

**MKANGO RESOURCES LTD.**  
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## **NEWS RELEASE**

### **MKANGO RESOURCES ANNOUNCES COMPLETION OF LEACH OPTIMIZATION TEST WORK AND PROVIDES UPDATE ON PRE-FEASIBILITY STUDY**

**Calgary, Alberta: October 28, 2013** – Mkango Resources Ltd. (TSXV-MKA) (the "**Corporation**" or "**Mkango**") is pleased to announce the completion of leach optimization test work on a rare earth mineral concentrate derived from flotation of a representative composite sample of drill core from the Songwe Hill rare earth project in Malawi. The results will be incorporated into the ongoing pre-feasibility study.

#### **Highlights**

- Leaching with dilute (20%) hydrochloric acid at ambient temperatures for a relatively short period of time (30 minutes) achieved good recoveries, in particular for critical and heavy rare earths. The mild leach conditions have important positive implications for plant design and capital expenditure:
  - ✓ **Good leach recoveries** – overall rare earth recoveries are greater than 80% with recovery of critical rare earths (CREO)<sup>1</sup> to the leach solution ranging from 86% to 93%
  - ✓ **Low temperature leaching** – high capital and energy intensive kilns will not be required
  - ✓ **Low strength acid** – enables the use of plastics or composite materials for tanks and pipework; will facilitate acid recycling using cheaper sulphuric acid
  - ✓ **Short leach time** – allows for a significant size reduction for the hydrometallurgical plant
  - ✓ **Conventional technology** - plant design will be largely comprised of tanks, pumps and filters
  - ✓ **Modular plant** – facilitates the potential for future expansions, the latter underpinned by significant resource base
- Mkango is now proceeding with further optimization of the purification, precipitation and acid recycle steps, with a view to generating product samples for marketing purposes. Proof of concept test work previously produced two potential products:
  - ✓ a high grade mixed rare earth carbonate product (59% TREO<sup>2</sup>, 7% HREO<sup>3</sup>/TREO); and
  - ✓ a heavy rare earth enriched mixed rare earth hydroxide product (55% TREO, 18% HREO/TREO)
- SNC Lavalin (Pty) is on schedule to complete various aspects of the pre-feasibility study, including the beneficiation and hydrometallurgical process plants, and project infrastructure. Current focus is on the design work for the beneficiation plant which is targeted for completion in November
- Digby Wells Environmental has completed a comprehensive environmental and social pre-feasibility report, which is a critical component of the pre-feasibility study and future project development

<sup>1</sup> CREO – critical rare earths comprising neodymium, europium, dysprosium, terbium, yttrium <sup>2</sup> TREO – total rare earth oxides including yttrium oxide; <sup>3</sup> HREO – heavy rare earth oxides including yttrium oxide

***William Dawes, Chief Executive of Mkango, stated “This is a further milestone towards completion of the pre-feasibility study, targeted for first quarter 2014. The pre-feasibility study is based on the previously defined Indicated mineral resource so no further drilling is anticipated in the near term. Songwe hosts a major strategic resource of rare earths in Malawi, with the critical rare earths, neodymium, dysprosium, europium, terbium and yttrium, accounting for circa 70% of the gross in-situ value at current prices, and praseodymium accounting for a further 15%.”***

Consistent with previous results, higher value critical and heavy rare earths leach more effectively than light rare earths such as lanthanum and cerium as indicated below:

#### **Leach recoveries**

<b>Rare earth</b>		<b>Recovery %</b>
Lanthanum	Light rare earth	75.0
Cerium	Light rare earth	79.5
Praseodymium	Light rare earth	83.3
Neodymium	Critical / light rare earth	85.8
Samarium	Light rare earth	89.4
Europium	Critical / heavy rare earth	90.9
Gadolinium	Heavy rare earth	92.1
Terbium	Critical / heavy rare earth	92.6
Dysprosium	Critical / heavy rare earth	92.6
Yttrium	Critical / heavy rare earth	89.8

Leach conditions were optimized with a view to minimizing acid and energy consumptions, and leach times, whilst maximising recoveries of critical and heavy rare earths.

