## **BAOBAB RESOURCES PLC**

## OVER 200MT UPGRADED TO JORC INDICATED CATEGORY AT TETE

3 APRIL 2013



Baobab Resources Plc ('Baobab' or the 'Company') is a Mozambique focused mineral resource development company. Further to the RNS dated 21 February 2013, the Company is pleased to present final results of the resource up-grade at the Tenge/Ruoni prospect at its 85% owned Tete pig iron and ferro-vanadium project (the 'Tete Project') in which International Finance Corporation ('IFC') hold a 15% participatory interest.

# **HIGHLIGHTS**

- International independent consultants Coffey Mining Limited have finalised a JORC resource estimate for the Tenge/Ruoni prospect based on the completed results of the 2012 infill drilling programme.
- The Tete Project's global resource base now reports 727Mt ('inferred' and 'indicated'), 553Mt of which is defined underlying the 2.5km<sup>2</sup> footprint of the Tenge/Ruoni prospect (see Table 1).
- 217Mt has been upgraded to an 'indicated' category at Tenge/Ruoni, representing an encouraging conversion ratio from Inferred to Indicated of 73% at Tenge and 88% at Ruoni North from the original March 2012 inferred resource estimates.
- The Definitive Feasibility Study ('DFS') drilling programme commenced at Tenge on 2 February 2013. The objective of the programme is to elevate resources that lie within the Stage 1 pit shell to a 'measured' category, as well as collect representative material for the next round of metallurgical test work.
- Following on from the successful completion of a 1Mtpa Pre-Feasibility Study ('PFS') which delivered a pre-tax NPV<sub>10</sub> of US\$1.3bn (refer to RNS dated 28 March 2013), Baobab is now assessing a range of strategic corporate opportunities. To aid in the evaluation and implementation of the options, the Company is enlisting the services of a corporate advisor. The selection process is nearing completion and the successful candidate will be announced shortly.

Commenting today, Ben James, Baobab's Managing Director, said: 'this latest update further consolidates the resource base on which to build a large-scale operation. The excellent conversion rate from 'inferred' to 'indicated' classifications in the areas infill drilled during 2012 further de-risks the technical elements of the project.

'With the base case PFS complete and results of increased production models due in shortly, Baobab is now in a position to accelerate the appraisal and execution of corporate strategies that will ensure the successful development of the Tete project. These initiatives will run in parallel with the continued technical initiatives as the Company maintains momentum into the DFS.'

#### BAOBAB RESOURCES PLC

27/28 Eastcastle Street London W1W 8DH United Kingdom Web: www.baobabresources.com AIM: BAO

#### BAOBAB MINING SERVICES Pty Ltd Unit 25 South Terrace Piazza

Fremantle
Western Australia 6160
Australia
Post: PO Box 1229 Fremantle
Western Australia
Tel: (+61) 8 9430 7151
Fax: (+61) 8 9430 7664

CAPITOL RESOURCES Lda Rua De França 19 / 2 Andar Bairro Coop Maputo Moçambique Tel: (+258) 21 415 200

#### TENGE/RUONI RESOURCE STATEMENT UPDATE

Tenge/Ruoni is the easternmost prospect area of the Massamba Group, Tete Project. Mineralisation in the area has been synformally folded with the fold hinge plunging gently to the west-northwest. The northern and southern limbs of the fold comprise the Ruoni North and Ruoni South resource blocks, while the outcropping fold hinge comprises the Tenge resource block to the east. The buried central portion of the fold comprises the Ruoni Flats resource block.

Internationally respected consultant, Coffey Mining Limited ('Coffey'), has revised the resource estimates for the Tenge/Ruoni resource blocks based on the infill drilling programmes completed at Ruoni North, Ruoni South and Tenge blocks during 2012. The initial results, including the indicated resource upgrades at Ruoni North and a portion of the Tenge resource block was announced on 21 February 2013. Additional drill results have since been returned and the global Tenge/Ruoni Inferred and Indicated resources have been re-modelled and estimated resulting in figures that vary slightly from those stated in the RNS.

Coffey's estimates of inferred and indicated mineral resources, including the South Zone estimate (announced on 30 August 2011) and Chitongue Grande (announced on 31 October 2011) are summarised below. All estimates have been compiled in accordance with the Joint Ore Reserves Committee (JORC) Code (2004) guidelines. Notes on the estimation parameters are presented as Annexure 1.

