

# **MARCH 2019 QUARTERLY ACTIVITIES REPORT**

Strategic development review of Jambreiro Iron Ore Project underway in light of strengthened iron ore market; Exceptional results from Itapitanga trench sampling, with Scoping Study nearing completion; Oversubscribed \$2.2M capital raising to underpin growth initiatives

#### 30 April 2019



## **MARCH QUARTER HIGHLIGHTS**

## **JAMBREIRO IRON ORE PROJECT**

- Strengthened iron ore price environment both internationally and in Brazil and improved conditions for project development provide the catalyst for a strategic review of the Project, with the planned approach being to rework the 2013 Feasibility Study with an assessment of new export logistic opportunities.
- Jambreiro is a fully-licensed, high-quality iron ore development asset that is well placed to capitalise on the expected emerging shortfall in Brazilian domestic iron ore supply and enhanced export logistics to access international markets.

## **ITAPITANGA NICKEL-COBALT PROJECT**

- 40-tonne bulk sample collected from the three trenches at the Itapitanga Project returned the following outstanding trench assay results:
  - o 90.0m @ 1.00% nickel, 0.27% cobalt and 33ppm scandium in ITAP-BS00001;
  - o 64.4m @ 1.67% nickel and 0.03% cobalt in ITAP-BS00002; and
  - o 30.0m @ 1.38% nickel and 0.02% cobalt in ITAP-BS00003.
- Bulk sample has been received by Centaurus' joint venture partner, Simulus Group, at its state-of-the-art demonstration plant in Perth, with Feasibility Study-level testwork programs focusing on flowsheet optimisation now underway.
- Simulus have indicated that the Scoping Study is progressing well with completion planned for Q2 2019.

## SALOBO WEST COPPER-GOLD PROJECT

> Receipt of drilling and clearing licence pending completion of a site visit by the Environmental agency, ICMBio.

## CORPORATE

- Highly experienced mining executive Chris Banasik joins the Centaurus board as a non-executive Director.
- Oversubscribed \$2.2M share placement completed.
- Cash reserves of \$3.0M at end of March 2019.

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# JAMBREIRO IRON ORE PROJECT

The Company's 100%-owned Jambreiro Project, located in south-east Brazil (Figure 1), is a shovel-ready development project that is fully-licensed for 3Mtpa of production and represents a strategic asset in the Brazilian domestic iron ore and steel sector, particularly with the premium pricing that exists in the market for high-grade ore (+65% Fe) such as that which could be produced at Jambreiro.



#### Figure 1: Jambreiro Iron Ore Project Location

During the Quarter, Centaurus announced that it was planning to update the 2013 Jambreiro Project Feasibility Study and commenced a strategic development review in light of the recent strong recovery in the iron ore price and renewed interest from prospective partners and off-takers.

Centaurus originally completed a positive Feasibility Study for the Jambreiro Project in November 2012 for a 2Mtpa Project which was subsequently revised during 2013 to a 1Mtpa iron ore production scenario (see initial ASX announcement of 5 November 2012 and subsequent announcements of 20 December 2013 and 13 January 2014). This Study demonstrated low operating costs and strong economics.

The Company now intends to update the Feasibility Study based on significant changes and marked improvements in a number of key parameters since the 2013 Feasibility Study was completed, including:

- Higher prices in the international market for premium 62% Fe ore;
- Lower availability of high-grade iron ore in the Brazilian domestic market compared with 2013;
- Improved domestic market pricing relative to 2013 as a result of the currency impact of a weaker Brazilian Real against the US Dollar;
- Significant premiums being realised for higher grade 65% Fe product, in light of tighter environmental conditions for steel mills across the globe, which didn't present in the domestic market in 2013;
- Greater access to open-access ports, logistics and infrastructure compared with 2013, which should provide a greater opportunity for the Company to consider supply into the export market;
- A number of new potential customers and partners in the domestic market which were not available to the Company in 2013; and
- A new pro-development government in Brazil which should provide strength for the domestic steel industry in Brazil over the coming years.



Between the end of November 2018 up to the end of the March Quarter, the 62% Fe price has risen by 45% in US Dollar terms to over US\$93/t, with ongoing uncertainty regarding Brazilian iron ore exports indicating that current pricing levels could be sustained well into 2019. The premium for 65% Fe ore over 62% Fe product is currently in the range of US\$12-US\$15/t.

