

**ASX:KRE**

16 October 2012

Kimberley Rare Earths Limited  
ABN 20 147 678 779

**Directors**  
Jon Parker – Chairman & NED  
Ian Macpherson – NED  
Tim Dobson – Managing Director  
Allan Trench – NED  
Mal James – NED

**Management**  
Tim Dobson – Managing Director  
Geoff Collis – GM Exploration  
Michael Chan – GM Project Dev.  
Darren Crawte – Company Secretary

**Head Office**  
Suite 1, 83 Havelock St  
West Perth WA 6005  
Telephone: +61 8 9486 4326  
Facsimile: +61 8 9486 4327

**Website**  
[www.kimberleyrareearths.com.au](http://www.kimberleyrareearths.com.au)

**Capital Structure**  
128.2m shares  
6.0m 25c, 2014 unlisted options  
3.5m 30c, 2014 unlisted options  
0.75m 30c, 2015 unlisted options

**Cash at 30 September 2012**  
\$11.0million

**Market cap at 3 October 2012**  
\$7.82million

For further information,  
please contact:

**TIM DOBSON**  
Managing Director

[info@kimberleyrareearths.com.au](mailto:info@kimberleyrareearths.com.au)  
Tel: +61 8 9486 4326

## **Malilongue Project: Further lithium-tantalum-tin prospectivity confirmed**

### **KEY POINTS**

- **Two further significant Li-Ta-Sn soil anomalies confirmed**
  - Lithium-in-soil values peak at over 289 ppm Li
  - Tantalum-in-soil values peak at over 59 ppm Ta
  - Tin-in-soil values peak at 990 ppm Sn
  - Dimensions exceed 1.5 km in strike, 500 m in width
- **Prospects analogous to mined Western Australian deposits**

Kimberley Rare Earths Limited (ASX:KRE), is pleased to provide a further exploration update for its Malilongue<sup>1</sup> strategic metals project located in Mozambique (Appendix 1).

The Company began exploration at Malilongue in March 2012 and recently announced significant rare earth anomalism at three separate prospects named Vundu, Tombalala and Central (ASX Announcements 29 June 2012 and 4 September 2012). The Malilongue geological environment is highly prospective for many types of economic mineralisation and the exploration program has been designed to screen the licence areas for all possibilities.

Further soil geochemical assay results are now to hand and confirm that the project is highly prospective for lithium-tantalum-tin (Li-Ta-Sn) mineralisation. Two further prospects have now been identified along strike from Chigaio, a significant pegmatite occurrence discovered and announced on the 17 July 2012. These prospects display similarities to the world-scale Greenbushes lithium mine in Western Australia.



<sup>1</sup> The Company has the right to earn up to 90% of the mineral rights, excluding gemstones, in the Malilongue Project.

**All first phase soil geochemical assays received.**

A total of 1,847 soil samples have been collected from around the margins of the Malilongue granite using a series of grids. The program was designed specifically to test a number of airborne radiometric anomalies defined within the granite contact margin for rare earths and other strategic metals, an exploration approach consistent with existing deposits currently being evaluated around the world. The full suite of assay results have now been received from these samples and reveal considerable lithium-tantalum-tin anomalism from within the Eastern Pegmatite Field grid (Figure 1).