The global resource totals 727Mt, of which 553Mt underlies the 2.5km² Tenge/Ruoni footprint. A total of 217Mt has been upgraded to an indicated category: at Tenge and Ruoni North, 116Mt and 82Mt have been elevated to an indicated resource category respectively which represent conversion rates of 73% and 88% of the original, pre 2012 infill drilling, inferred resources (as tabled in the RNS dated 5 March 2012). 19Mt were upgraded to an indicated category at Ruoni South, this represents a relatively low conversion rate of 34% and is due to insufficient drill coverage on some sections. The Company is confident that further conversion will be achieved with a minor extension of the 2013 drilling programme.

Coffey Mining has estimated the expected average concentrate characteristics for the mineralised material for the combined Tenge/Ruoni resource as: 59.7% Fe, 0.9% V2O5, 10.6% TiO2, 0.9% SiO2, 3.2% Al2O3, 0.001% P and 0.2% S at a Mass Recovery of 44.3%. A detailed summary of the expected concentrate grades of the individual ore domains is tabulated in Annexure 1.

## TABLE 1 Tete Iron Project

Whole Rock Grade Estimates Derived by Ordinary Kriging - \*15% Lower Cutoff Grade Applied \*\*No Lower Grade Cutoff Applied Resource Classification Based on JORC Code (2004) Guidelines

AREA	Resource	Tonnage	Fe	V <sub>2</sub> O <sub>5</sub>	TiO <sub>2</sub>	SiO <sub>2</sub>	Al <sub>2</sub> O <sub>3</sub>	Р	LOI	CaO	K <sub>2</sub> O	MgO	MnO	S
	Classification	(Mt)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Ruoni North*	Indicated	82.2	37.1	0.4	13.7	15.6	9.5	0.00	-1.8	2.2	0.2	4.9	0.2	0.2
	Inferred	24.6	38.0	0.4	14.2	14.5	9.3	0.00	-1.8	2.1	0.2	4.6	0.2	0.2
	Total	106.8	37.3	0.4	13.9	15.4	9.4	0.00	-1.8	2.2	0.2	4.8	0.2	0.2
Tenge*	Indicated	116.1	37.0	0.4	13.6	15.7	9.8	0.01	-1.7	2.4	0.2	4.2	0.2	0.2
	Inferred	73.4	37.8	0.4	14.1	14.9	9.3	0.01	-0.8	2.1	0.2	3.8	0.2	0.2
	Total	189.4	37.3	0.4	13.8	15.4	9.6	0.01	-1.3	2.3	0.2	4.1	0.2	0.2
Ruoni South*	Indicated	19.0	33.2	0.4	12.2	19.1	10.8	0.01	-1.0	3.2	0.3	4.7	0.2	0.2
	Inferred	49.2	33.3	0.4	12.5	19.1	10.5	0.01	-1.1	3.2	0.3	4.8	0.2	0.2
	Total	68.2	33.3	0.4	12.4	19.1	10.6	0.01	-1.1	3.2	0.3	4.8	0.2	0.2
Ruoni Flats*	Inferred	188.6	35.2	0.4	12.8	17.3	10.3	0.01	-1.3	2.7	0.3	4.7	0.2	0.3
Chitongue Grande**	Inferred	60.9	24.9	0.2	9.6	29.4	12.0	0.00	-0.2	4.8	0.7	4.6	0.2	0.3
South Zone**	Inferred	113	27.5	0.2	10.1	25.9	8.0	0.29	-0.7	5.2	0.3	6.9	0.3	0.3
Total Indicated		217.2	36.7	0.4	13.6	16.0	9.8	0.0	-1.6	2.4	0.2	4.5	0.2	0.2
Total Inferred		509.7	32.6	0.3	12.1	20.3	9.8	0.1	-1.0	3.4	0.3	5.0	0.2	0.3
Grand Total		726.9	33.8	0.4	12.5	19.0	9.8	0.1	-1.2	3.1	0.3	4.9	0.2	0.2

Where no lower cut-off grade has been applied, the resource blocks have been constrained by geologically defined mineralised domains and therefore reported accordingly; it is currently assumed that mining selectivity is limited to within the mineralised domains. A three-dimensional block model was generated for the Tenge / Ruoni deposit to enable grade estimation. Coffey Mining has based its grade interpolation on Ordinary Kriging. Whole rock and concentrate grades were interpolated based on 4m composite samples using domain control for

both composite and block selections applying soft boundaries between the geographic zones. A service variable approach to the estimation of block concentrate grades required to account for the variation in percent recovery weight. The concentrate grades (Fe, V2O5, TiO2, SiO2, Al2O3, P, LOI, CaO, K2O, MgO, Mn, and S) were then back calculated from these estimates. Ordinary Kriging was also used to obtain estimates of DTR and service variables. For the concentrate grades of all other resource blocks, a similar approach was adopted. However, insufficient DTR test work resulted in a lower confidence in the estimate, precluding their classification.

