



**ASX/ RELEASE**

**31 October 2017**

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**Board of Directors:**

**Stephen Dobson**  
Executive Chairman

**Mark Hohnen**  
Non-Executive Director

**Greg Cunnold**  
Technical Director

**Akram Aziz**  
Non-Executive Director

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# QUARTERLY ACTIVITIES REPORT

For the Period Ending 30 September 2017

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## HIGHLIGHTS

### ANGOLA 70%

#### OZANGO PROJECT

- DRILLING COMPLETED AT LONGONJO.
- MAIDEN RESOURCE ESTIMATE FOR LONGONJO.
- DRILLING COMMENCED AT CASSENHA HILL.

#### CORPORATE

- MR MARK HOHNEN JOINED THE BOARD AS NON-EXECUTIVE DIRECTOR

## **ANGOLA (RIFT VALLEY 70%)**

### **Diamond Drilling**

A local drilling contractor, Moto Engil, commenced drilling at Longonjo in May (Figure 1) and concluded in July 2017. Drill holes twinned previous air core drill holes (figure 2) with large diameter (PQ-116mm) diamond drill core. Triple tube barrels were used to ensure maximum core recovery.

Diamond core was obtained to provide the sample integrity necessary for a JORC compliant mineral resource estimation (MRE) as well as the material needed for detailed metallurgical test work, both of which will be incorporated into the independent scoping study to be carried out by AMEC Foster Wheeler.

The results of this program not only provided sufficient data to meet the initial requirements of the Company and its advisors, but identified additional high-grade TREO mineralisation and expanded the known mineralisation zones, with all drill holes returning significant rare earth mineralisation from surface to end of hole (table 1) and the mineralisation remaining open in all directions and at depth.

A total of 10 holes were drilled for an advance of 650 metres, of which 7 holes were drilled to a depth of 50m with 3 holes to 100m. These exceeded the depth of their air core twins, which were drilled to blade refusal (typically 30m) and evidenced the continuation of rare earth mineralisation into the fresh, bedrock material at Longonjo.