Mine gate prices domestically in Brazil are generally based on the international export price for similar quality ore, less a net-back for the costs of logistics to the point of sale in the domestic market – whether that be at the mine gate, rail-head or export port.

Key outcomes from the 2013 Feasibility Study, as previously reported in the ASX releases referred to above, included:

Proven and Probable Ore Reserve (JORC 2004)	48.5Mt at an average grade of 28.1% Fe <sup>1</sup>	
Concentrate Product Grade	65% Fe	
Production Rate of Concentrate	1Mtpa	
Mine Life	18 years	
Total Revenue	A\$750 million	
EBITDA	A\$350 million	
Capital Costs	A\$53 million	
Annual Average Operating Cash Flow	A\$19.4 million	
LOM Average Sales Price – Mine Gate	A\$41.3/dmt	
Operating Cash Cost (per tonne product – LOM)	A\$22.0/dmt	

	2013 FS	March 2019
Average FX – AUD to BRL	2.00	2.65
Average FX – AUD to USD	0.91	0.70
Average FX – USD to BRL	2.20	3.78
Avg. Sales Price Mine Gate R\$/wmt Product	82.7	See Comment Below

Mine gate sales of 62% Fe ore are occurring in close proximity to the Jambreiro Project which, based on information available to the Company, indicates that a price of R\$100-R\$120 tonne is presently being achieved for that ore.

Discussions with the owners of the Candonga DSO Mine, which Centaurus divested in 2015 (located only 20km from Jambreiro and currently producing both sinter feed and lump iron ore products), indicates that their 62% iron ore product is achieving prices comfortably within or above this range. Given the higher grade of the Jambreiro ore, the Company believes that those prices are likely to be at least representative of the current market for its product.

Current exchange rates, combined with the enhanced conditions for future development, are expected to expand the range of funding alternatives for the Jambreiro Project. Additionally, a number of potential partners have already expressed an interest in the project, whereby they could secure an equity interest in the project by funding the capital required to develop it.

While there is no guarantee that a transaction of this nature will be finalised, the discussions to date provide the Company with confidence that Jambreiro can be funded at a Project level with equity, should the review of the previous Feasibility Study work deliver the results expected by the Company.

<sup>&</sup>lt;sup>1</sup> This information was prepared and first disclosed under the JORC Code 2004. It has not been updated since to comply with the JORC Code 2012 on the basis that the information has not materially changed since it was last reported. All information included in this presentation regarding the Ore Reserve estimate for the Jambreiro Iron Ore Project should be read in conjunction with the Company's ASX announcement dated 5 November 2012.



# THE CARAJÁS MINERAL PROVINCE – BASE METALS

Centaurus' Itapitanga Nickel-Cobalt Project, the Salobo West Copper-Gold Project and the Pebas Copper-Gold Project are all located in the Carajás Mineral Province ("Carajás"), which is considered to be one of the world's premier mining addresses (see Figure 2).



#### Figure 2 – Regional location map of the Carajás Mineral Province showing the location of Centaurus' key projects.

More than 20 world-class mineral deposits lie within an area of just 300 x 100km, including 10 Iron Oxide Copper-Gold ("IOCG") deposits with resources of +100 million tonnes of copper-gold ore. These IOCG mines and deposits – in addition to several other IOCG prospects that are under exploration – collectively contain resources of more than 4.0 billion tonnes of copper-gold ore.

Furthermore, the Carajás region hosts multiple world-class, large-tonnage nickel-cobalt projects including the Onça-Puma nickel mine and the Jacaré nickel-cobalt project, in addition to some of the world's best iron ore deposits at S11D and Serra Norte.

The sheer size and scale of projects in the Carajás has resulted in significant investment in key infrastructure for the region, which will provide significant benefits to Centaurus as it looks to grow its base metal activities in Brazil.

## **ITAPITANGA NICKEL-COBALT PROJECT**

The Itapitanga Project covers an area of approximately 50km<sup>2</sup> and is located in the Carajás Mineral Province of northern Brazil. The Project covers the southern extension of the same ultramafic-mafic intrusive complex that hosts both the Jacaré nickel-cobalt deposit and several unpublished nickel-cobalt resources held by Vale.