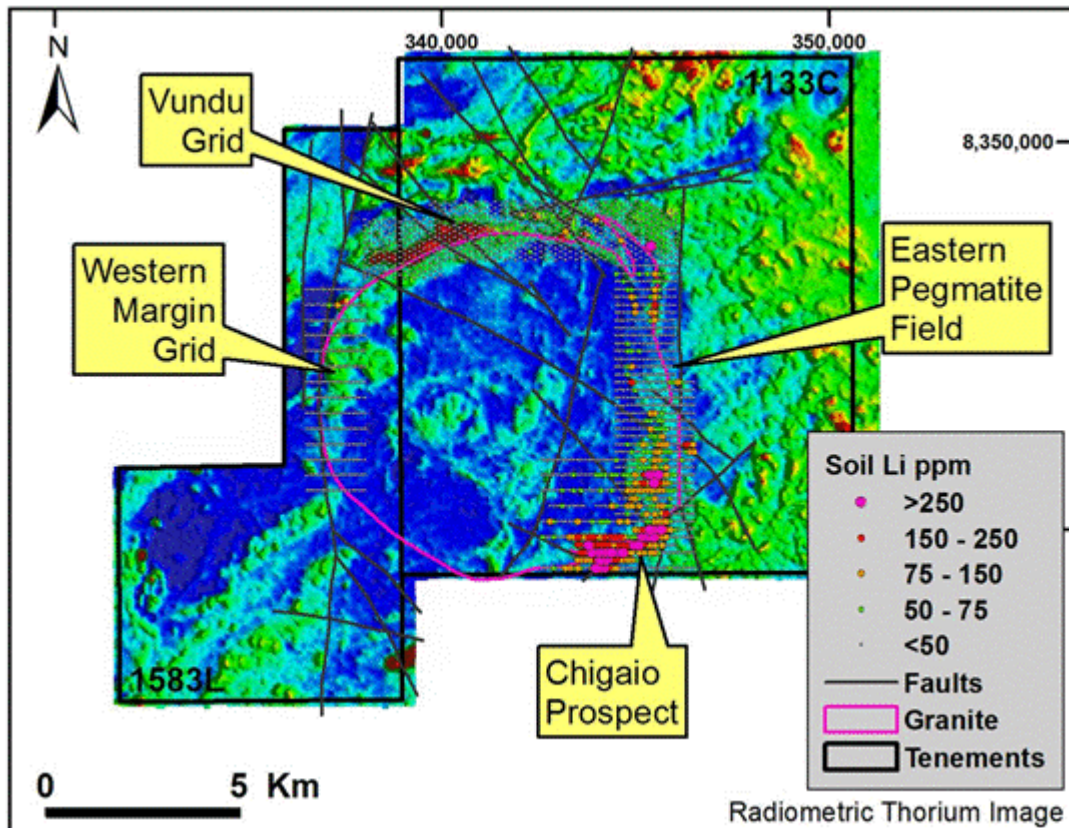


Figure 1: Soil sample locations showing lithium results.

**Further significant Li-Ta-Sn surface anomalism defined.**

The full suite of analytical results have now been interpreted and reveal considerable Li-Ta-Sn surface anomalism located within the Eastern Pegmatite Field. This area has been a high priority target for KRE as it contains over 40 separate pegmatite occurrences that have historically been worked by artisanal miners for high quality gemstones including topaz, aquamarine and amazonite. Two new Li-Ta-Sn prospects have been identified and named Malala and Tombalala North (Figures 2 to 4).



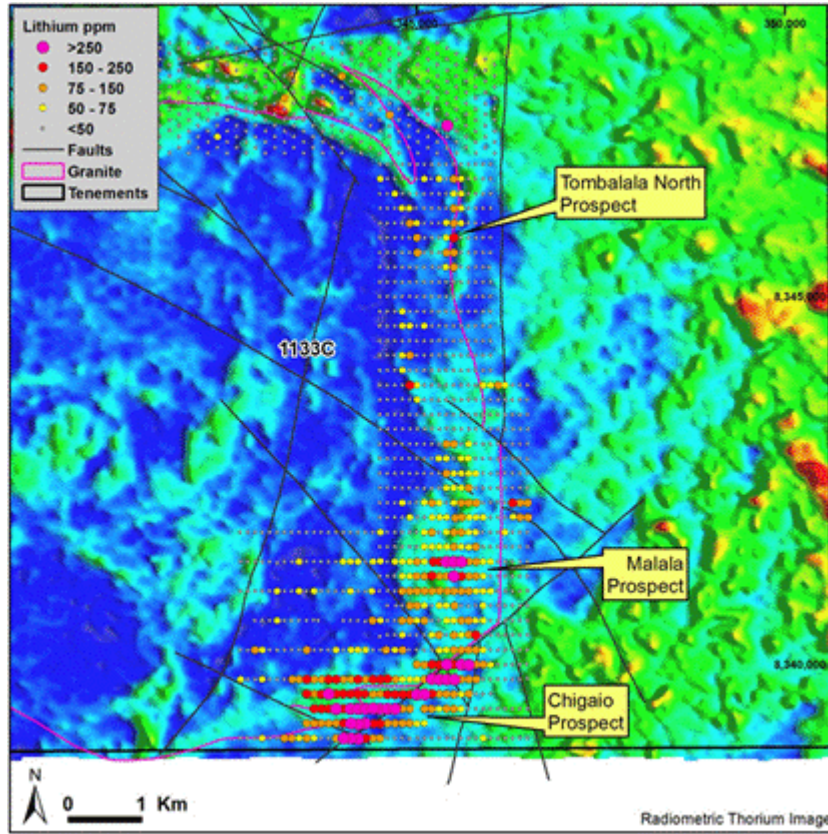


Figure 2: Location of prospects as defined by Li-in-soil assay results.