**Figure 1 – Diamond Drill Rig on site at Longonjo**

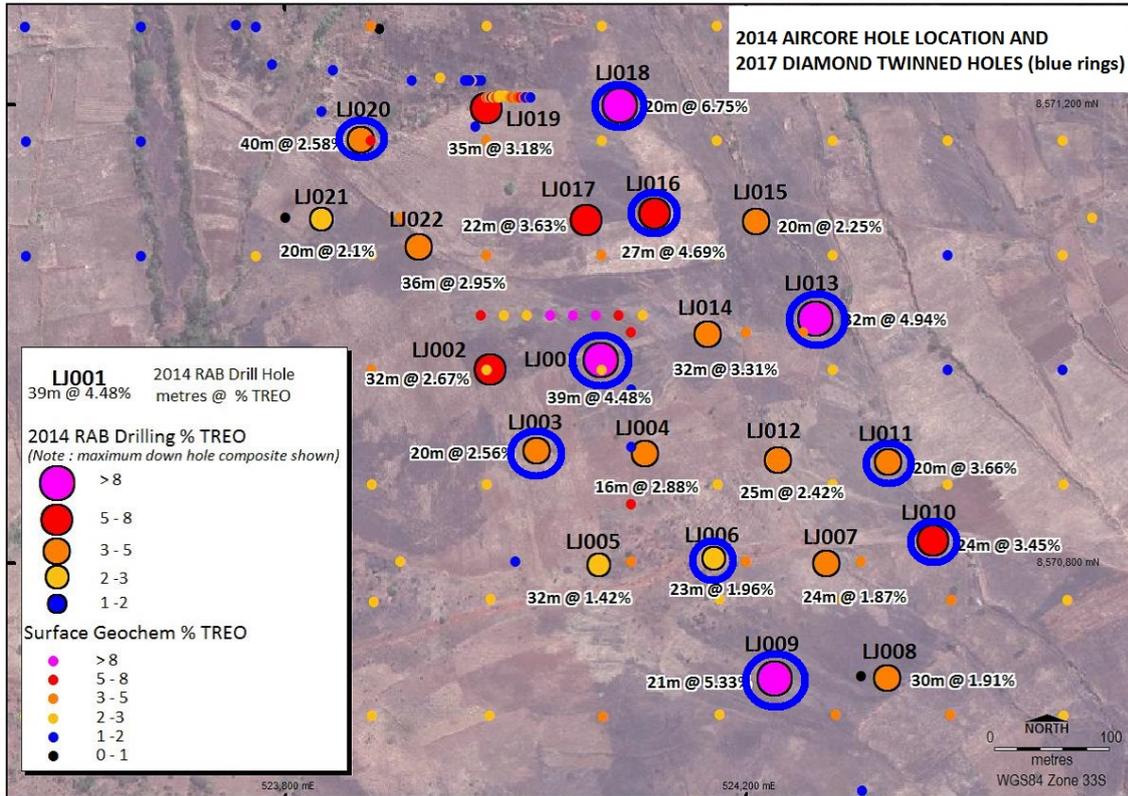


Figure 2 – Current Diamond Drill Hole Locations (blue ringed) with Respect to Previous Air Core Holes

Table 1: ALL DRILL HOLE RESULTS

• LJD001 - 50m @ 3.65 % INCLUDING 20m @ 6.47% FROM SURFACE
• LJD002 - 100m @ 3.30% INCLUDING 38m @ 5.04% FROM SURFACE
• LJD003 - 50m @ 3.17% INCLUDING 20m @ 4.98% FROM SURFACE
• LJD004 -100m @ 1.85% INCLUDING 10m @ 4.64% FROM SURFACE
• LJD005 - 50m @ 2.55% INCLUDING 10m @ 5.69% FROM SURFACE
• LJD006 - 50m @ 1.30% INCLUDING 10m @ 2.04% FROM SURFACE
• LJD007 - 51m @ 3.24% INCLUDING 16m @ 7.04% FROM SURFACE
• LJD008 - 51m @ 3.45% INCLUDING 16m @ 6.04% FROM SURFACE
• LJD009 - 50m @ 1.59% INCLUDING 10m @ 4.37% FROM SURFACE
• LJD010 - 100m @ 2.19% INCLUDING 12m @ 4.28% FROM SURFACE

## Mineral Resource Estimate

Diamond drilling results were performed on the basis of Mineral Resource Estimate (MRE) for the Longonjo magnet metals project, published during the quarter. The Inferred MRE is reported at a 1% cut-off grade and tabulations at various cut-off grades and material types are given in Tables 2, 3 and 4 below.

**Table 2: Inferred Mineral Resource (JORC 2012) – Longonjo Oxide Material.**

	Cut-off (% TREO)	Tonnage	Grade	Content
		Mt	TREO (%)	TREO (t)
Oxide	0.0	11.6	4.30	499
	0.5	11.6	4.30	499
	<b>1.0</b>	<b>11.6</b>	<b>4.30</b>	<b>499</b>
	1.5	11.6	4.32	501
	2.0	11.4	4.35	496
	2.5	10.9	4.44	484
	3.0	10.2	4.56	465
	3.5	9.3	4.68	435
	4.0	7.6	4.89	372

**Table 3: Inferred Mineral Resource (JORC 2012) – Longonjo Fresh Material.**

	Cut-off (% TREO)	Tonnage	Grade	Content
		Mt	TREO (%)	TREO (t)
Fresh	0.0	34.6	1.82	630
	0.5	34.6	1.82	630
	<b>1.0</b>	<b>33.2</b>	<b>1.87</b>	<b>621</b>
	1.5	24.5	2.08	510
	2.0	11.7	2.43	284
	2.5	3.7	2.95	109
	3.0	1.1	3.52	39
	3.5	0.4	4.09	16
	4.0	0.2	4.74	9

**Table 4: Inferred Mineral Resource (JORC 2012) – Longonjo Oxide and Fresh Material.**

	Cut-off (% TREO)	Tonnage	Grade	Content
		Mt	TREO (%)	TREO (t)
Combined - Fresh & Oxide	0.0	46.3	2.44	1,129
	0.5	46.2	2.44	1,129
	<b>1.0</b>	<b>44.7</b>	<b>2.50</b>	<b>1,120</b>
	1.5	36.1	2.80	1,011
	2.0	23.1	3.38	780
	2.5	14.6	4.06	593
	3.0	11.3	4.46	504
	3.5	9.8	4.61	452
	4.0	7.7	4.95	381