Anglo American's neighbouring world-class Jacaré nickel-cobalt deposit is one of the highest grade, large-tonnage nickel-cobalt deposits in the world, with a Mineral Resource of 307Mt at 1.3% Ni, including a high-grade ferruginous laterite (high grade cobalt) resource of 185Mt at 1.2% Ni and 0.19% Co<sup>2</sup>. The Itapitanga Project is located primarily on farm land 50km north-east of the regional centre of São Felix de Xingu and is accessible all year via an unpaved road. The project is located 110km from Vale's operating nickel mine, Onça-Puma.

In November 2018, Centaurus executed a binding earn-in joint venture term sheet with Australian-based battery metals process leader, the Simulus Group, covering the development of the Itapitanga Project. Under the staged earn-in Agreement, Simulus can earn up to an 80% interest in the project and will manage it through various study phases utilising its extensive in-house capabilities for process design on nickel-cobalt projects with the ultimate aim of delivering a low capital intensity process design and completing a Definitive Feasibility Study. Centaurus will be free-carried throughout the various exploration, resource evaluation and feasibility phases until project financing is arranged and a decision to mine is made.

#### Trench Work and Bulk Sampling Program

A 40-tonne bulk sample was collected in January to allow Simulus to undertake Feasibility Study-level flowsheet optimisation work at its state-of-the-art demonstration plant in Perth. Samples were taken from three trenches with each trench supplying different mineralisation types.

Trench ITAP-BS00001 focused on the collection of high-grade nickel-cobalt ferruginous laterite mineralisation, which is found readily at or near surface over the project area. This high-grade nickel-cobalt trench returned **an outstanding trench assay result of 90.0m @ 1.00% nickel, 0.27% cobalt and 33ppm scandium.** 

Samples were also taken from Trenches ITAP-BS00002 and ITAP-BS00003, which focused on the high-grade nickel saprolite mineralisation, which generally sits below the ferruginous laterite mineralisation in the profile but can occur locally at surface. These high-grade nickel trenches also returned strong results with trench assays including **64.4m @ 1.67% nickel and 0.03% cobalt** in ITAP-BS00002 and **30.0m @ 1.38% nickel and 0.02% cobalt** in ITAP-BS00003.

The location of the trenches can be seen on Figure 3 and full assay details of the trenches were provided in the Company's ASX Announcement dated 25 February 2019.

The bulk sample has successfully cleared Australian customs and has been delivered to Simulus' Welshpool laboratory. The ore received will provide a sufficiently large and representative sample for Feasibility Study-level flowsheet optimisation work to be undertaken, allowing the flowsheet already designed by Simulus to be confirmed and the requisite engineering design data to be collected.

Furthermore, processing of the bulk samples through the demonstration plant by Simulus will provide a number of high-value products for the sustainable energy and emerging technology markets to assist in marketing negotiations with potential off-take partners.

Simulus have indicated that the Scoping Study for the Itapitanga Project is advancing well and due to be completed in Q2 2019.

<sup>&</sup>lt;sup>2</sup> Resource data sourced from Anglo American Presentations "Ore Reserves and Mineral Resources Report 2018"





#### Figure 4: Itapitanga Nickel-Cobalt Project Indicative Development timeline



Completed on schedule Underway

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## SALOBO WEST COPPER GOLD PROJECT

Three of the top five known IOCG deposits in the Carajás (all with resources +300Mt Cu-Au ore), as well as multiple exploration targets, are located along the Cinzento Shear Zone (see Figure 5). These deposits are structurally controlled by regional-scale W-NW striking, brittle-ductile shear zones hosted within the highly prospective volcanic and sedimentary rocks of the Itacaiúnas Supergroup.

Vale's giant Salobo Copper-Gold Mine is one of these deposits and is arguably the second-biggest IOCG in the world behind BHP's Olympic Dam Mine. Salobo has Reserves of 1.15 billion tonnes at 0.61% Cu and 0.3g/t Au and produced approximately 193kt of copper and 361koz of gold in calendar year 2018<sup>3</sup>.



#### Figure 5: Tier-1 IOCG deposits in the Cinzento Shear Zone over the Regional Magnetics (AS).

Centaurus' Salobo West Cu-Au Project includes multiple distinct targets that display similar geochemical and geophysical characteristics and are located in the same geological context as the Salobo mine, just 12km along strike.