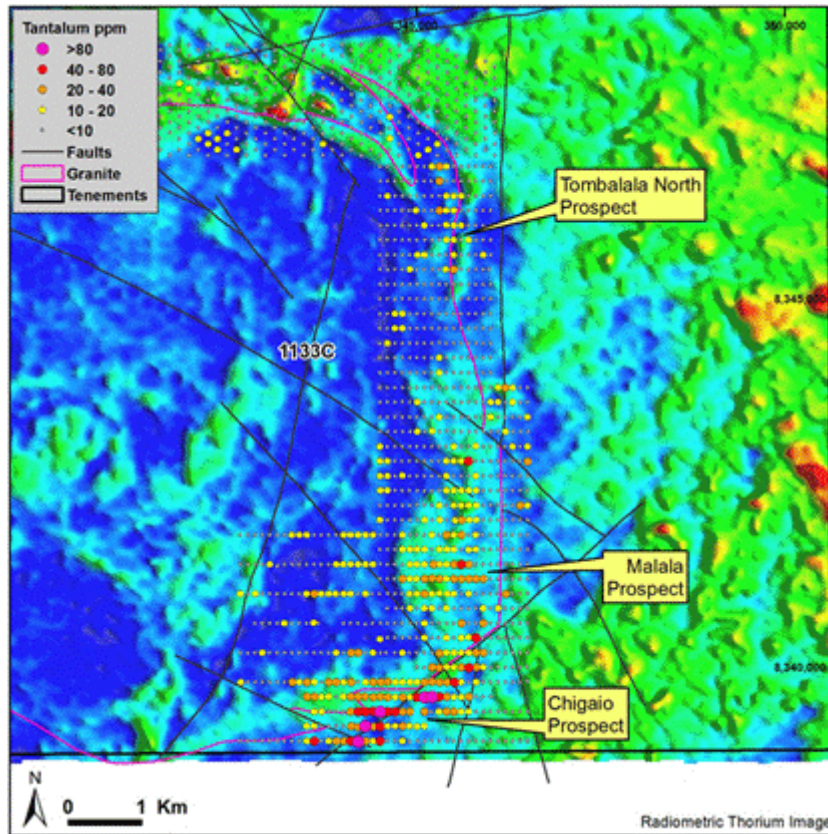


Figure 3: Location of prospects as defined by Ta-in-soil assay results.

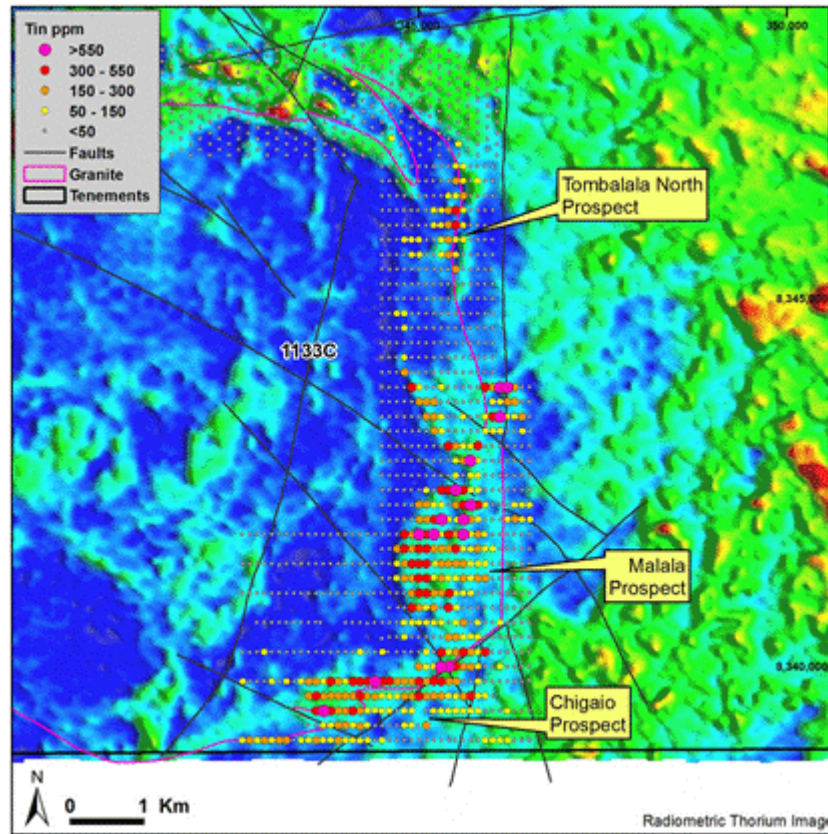


Figure 4: Location of prospects as defined by Sn-in-soil assay results.