#### **Mineral Resource Tabulation – supporting information:**

- **5% Geological loss applied**
- **1% TREO Cut-off applied to the MRE**
- **Density used in the determination of the tonnes: 2.98t/m<sup>3</sup> for fresh (carbonatite) and 2.43t/m<sup>3</sup> for oxide**
- **100% of the MRE stated in above tables**
- **Effective Date based on latest technical information utilised**

Geological modelling and grade estimation were undertaken by Amec Foster Wheeler. The diamond drill (DD) and Rotary Air Blast (RAB) drilling grids are over an average length of ~780 north-south and ~395m east-west. Quality Assurance and Quality Control formed an integral part of the exploration process from drilling management, to shipment and analysis of the samples. A three-dimensional model was compiled using both the RAB and DD information. The two domains, fresh and oxide, were estimated separately. The estimation methodology employed was Inverse Distance Squared (ID2) utilizing the DD hole results. The block size for the grade model estimation was 50 X 50 X 2m (X, Y and Z respectively). The in-situ density applied to the volumes were obtained from measurements taken on samples from the Longonjo DD campaign.

The Inferred MRE covers a small portion, less than 10%, of the prospective Longonjo Carbonatite, based on the current geological understanding and available exploration information. The mineralization remains demonstrably open in all directions, and at depth, with the highest-grade tenor holes being largely on the periphery of the RAB (prefix 'LJ') and DD ('prefix LJD') drill holes.

A plan detailing the extent of the MRE in relation to the drilling is included below as Figure 1. A type section follows as Figure 2. The higher-grade oxide material conformably overlies the fresh material throughout the deposit, mineralised from surface in every drill hole. The average depth of the oxide zone is estimated at 20m below surface.