The mild leach conditions are a function of the Songwe Hill project’s favourable mineralogy, comprising synchysite and apatite that is anomalously enriched in heavy rare earths, which means that high capital and energy intensive kilns will not be required in the flow sheet, in contrast to projects dominated by monazite, xenotime or other refractory REE minerals.

Scientific and technical information contained in this release in relation to metallurgical test work has been approved and verified by Mr Gavin Beer BSc. (Ext. Met.) MAusIMM (CP), consultant metallurgist who is a “Qualified Person” in accordance with National Instrument 43-101 – *Standards of Disclosure for Mineral Projects*.

#### **The Songwe Hill Rare Earth Project**

The Songwe Hill rare earth project is located within the 100% owned Exclusive Exploration Licence 0284/10R in southeast Malawi. The Songwe project is accessible by road from Zomba, the former capital, and Blantyre, the principal commercial town of Malawi. Total travel time from Blantyre is approximately 2 hours, which will reduce as infrastructure continues to be upgraded in the area.

On 22 November 2012, Mkango filed a Technical Report (the “Report”) for its maiden NI 43-101 mineral resource estimate entitled *NI 43-101 Technical Report and Mineral Resource Estimate for the Songwe Hill Rare Earth Element (REE) Project, Phalombe District, Republic of Malawi* authored by Scott Swinden, Ph.D, P.Geo. and Michael Hall, Pr.Sci.Nat., MAusIMM. The Report’s mineral resource estimates, as previously announced, are summarized below.

<b>Cut-off grade</b>	<b><i>In-situ</i> Indicated Mineral Resource estimate</b>	<b><i>In-situ</i> Inferred Mineral Resource estimate</b>
1.0% TREO	13.2 mt grading 1.62% TREO	18.6 mt grading 1.38% TREO
1.5% TREO	6.2 mt grading 2.05% TREO	5.1 mt grading 1.83% TREO

TREO – total rare earth oxides including yttrium. In-situ - no geological losses applied. mt - million tonnes

For further details of mineral resource estimates including breakdowns thereof, please refer to the Report which is available at [www.sedar.com](http://www.sedar.com).

### **Mkango Resources Ltd.**

Mkango's primary business is the exploration for rare earth elements and associated minerals in the Republic of Malawi. It holds, through its wholly owned subsidiary Lancaster Exploration Limited, a 100% interest in two exclusive prospecting licenses covering a combined area of 1,751 km<sup>2</sup> in southern Malawi. The main exploration target is the Songwe Hill rare earth deposit, which features carbonatite hosted rare earth mineralisation and was subject to previous exploration in the late 1980s.

In parallel, the company is also undertaking regional exploration in the second license area, known as Thambani, where a number of areas with potential for uranium, zircon, corundum and niobium have been identified.

The Corporation's corporate strategy is to further develop the Songwe Hill rare earth deposit and secure additional rare earth element and other mineral opportunities in Malawi and elsewhere in Africa.

On behalf of the Board of Mkango Resources Ltd.,

*"William Dawes"*  
Chief Executive Officer

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### **Cautionary Note Regarding Forward-Looking Statements**

This news release may contain forward-looking statements relating to the Corporation. Readers are cautioned not to place undue reliance on forward-looking statements, as there can be no assurance that the plans, intentions or expectations upon which they are based will occur. By their nature, forward-looking statements involve numerous assumptions, known and unknown risks and uncertainties, both general and specific, that contribute to the possibility that the predictions, forecasts, projections and other forward-looking statements will not occur, which may cause actual performance and results in

future periods to differ materially from any estimates or projections of future performance or results expressed or implied by such forward-looking statements. Such factors and risks include, among others, the interpretation and actual results of current exploration activities; uncertainty of estimates of mineral resources, changes in project parameters as plans continue to be refined; future commodity prices; possible variations in grade or recovery rates; failure of equipment or processes to operate as anticipated; labour disputes and other risks of the mining industry; delays in obtaining governmental approvals or financing or in the completion of exploration.

The forward-looking statements contained in this press release are made as of the date of this press release. Except as required by law, the Corporation disclaims any intention and assume no obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by applicable securities law. Additionally, the Corporation undertakes no obligation to comment on the expectations of, or statements made, by third parties in respect of the matters discussed above.

***The TSX Venture Exchange has neither approved nor disapproved the contents of this press release.***

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