These two new zones complement the previously announced major Chigaio prospect (ASX announcement 17 July 2012) and have the potential to add significantly to any mineralisation discovered within the tenements. Anomaly specifics are detailed in Table 1.

Prospect	Chigaio	Malala	Tombalala North
<b>Lithium</b>			
Li Threshold (ppm)	100	50	50
Li Peak (ppm)	450	289	151
Li Dimensions (m)	2000 x 400	2000 x 500	1200 x 200
<b>Tantalum</b>			
Ta Threshold (ppm)	20	10	10
Ta Peak (ppm)	270	59	33
Ta Dimensions (m)	1800 x 300	1400 x 800	1400 x 200
<b>Tin</b>			
Sn Threshold (ppm)	100	50	50
Sn Peak (ppm)	992	990	362
Sn Dimensions (m)	1800 x 300	3000 x 800	1400 x 300

Table 1: Specific characteristics for each of the three soil geochemical anomalies identified.

The granite margin location and north-south orientation of both the Malala and Tombalala North prospects are considered significant due to the strong structural control to pegmatite development in this region. Both geological mapping and aeromagnetic interpretation support a very strong N-S structural fabric along the eastern margin, potentially controlling pegmatite emplacement.

Geological mapping at Chigaio has identified that the surface Li-Ta-Sn anomalism is directly related to a large pegmatite body emplaced along a major NE trending structure that defines the SE contact of the Malilongue granite. The lithium, tantalum and tin anomalism are not entirely coherent and are slightly offset from each other. This may be indicative of zoned pegmatite bodies which is consistent with similar deposits currently being mined around the world.

### Comparison with Australian producers

Early indications suggest that the Chigaio pegmatite is of a particular rare element class known as LCT (Lithium, Cesium, Tantalum)<sup>2</sup>. This type of pegmatite is one of the world's most important sources of tantalum, lithium, tin, other rare metals and gemstones.

For example, two such pegmatites currently being exploited in Western Australia have yielded large tonnage Resources (Table 2), namely the pegmatite mines at Greenbushes operated by Talison Lithium Limited and at Mt Cattlin operated by Galaxy Resources Limited.

Deposit	Mineral Resource <sup>3</sup>			Source
	Category	Tonnes (Mt)	Grade	
Greenbushes - Lithium	Measured	0.2	3.9 % Li <sub>2</sub> O	31 March 2011,
	Indicated	70.2	2.6 % Li <sub>2</sub> O	Talison Lithium Limited,
	Inferred	2.0	2.2 % Li <sub>2</sub> O	NI 43-101 Technical Report
Greenbushes - Tantalum	Measured	44.8	163 ppm Ta <sub>2</sub> O <sub>5</sub>	30 June 2003,
	Indicated	85.0	148 ppm Ta <sub>2</sub> O <sub>5</sub>	Sons of Gwalia,
	Inferred	62.4	164 ppm Ta <sub>2</sub> O <sub>5</sub>	2003 Annual Report
Mt Cattlin	Measured	3.2	1.2 % Li <sub>2</sub> O	February 2011,
	Indicated	10.6	1.1 % Li <sub>2</sub> O	Galaxy Resources Limited,
	Inferred	4.4	1.1 % Li <sub>2</sub> O	ASX Release 22 March 2011

Table 2: Current and historic mineral resources from the Greenbushes and Mt Cattlin deposits

For comparison with anomalous soil geochemical values achieved by KRE's sampling, it should be noted that 450 ppm Li equates to 0.1 % Li<sub>2</sub>O and that 270 ppm Ta equates to 330 ppm Ta<sub>2</sub>O<sub>5</sub>.