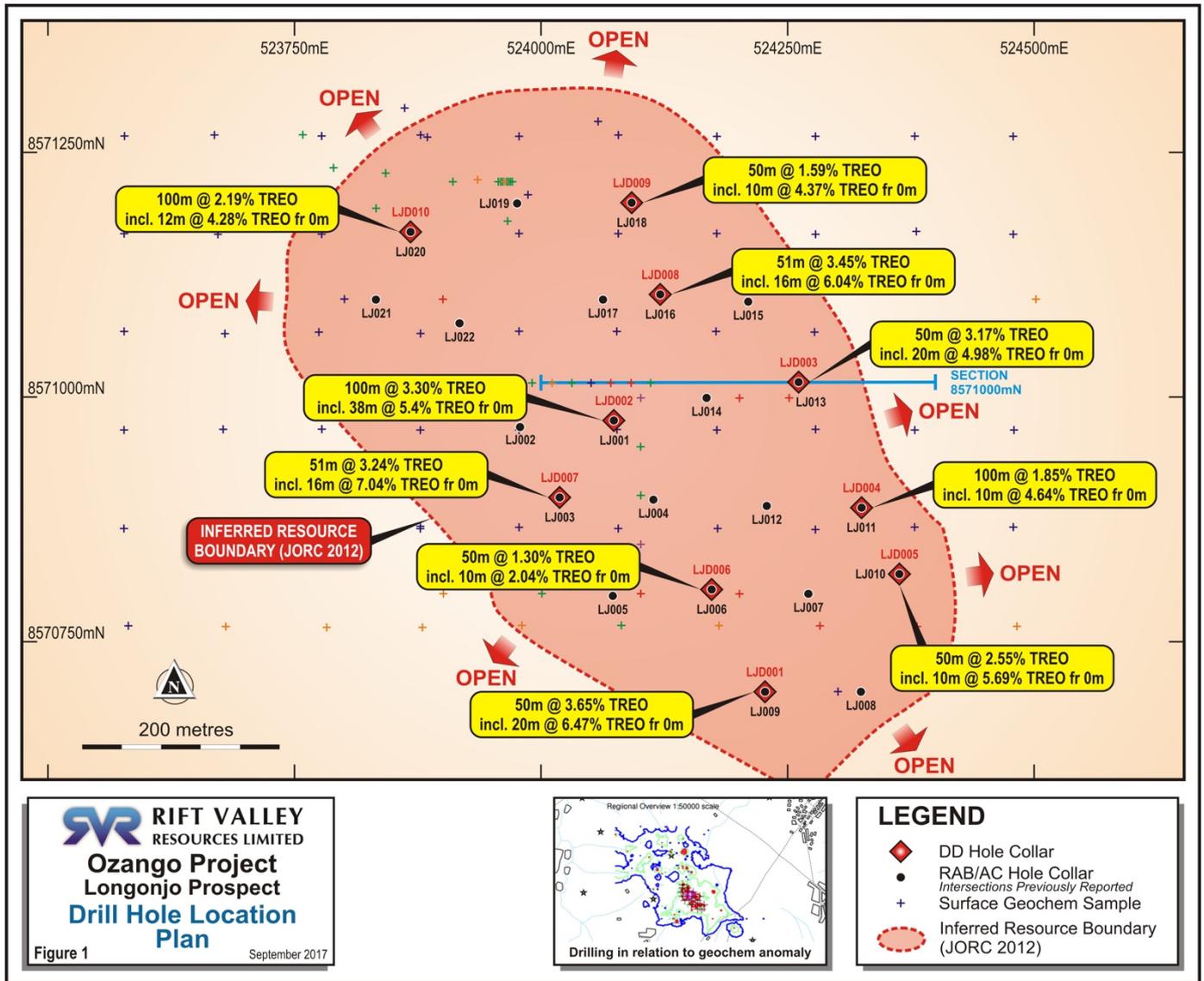
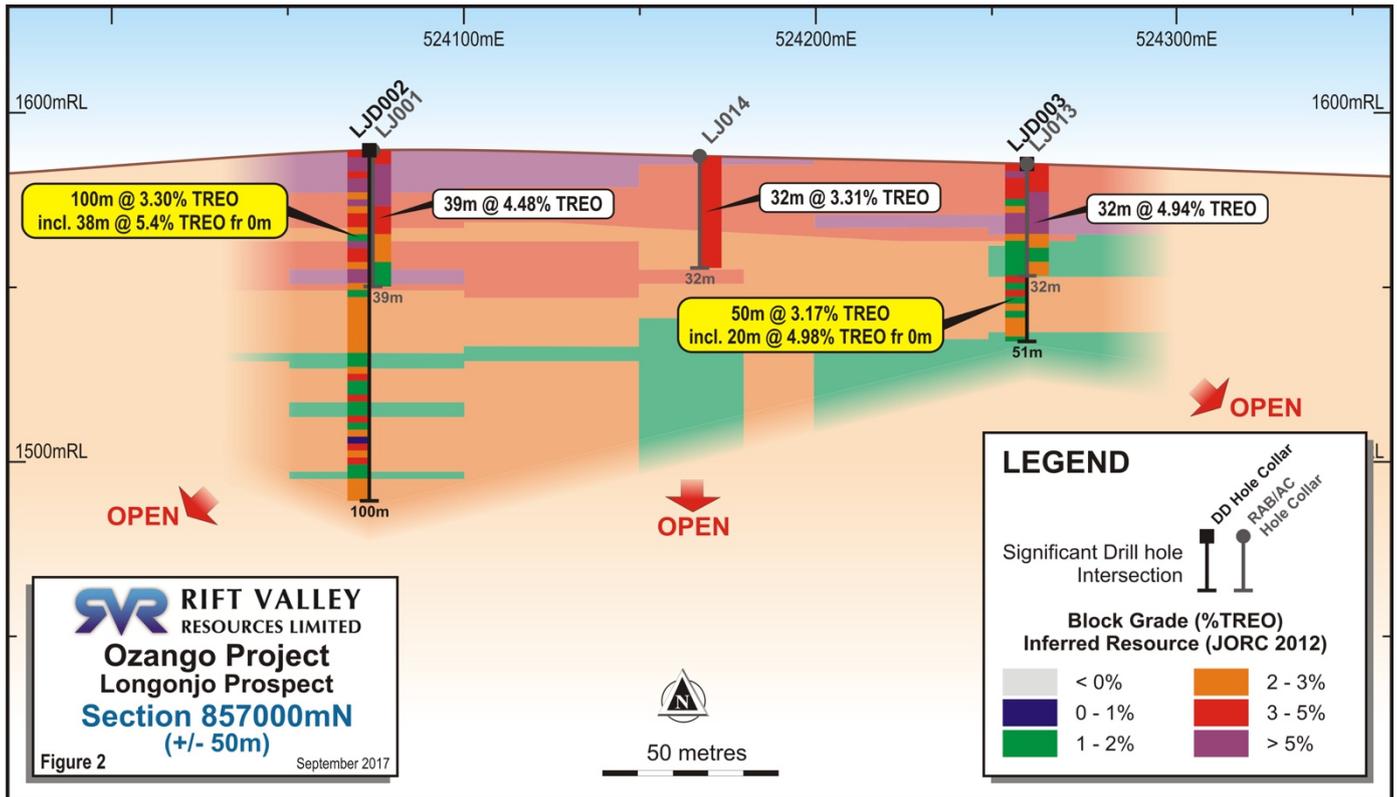


