Company North River Resources Plc

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# North River Resources plc ('North River') Monte Muande Exploration Target & Progress Update

North River Resources plc, the AIM listed southern African multi-commodity resource company, is pleased to announce an update from its Joint Venture partner Baobab Resources plc ('Baobab' or 'the Company') in relation to North River's Monte Muande licences in the Tete province of Mozambique ('the Project') which are prospective for magnetite, phosphorus, uranium and gold.

North River Managing Director David Steinepreis said, "This iron and phosphate exploration target of 200mt-250mt demonstrates the significant potential of the Monte Muande project, and the shallow depth of the current modelling suggests that further mineralisation may be delineated following deeper drilling programmes. A drilling campaign, which will be conducted and fully funded by Baobab, is expected to commence in Q2 2011, with the objective of defining the deeper geology of the Monte Muande project. The drilling programme will also evaluate additional eluvial deposits within the southwest extension area which may also be a potential source of direct shipping ore material. We look forward to further updates from Baobab in the coming months as it rapidly progresses exploration work on this highly prospective project area and progresses up the value curve."

# **Baobab announcement:**

### **Exploration Target**

Baobab Resources plc ('Baobab' or the 'Company') is an iron ore, base and precious metals explorer with a portfolio of mineral projects in Mozambique. The Company announced on 15 November 2010 the signing of a Joint Venture with North River Resources plc ('North River') in relation to North River's Monte Muande magnetite/phosphorus, base and precious metal project (the 'Project') in the Tete province of Mozambique. The Company is pleased to present an update on work completed.

### **Highlights:**

- Independent consultants have estimated an iron and phosphate Exploration Target at Monte Muande of 200Mt to 250Mt to an average depth of c.40m, the limit of previous drilling.
- Geologically, it is reasonable to assume that deeper drilling will encounter further mineralisation
  - below the modelled depths.
- Exploration Target includes lower and higher grade material types. It also includes 3Mt to 5Mt of eluvial material grading between 45% and 55% Fe which could potentially be upgraded to a DSO (Direct Shipping Ore) product.
- A high level review of available metallurgical data indicates that a magnetite concentrate

containing 67% Fe could be generated via a simple, cost-effective process of coarse grinding and magnetic separation, followed by regrinding and a flotation circuit to recover a phosphate rock concentrate containing 36%  $P_2O_5$ .

Mr Ben James, Baobab's Managing Director, said: "The exploration target results further endorse the project's potential to host substantial magnetite and phosphate resources, particularly considering the shallow depth of the modelling.

"Previous metallurgical test work indicates that the magnetite and phosphate may be easily liberated; allowing us to consider exploiting lower grade halos encompassing higher grade zones. The Company will be fast tracking its assessment of the eluvial mineralisation in the Monte Muande area as a potential source of DSO material. There are also real opportunities for outlining additional eluvial deposits within the southwest extension area."

## **Exploration Target assessment**

Internationally respected consultancy, Coffey Mining Pty Ltd ('Coffey'), was commissioned to assess the exploration target potential of the Monte Muande area for iron and phosphate mineralisation. Coffey used drill hole and trench data from the Geological Institute of Belgrade 1983 - 1985 exploration campaign as well as more recent soil geochemistry and aeromagnetic surveys completed by Omegacorp (2006 - 2007) in the assessment and carried out the following:

- Compiled an indicator kriging (IK) model to confirm the general trend of mineralisation.
- Compiled 3d wireframes of the various material types.
- Carried out an inverse distance calculation using the available grades within the mineralised wireframes.
- Defined the possible surface area of the similar host rock to the southwest of Mt Muande and assigned target tonnages proportionally (no grades have been assigned to this material).

Indicative tonnage and grade ranges are presented in Table 1. Lower target tonnages have been derived from extrapolations of drillhole / trench mineralisation intersections to an average depth of 42m from below surface level (the absolute range is down to 135m). Upper target tonnages have assumed an additional 20% of mineralised material will be identified with addition drilling. There is no reason to believe that mineralisation will not be encountered below the modelled depths.

# Table 1 Mt Muande Magnetite and Phosphate Project Indicative Tonnages and Grades<sup>1</sup>

			Tonnes Range (Mt)		Grade Ranges			
Area	Material	Density	Lower	Upper	Fe%		P <sub>2</sub> O <sub>5</sub> %	
	Type	(t/m3)			Lower	Upper	Lower	Upper
Mt Muande Drilled / Trenched Zone	Eluvial	3.5	3	5	45	55	3	7
	Lower Grade	2.7	90	110	4	10	2	7
	Higher Grade	3.0	30	35	20	25	2	7
Southwest	Marble							
Extension <sup>1</sup>	Hosted		80	100	-	-	-	-

<sup>&</sup>lt;sup>1</sup> Without drillhole sampling data available, there is a higher degree of risk allotted to the indicative tonnages in the southwest extension

The information in this report relating to exploration targets should not be misunderstood or misconstrued as an estimate of Mineral Resources or Ore Reserves. Hence the term(s), Resource(s) or Reserve(s) have not been used in this context. The potential quantity and grade is conceptual in nature, since there has been insufficient work completed

to define them beyond exploration targets and that it is uncertain if further exploration will result in the determination of a Mineral Resource.

Coffey also carried out a high level review of the metallurgical data from the Muande project. Detailed reports are not currently available, however a summary of works completed indicated that a magnetite concentrate containing 67% Fe could be generated via a process of coarse grinding (to 0.3mm) and magnetic separation, followed by regrinding and a flotation circuit to recover an apatite (phosphate rock) concentrate containing 36%  $P_2O_5$ . Total magnetite and apatite recoveries of 92% and 70% respectively were recorded.