The information in this release that relates to Exploration Results is based on information compiled by Managing Director Ben James (BSC). Mr James is a Member of the Australasian Institute of Mining and Metallurgy, is a Competent Person as defined in the Australasian Code for Reporting of exploration results and Mineral Resources and Ore Reserves, and consents to the inclusion in the report of the matters based on the information in the form and context in which it appears.

The information in the report which relates to the Mineral Resource is based on information compiled by Oliver Mapeto who is a Member of both The Australasian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists and is employed by Coffey Mining Ltd. Mr. Mapeto 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 Competent Person as defined in the 2004 Edition of the "Australasian Code for Reporting of Mineral Resources and Reserves". Mr. Mapeto consents to the inclusion in the report of the matters based on the information in the form and context in which it appears.

#### **CONTACT DETAILS**

**Baobab Resources PLC** 

Ben James: Managing Director Tel: +258 21 415 200 Jeremy Dowler: Chairman Tel: +44 1372 450529

**Grant Thornton Corporate Finance** 

Gerry Beaney / David Hignell Tel: +44 20 7383 5100

**Shore Capital Stockbrokers** 

Jerry Keen / Toby Gibbs Tel: +44 20 7468 7964

**Fortbridge Consulting** 

Matt Beale Tel: +44 7966 389 196

# **ANNEXURE 1**

#### Resource Statement Notes:

- The Tenge-Ruoni Project is part of Baobab Mining's Tete Iron Ore Project in Mozambique. The project is located north of the Provincial capital of Tete in the central portion of the Tete Suite (a mafic complex), covering an area of approximately 632km². Diamond (DD) and reverse circulation (RC) drilling was carried out as part of a larger exploration and resource definition.
- Mineralisation is cumulate-style, in massive or breccia form, emplaced predominantly as a single pod of mineralisation
  with occasional partings of anorthosite. Numerous subvertical dolerite dykes obliquely dissect the zone of
  mineralisation. Faulting also affects the mineralisation.
- Drilling coverage for the whole rock grades (in total 13 grade items) is on a variable grid over the target area, drilling being aligned mainly along sections oriented perpendicular to mineralisation. There are also 6 holes specifically targeting the dykes. The drillhole database used in this resource estimate was the same as in the previous models, with the addition of assay data from 17 new infill holes (Ruoni South 5 holes and Tenge 12 holes). In total, 144 drillholes with valid data were used in this resource update.
- Drillhole data and mapping of dykes outcropping at surface was used to model the dykes. The volume of mineralisation
  was interpreted using geological logging and a head grade mineralisation cut-off of 15% Fe.
- The previous unified models for the Tenge-Ruoni Project area has been updated with the new drilling data using a DTM surface for the base and the top of the mineralisation and the three main internal anorthosite lenses to create a combined geological/mineralisation model covering the entire Tenge-Ruoni Project area. This model maintained the limits of the individual prospect areas as previously reported.
- Total resource increased marginally by 0.4% to 553Mt from previously reported.
- Indicated resource increased by 65Mt to 217Mt (Increase: Tenge 44Mt, Ruoni South 19Mt and Ruoni North 2Mt). There is a corresponding decrease in Inferred resource to 336Mt.
- Some non-mineralised horizons within the mineralised zones may not be separable during the mining stage; this should be accounted for in both metallurgical and mine planning.
- Information about oxidation was provided enabling a base of oxidation surface to be produced. Further studies on bulk density are required to define a different density value for oxidised material.
- For head (whole rock) analysis, grade characteristics were based on assaying for Fe, V, TiO<sub>2</sub>, SiO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub>, P, LOI, CaO, K<sub>2</sub>O, MgO, Mn, Na<sub>2</sub>O and S using XRF analysis or thermogravimetric measurement (for LOI).