Figure 1. Plan View of the RAB and DD Holes, and Inferred MRE Boundary, for the Longonjo Magnet Metals Project.



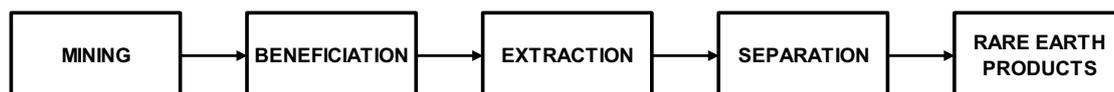
**Figure 2. Cross-section looking North illustrating the RAB and DD Holes and Inferred MRE Block Model for the Longonjo Magnet Metals Project.**

The Longonjo Mineral Resource Estimate forms the basis of the independent Scoping Study presently being carried out by Amec Foster Wheeler. Metallurgical test work is presently underway on composite samples of the diamond core. Both the oxide and fresh mineralisation types are being assessed for their potential for physical upgrading to produce a high-grade flotation concentrate. The Scoping Study is scheduled for completion in the coming quarter.

A detailed metallurgical testwork program has been scoped for implementation on the diamond drill core and composites.

Initially, the composites will be assayed and categorised using qualitative mineralogy (XRD). A bulk composite, typical on the mineralisation that will be seen in the first five to ten years of mining, will then be made for metallurgical testing. This composite will undergo quantitative mineralogy (QEMSCAN) to guide the testwork.

The testwork program will initially focus on the beneficiation stage, the process that physically upgrades the mined ore to a high grade, low mass mineral concentrate as shown in Figure 3. This will continue on from the previous work undertaken in the Desktop Study where concentrate grades of up to 19.44% REO were achieved.



**Figure 3 – Stages of Rare Earth Processing**

The concentrate produced from the beneficiation testwork will be used for the extraction testwork, again building on from the positive results reported in Desktop Study where extractions of the magnet metals praseodymium and neodymium exceeded 89%.

Once the drilling programme at Longonjo is completed the rig will mobilize to the Cassenha Hill prospect to test the extents of copper mineralization delineated in the maiden drilling programme during 2016.

## **TANZANIA**

During the quarter, new legislation was passed by the Tanzanian Government relating to the legal and regulatory framework governing the natural resources sector in Tanzania created significant uncertainty for the mining industry in Tanzania, however, while the ramifications are yet to be fully assessed they are expected to have limited impact on the Company due to its continual focus on the development of its Angolan projects.

The Company is currently undergoing a pre feasibility study on the Miyabi Assets in readiness to apply for a mining licence.

## **CORPORATE**

During the quarter experienced executive, Mr Mark Hohnen joined the Board as a Non-Executive Director.

The Company also advised that Geoff Gilmour resigned as Managing Director and from the Board. With the resignation of Geoff, Stephen Dobson moved to the role of Executive Chairman.

Securities in the Company as at 30 September 2017 was as follows:

- 738,778,046 fully paid ordinary shares
- 45,355,000 unlisted options exercisable at \$0.06 expiring 27 July 2018
- 32,500,000 unlisted options exercisable at \$0.035 expiring 5 May 2018
- 20,000,000 unlisted options exercisable at \$0.035 expiring 3 November 2018
- 5,000,000 unlisted options exercisable at \$0.04 expiring 2 November 2019
- 5,000,000 unlisted options exercisable at \$0.06 expiring 2 November 2019
- 3,000,000 performance rights
- 5,000,000 performance rights vest upon VWAMP \$0.06 for 90 days expiring 16 June 2019
- 3,000,000 Performance Rights vest upon raising of \$5m expiring 16 December 2018
- 2,000,000 Performance Rights vest on 16 June 2018
- 2,000,000 Options exercisable at \$0.05 on or before 6 April 2020

Unaudited Cash as at 30 September 2017 was \$930,000.