The Salobo West Copper-Gold Project comprises two tenements – SW1 in the north and SW2 in the south of the project area, both of which have multiple walk-up drill targets.

#### **Project Permitting**

The necessary vegetation inventory has been completed for the areas planned to be cleared ahead of drilling and a site inspection of the planned holes is now required to be completed by the Environmental Agency, ICMBio, in advance of the grant of the drilling and clearing licence. This site visit is awaiting a window in the heavy rainfall currently being experienced in the region.

The Company was expecting to receive the licence by the end of April 2019 but heavy rains have continued to impact the region with the impact for Centaurus being that the ICMBio site inspection has not yet been able to be undertaken. The inspection process is considered to be a formality and the Company is not envisaging any issues once it is able to take place.

The licence is expected to be granted within weeks of the ICMBio inspection being completed.

<sup>&</sup>lt;sup>3</sup> Vale Data sourced from "Vale Production and Sales in 4Q18" Report, its 20-F Annual Report for 2017 and 2018 and other public reports



The Company has received a number of proactive approaches from large third-party mining companies to potentially joint venture into the Salobo West Project. Centaurus is continuing to evaluate the merits of these joint venture approaches.

# CORPORATE

#### **Board Change**

Highly experienced geologist and Australian mining executive Mr Chris Banasik was appointed to the Centaurus board during the Quarter as a non-executive Director.

Mr Banasik filled a board vacancy created by the departure of Mr Steve Parsons, who stepped down from the Centaurus Board due to his growing work-load and commitments as Managing Director of ASX Listed gold company, Bellevue Gold Limited.

With more than 30 years' experience across multiple disciplines and commodities, Mr Banasik is a well-known and highly-regarded mining and exploration executive. He was a founding Director of the successful WA gold producer Silver Lake Resources (ASX: SLR), where he held the key role of Director of Exploration and Geology from 2007 to 2014 – a period which saw the Company grow to an ASX-200 company in 2012 with a market capitalisation of over \$1 billion and employing over 650 personnel.

Prior to that, he held a range of senior geological and executive roles for companies including Consolidated Minerals, Reliance Nickel and Western Mining Corporation.

He has extensive experience in nickel exploration, project development and operations, having held several geological and management positions with WMC (1986-2001). He was also Senior Mine Geologist with Goldfields Mine Management (2001-2004) and Chief Geologist at the Beta Hunt nickel operations (2004-2007).

During his time at WMC, he was actively involved in the decision-making and implementation process to sell the Company's Kambalda nickel mines, which resulted in significant additions to the mine life of the Kambalda nickel field.

#### **Capital Raising**

During the Quarter, Centaurus completed a share placement to raise \$2.20 million, before costs. Originally seeking \$1.65 million, the Company accepted oversubscriptions of \$550,000.

The capital raising will provide funding for the update to the Jambreiro feasibility study, advance permitting for the Salobo West Copper-Gold Project and preparations for future drilling, assessment of new project opportunities in the Carajás Mineral Province, and for general working capital.

Under the placement, the Company issued 400 million shares at \$0.0055, together with 400 million free attaching options having an exercise price of \$0.012 and an expiry date of 31 May 2021, to sophisticated and professional investors. Hong Kong based private equity group LC Capital Limited subscribed for 10% of the placement.

The options are subject to shareholder approval, which will be sought at the Company's Annual General Meeting due to be held on 31 May 2019. Subject to meeting applicable ASX and ASIC requirements, the Company also intends to seek quotation of those options. The placement shares were issued in one tranche under the Company's existing placement capacity under LR 7.1 (169,501,784 shares) and 7.1A (230,498,216 shares) and were allotted on 27 March 2019.



Melbourne-based Pinnacle Equities were the Lead Manager to the placement. As part of their fee, Pinnacle will receive 30 million options having the same exercise price and expiry date as the options issued as part of the placement, subject to shareholder approval.

#### **Cash Position**

At 31 March 2019, the Company held cash reserves of A\$3.0 million.

#### **Annual General Meeting**

The Company's 2019 Annual General Meeting is due to be held at the Perth offices of KPMG (Level 8, 235 St Georges Terrace, Perth) at 10 am on 31 May 2019. The Notice of Meeting has been sent to shareholders this week.