- Baobab has an industry standard QAQC programme in place. Analysis of standard samples shows that achieved accuracy is acceptable and appropriate for use in resource estimation. Field duplicate analysis results are very similar showing that the drill hole data is reliable. Standard laboratory quality control data show no unexpected deviations.
- Statistical analysis was completed on raw samples and 4m composites. Statistical analyses were also completed on 4,085 DavisTube testwork results for largely 4m composites and subsequent 4m composites for service variables.
- Variography on the composite data was defined as input into the spatial grade estimation. Variography was undertaken on Fe assay head and DTR for the Tenge prospect which is based on the largest amount of data and density of drilling. Variogram parameters for the Tenge-Ruoni project area were based on the Tenge Fe and DTR variogram models for input into the weighted grade estimation for assay head and concentrate service variables respectively.
- At the time of the resource estimation, Baobab Mining has conducted Davis Tube testwork to determine the percent weight recovery (DTR) of magnetic material (concentrate) on 85% of the 4,307 composite head XRF samples. The concentrate has been assayed to establish its grade characteristics and enable an initial estimate of expected concentrate grades prior to more detailed metallurgical testwork and determination of a final processing method. The concentrate grades are representative of the recovered portion only. The concentrate grade estimation was completed using service variables to ensure appropriate weighting. Service variables were calculated as Fe grade multiplied by DTR, SiO<sub>2</sub> multiplied by DTR, Al<sub>2</sub>O<sub>3</sub> multiplied by DTR etc. for the remaining grade items. An additional programme of metallurgical testwork to further assess concentrate recovery and grades is planned.
- Grade estimates were estimated for parent blocks of size 50m x 50m x10m with sub blocks of size 2mx2mx2m. The
  method used to obtain grade estimates was Ordinary Kriging (OK).
- Ordinary Kriging was also used to obtain estimates of DTR and service variables. The concentrate grades (Fe, V<sub>2</sub>O<sub>5</sub>, TiO<sub>2</sub>, SiO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub>, P, LOI, CaO, K<sub>2</sub>O, MgO, Mn, Na<sub>2</sub>O and S) were then back calculated from these estimates.
- The grade estimation was controlled by domain for the search orientation.
- A small amount of DTR (1.4%) and concentrate data do not have complete analyses. Due to variability within this data as currently constrained by the existing domains, and then also some uncertainty about how the DTR results might relate to any final treatment/metallurgical process, the DTR estimation is not classified as are the head grade estimates. Geo-metallurgical domaining is currently being reviewed and refined to possibly improve the modelling of DTR and concentrate data in the model. Indicative concentrate and DTR grades are provided in Table 2.
- In situ dry bulk densities were assigned on the basis of average values from testwork (3.6t/m³ for Tenge, 3.9t/m3 for Ruoni North). A range of density values from 2.7t/m³ to 2.9t/m³ were assigned to waste. Additional studies from the available data are needed to gain an understanding of the density distribution throughout the deposit for future model updates.
- Resource classification was developed from key criteria including drilling methods, geological understanding and interpretation, sampling, minimum number of data and location, grade estimation and quality.

# Table 2 Tenge-Ruoni Titano-Magnetite Prospect Concentrate Grade Estimates Derived by Ordinary Kriging Lower Grade Cutoff of 15% Fe Applied

Concentrate														
ZONE	Tonnes	DTR	FE	V2O5	TIO2	SIO2	AL203	P	LOI	CAO	K20	MGO	MNO	S
ZONE	(Mt)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Ruoni North	106.8	50.0	58.4	0.8	12.4	0.8	3.4	0.001	-3.6	0.07	0.01	1.5	0.19	0.13
Tenge	189.4	47.2	58.9	0.8	11.8	0.8	3.2	0.001	-3.3	0.07	0.01	1.4	0.18	0.14
Ruoni South	68.2	35.9	61.6	0.9	7.8	1.0	3.0	0.001	-3.3	0.10	0.01	1.0	0.12	0.22
Ruoni Flats	188.6	41.2	60.6	0.9	9.3	0.9	3.1	0.001	-3.3	0.08	0.00	1.2	0.14	0.25
Total	553.0	44.3	59.7	0.9	10.6	0.9	3.2	0.001	-3.3	0.08	0.01	1.3	0.16	0.19