**ENDS**

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#### **COMPETENT PERSON STATEMENTS**

*We advise in accordance with Australian Stock Exchange Limited Listing Rules 5(6) that the exploration results contained within this report is based on information compiled by Mr. Greg Cunnold who is a member of the Australian Institute of Mining and Metallurgy. Mr Cunnold is a Director of Rift Valley Resources Ltd and has consented in writing to the inclusion in this ASX Release of matter based on the information so compiled by him in the form and context in which it appears. Mr Cunnold has sufficient experience relevant to the style of mineralisation and type of deposit under consideration to be qualified as a Competent Person as defined by the 2012 Edition of the "Australian Code for reporting of Exploration Results, Mineral Resources and Ore Reserves".*

*The information in this release that relates to Metallurgical Test-work is based on and fairly represents information compiled and / or reviewed by Mr Gavin Beer who is a Member of The Australasian Institute of Mining and Metallurgy and a Chartered Professional. Mr Beer is a Consulting Metallurgist and a full-time employee of Met-Chem Consulting Pty Ltd. Mr Beer has sufficient experience relevant to the activity which he is undertaking to be recognised as competent to compile and report such information. Mr Beer consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.*

*The information in this release that relates to the Mineral Resource estimate for Longonjo REE Project is based on information compiled by Mrs. Heather King who is a who is a member of a 'Recognised Professional Organisation' (RPO) included in a list posted on the ASX website from time to time, specifically the South African Council for Natural Scientific Professions, and Mrs. King is registered as a Professional Natural Scientist (Pr. Sci. Nat.) Mrs. King is a full-time employee of Amec Foster Wheeler, consulting to Rift Valley Resources. Mrs. Heather King has sufficient experience that is relevant to the style of mineralization 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'. Mrs. King consents to the inclusion in the report of the matters based on his (or her) information in the form and context in which it appears.*

**Tenement Information as at 30 September 2017**

<b>Country</b>	<b>Project Name</b>	<b>License Name</b>	<b>License no.</b>	<b>% Held at 30 June 2017</b>	<b>Change</b>	<b>% Held at 30 Sept 2017</b>
<b>Tanzania</b>	Kitongo	Ugambilo East	PL11175/2017	100%	-	100%
	Kitongo	Kitongo West	PL10655/2015	100%	-	100%
	Kitongo	Ugambilo North	PL6385/2010	100%	-	100%
	Kitongo	Mwagimagi	PL6499/2010	100%	-	100%
	Kitongo	Mwamazengo SE (2)	PL6543/2010	100%	-	100%
	Kitongo	Mwamazengo South (2)	PL6631/2010	100%	-	100%
	Kitongo	Ugambilo	PL10067/2014	100%	-	100%
	Kitongo	Kitongo	PL10068/2014	100%	-	100%
	Kitongo	Mwamazengo	PL10069/2014	100%	-	100%
	Kitongo	Isengwa Hills North	PL10060/2014	100%	-	100%
	kitongo	Busongo Northeast	PL10065/2014	100%	-	100%
	Kitongo	Gulumungu	PL10656/2015	100%	-	100%
	Kitongo	Ntalebujika	PL10660.2015	100%	-	100%
	Miyabi	Miyabi Dyke	PL8933/2013	100%	-	100%
	Miyabi	Miyabi South New	PL10149/2014	100%	-	100%
	Miyabi	Miyabi South 2 West	PL9782/2014	100%	-	100%
	Miyabi	Miyabi North	PL10908/2016	100%	-	100%
	Miyabi	Miyabi Airport New	PL10556/2015	100%	-	100%
	Miyabi	Mwabombo	PL10836/2016	100%	-	100%
	Miyabi	Miyabi Airport	PL6593/2010	100%	-	100%
	Mtemi	Chunya	PL9780/2014	100%	-	100%
	Mtemi	Chunya	PL9899/2014	100%	-	100%
<b>Angola</b>	Ozango	Ozango Minerais SA	Nº013/03/09/T.P/A NG-MGM/2015	70%	-	70%