#### **Shareholder Information**

At the end of the reporting period, the Company had 2,704,982,165 shares on issue with the Top 20 holding 27.5% of the total issued capital. Directors and Senior Management held approximately 5.3% of the total issued capital.

The Company's capital structure is as follows:

#### **Quoted Securities**

Security	Number	
Fully paid ordinary shares (CTM)	2,704,982,165	
Listed options, exercise price \$0.01, expiry date 31 August 2019 (CTMOB)	623,049,575	

#### **Unquoted Options**

Expiry date	Exercise price	Employee Options		Options	Total number of
		Vested	Unvested		shares under option
10/06/2019	\$0.0082	8,500,000	-	-	8,500,000
10/06/2020	\$0.0082	8,500,000	-	-	8,500,000
31/05/2020	\$0.0130	18,500,000	-	-	18,500,000
31/05/2021	\$0.0140	18,500,000	-	-	18,500,000
31/05/2022	\$0.0150	-	33,500,000	-	33,500,000
31/01/2020	\$0.0150	-	-	167,500,000	167,500,000
Total		54,000,000	33,500,000	167,500,000	255,000,000

#### **Unquoted Performance Rights**

The following Performance Rights were issued on 5 September 2017 and are held by Terrativa Minerais SA under the terms of the Company's Agreement with Terrativa signed in December 2016 in relation to the acquisition of 100% of the Para Exploration Package in Brazil.

Each tranche of Performance Rights will be converted into Ordinary Shares upon the achievement in full of the following vesting conditions:

- <u>Tranche A 30,000,000 Performance Rights</u> will be converted into 30,000,000 Ordinary Shares if, within a
  period of 5 years after the date of issue of the Performance Rights, a JORC-compliant Inferred Resource of
  500,000oz of gold or gold equivalent is defined on the Pará Exploration Package Project tenements;
- <u>Tranche B 30,000,000 Performance Rights</u> will be converted into 30,000,000 Ordinary Shares if, within a period of 5 years after the date of issue of the Performance Rights, a JORC-compliant Inferred Resource of 1,000,000oz of gold or gold equivalent is defined on the Pará Exploration Package Project tenements;



• <u>Tranche C – 30,000,000 Performance Rights</u> will be converted into 30,000,000 Ordinary Shares if, within a period of 5 years after the date of issue of the Performance Rights, a JORC-compliant Inferred Resource of 1,500,000oz of gold or gold equivalent is defined on the Pará Exploration Package Project tenements.

During the Quarter none of the Performance Rights were converted or cancelled and no vesting conditions were met.

DARREN GORDON MANAGING DIRECTOR

#### **Competent Person Statement**

The information in this announcement that relates to Exploration Results and Mineral Resources is based on information compiled by Roger Fitzhardinge, a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy and Volodymyr Myadzel, a Competent Person 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 that is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are 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'. Roger Fitzhardinge and Volodymyr Myadzel consent to the inclusion in the announcement of the matters based on their information in the form and context in which it appears.

The information in this announcement that relates to Ore Reserves is based on information compiled by Beck Nader, a Competent Person 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 that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken 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'. Beck Nader consents to the inclusion in the announcement of the matters based on his information in the form and context in which it appears.

#### Disclaimer

All information included in this announcement regarding Mineral Resources and Ore Reserve estimates for the Jambreiro Project were prepared and first announced by the Company to the market under the JORC Code 2004. To the extent that information related to the Jambreiro Mineral Resource, it was subsequently updated to be compliant with the JORC 2012 Code and that updated information has since been announced by the Company. The information in relation to the Jambreiro Ore Reserve has not been updated since to comply with the JORC Code 2012, however, on the basis that the information has not materially changed since it was last reported.

All information included in this announcement regarding the Ore Reserve estimate for the Jambreiro Iron Ore Project should be read in conjunction with the ASX announcement dated 5 November 2012. No material change has occurred since that time in any of the pit optimisation parameters used to estimate the Jambreiro Ore Reserve.

Refer to the ASX announcements dated 20 December 2013 and 13 January 2014 for details of the material assumptions underpinning the production target and forecast financial information included in this announcement for the Jambreiro Iron Ore Project. The Company confirms that all the material assumptions underpinning the production target and forecast financial information derived from the production target continue to apply and have not materially changed.