No metallurgical test work appears to have been completed on the eluvial mineralised material. Coffey assumes that this material will be able to be upgraded via simple gravity concentration processes such as cobbing and spirals. They conclude that the resulting process could produce a potential direct shipping ore (DSO) product, however this will need to be confirmed with laboratory test work.

## Monte Muande Project Background

The Monte Muande project comprises two exploration licences covering an area of 338km² located approximately 25km northwest of the provincial capital of Tete. The licences are valid until Q3 2014.

The licences are underlain by the Proterozic aged Chacocoma Granite and flanking Tete Mafic Complex. A carbonatite of Cretaceous age has intermittently intruded the eastern and northern margins of the Chacocoma Granite. The south-western corner of licence 1119L is underlain by 12 square kilometres of Lower Karoo lithologies.

Previous exploration has targeted mineralisation within the carbonatite. During the 1980's, the Geological Institute of Belgrade (GIB) conducted exploratory works at the Monte Muande magnetite/phosphorus deposit. GIB completed two phases of vertical diamond drilling between 1983 and 1985 totalling 5,570m, 2,960m of which falls within the Joint Venture area. The institute also completed more than 10km of trenching.

Regrettably sampling of the first phase of drilling and trenching was not systematic. The available analytical results do, however, demonstrate the potential of the deposit. A complete listing of significant intercepts from both drilling and trenching is tabulated below (please note that this is historical data and the Company cannot yet confirm its veracity). Iron grades are generally higher, and phosphorus lower, in trench samples than in the drill core. This may be a function of the near surface chemical weathering of the marble host rock or reflect different sampling techniques.

More recently, Omega Corp (and latterly Mavuzi Resources) completed detailed exploration programmes investigating the uranium, gold, copper and coal potential of the area.

During 2006-2007, Omegacorp completed a detailed soil geochemical survey over an area of 19 square kilometres extending from the Monte Muande deposit in the northeast to the southern limit of the 1054L licence boundary, 9km to the southwest. The sampling grid overlies a robust, linear magnetic trend marking the margin of the Chacocoma Granite.

Contouring of the iron (Fe) and phosphorus (P) soil analyses has delineated a corridor of >15% Fe and >1% P anomalism extending from the GIB work area 4km to the southwest. The geochemistry also outlines a discrete 2,500m x 400m copper (Cu) in soil anomaly immediately west of the southwestern limit of the Fe/P corridor, overlying a parallel magnetic trend (*Figures 3, 4 and 5\**). Both sets of anomalies remain undrilled.

The soil geochemistry also identified the Boa Viseau gold anomaly, located centrally within the survey area. Boa Viseau was subsequently diamond drilled by Omegacorp in late 200, returning a best intercept of 6.40m @ 2.01g/t Au from 46.10m (0.5g/t Au cut-off).

Mavuzi Resources completed a preliminary review of the coal potential of the 12 square kilometres of Lower Karoo lithologies underlying the southwestern corner of 1119L. Field work identified carbonaceous rich units exposed in river banks along the Mufa River. No further work was completed.

### **Details of North River Joint Venture**

North River Resources plc is an AIM listed multi commodity resource development company, focussed on southern Africa. Its current portfolio includes significant gold, base metal and uranium assets in Namibia and uranium, gold and copper assets in Mozambique. North River has an active development plan with the aim of generating production in the near term. North River is approximately 45% owned by AIM listed Kalahari Minerals plc.

Baobab Resources plc is actively developing iron / vanadium / titanium resources at its Tete Project in Mozambique. With a view to consolidating its strategic position in the Tete area, the Company approached North River with the objective of entering into an unincorporated Joint Venture relationship for the purpose of undertaking exploration activities at the Muande Project and, subject to exploration success, developing mining operations.

A legally binding Heads of Agreement outlines a three stage investment to earn an increasing participatory interest in the Project. North River has the option to participate pro-rata at both Stage 2 and 3 to maintain their 40% interest in the Project.

- Stage 1 Baobab commits to funding a First Work Programme at a cost of not less that US\$625,000 over a period of not more than 12 months. The work programme will include 2,000m of diamond drilling. Baobab's participatory interest in the Project upon the completion of Stage 1 will be 60%.
- Stage 2 Subject to having completed the First Work Programme satisfactorily Baobab shall have the exclusive right to undertake a Pre-Feasibility Study over a period of not less than 12 months. Against Baobab having completed the Pre-Feasibility Study, its participatory interest in the Project shall increase to 75% (if North River elects not to participate).
- Stage 3 Upon completion of the Pre-Feasibility Study, Baobab will have the option to
  increase their participatory interest by an additional 15% (to 90% if North River elects not
  to participate) by undertaking and funding a Definitive Feasibility Study over a period of
  not less than 18 months.

Baobab has been nominated as the operator of the Joint Venture, reporting to a management committee represented by both parties to the Joint Venture. A review of historical exploration and data compilation is currently underway with drilling scheduled for Q2 2011.

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.

# A COPY OF THIS ANNOUNCEMENT IS AVAILABLE FOR DOWNLOAD FROM THE COMPANY'S WEBSITE www.baobabresources.com.

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#### **Notes:**

North River Resources plc is an AIM listed emerging southern African focussed multi commodity resource development company. Its current portfolio includes gold, base metal and uranium assets in Namibia; uranium, and base and precious metal interests in Mozambique. North River's strategy is to identify, acquire and develop a portfolio of resource opportunities in sub-Saharan Africa at various stages of development in order to create value for its shareholders. The Company has a highly experienced board and management of industry and corporate professionals, led by David Steinepreis and Luke Bryan.

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