### Follow up exploration in progress

A program of trenching has been completed at Chigaio where a total of 3,003 metres were excavated within 6 separate trenches spaced evenly over the surface extent of the soil anomalism. Two further trenches have also commenced at Malala to test the highest soil values. All trenches are being continuously channel sampled using three meter composite samples and assay results are expected during the fourth quarter of 2012. This area exhibits a shallow weathering profile and trenching provides a low cost and effective follow-up test of the soil anomalism.

<sup>2</sup> Cerny, P., 1989a. Characteristics of pegmatite deposits of tantalum in *Lanthanides, Tantalum and Niobium: Society for Geology Applied to Mineral Deposits*, Special Publication 7, Springer-Verlag, p. 192-236.

<sup>3</sup> Reported in accordance with the JORC code, or National Instrument 43-101 in the case of Talison Lithium Limited.





Figure 5: Chigaio pegmatite exposed in artisanal working showing very coarse green amazonite



Figure 6: Trenching at Chigaio.

**Competent Person Statement**

Information in this ASX release that relates to exploration or exploration results is based on information compiled by Mr. Geoff Collis, who is a member of the Australasian Institute of Mining and Metallurgy and has sufficient exploration experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activities which are being undertaken to qualify as a Competent Person as defined in the 2004 Edition of the "Australian Code for Reporting of Mineral Resources and Ore Reserves". Mr Collis consents to the inclusion of these estimates in the form and context in which they appear.



Appendix 1 – Malilongue Project location map



Glossary

<b>Aeromagnetic</b>	Airborne geophysical technique where the intensity of the Earth's magnetic field is measured in a systematic way.
<b>Alluvium</b>	Loose unconsolidated soil or sediment eroded and deposited by water.
<b>Amazonite</b>	A bright green mineral of limited occurrence that can be cut and used as a gemstone.
<b>Carbonatites</b>	Intrusive igneous rocks with a composition of greater than 50 % carbonate minerals.
<b>Diamond Drilling</b>	(or <b>Core Drilling</b> ) A drilling technique which uses a diamond-set drill bit to produce a cylindrical core of rock.
<b>Dykes</b>	Igneous rocks that intrude the geological sequence at a high angle to the geological layering
<b>Eluvium</b>	Loose unconsolidated soil or sediment deposited under gravitational weathering and accumulation processes.
<b>Gemstones</b>	In the Heads of Agreement signed with GWM covering farm-in rights to the Malilongue heavy rare earths project in Mozambique, gemstones is defined as topaz, aqua-marine and amazonite.
<b>HREO</b>	Heavy rare earth oxides. The oxides of the 9 heavy rare earth elements Europium (Eu), Gadolinium (Gd), Terbium (Tb), Dysprosium (Dy), Holmium (Ho), Erbium (Er), Thulium (Tm), Ytterbium (Yb), Lutetium (Lu) plus Yttrium (Y).
<b>LEO</b>	Light rare earth oxides. The oxides of the 5 light rare earth elements; Lanthanum (La), Cerium (Ce), Praseodymium (Pr), Neodymium (Nd), Samarium (Sm). Note, excludes Promethium (Pm) due to its transient (radioactive) nature.
<b>Pegmatite</b>	A very coarse grained igneous intrusive rock composed predominantly of quartz, feldspar and mica. Certain classes of pegmatite commonly host significant strategic metal ore deposits.
<b>ppm</b>	Parts per million by weight (10,000 ppm equals 1.0 %).
<b>Pyroxenite</b>	Ultramafic igneous rock comprising predominantly minerals of the pyroxene group.
<b>RAB</b>	Rotary air blast, a cost-effective drilling technique used to sample weathered rock.
<b>RC</b>	Reverse circulation, a drilling technique that is used to return uncontaminated pulverised rock samples through a central annulus inside the drill pipes. RC samples can be used in industry-standard Mineral Resource statements.
<b>REO</b>	The oxides of the 14 rare earth elements; Lanthanum (La), Cerium (Ce), Praseodymium (Pr), Neodymium (Nd), Samarium (Sm), Europium (Eu), Gadolinium (Gd), Terbium (Tb), Dysprosium (Dy), Holmium (Ho), Erbium (Er), Thulium (Tm), Ytterbium (Yb), Lutetium (Lu) plus Yttrium (Y) but excluding Promethium (Pm).
<b>Sills</b>	Igneous rocks that intrude the geological sequence at a low angle or sub-parallel to the geological layering
<b>TREO</b>	The sum total of the 14 rare earth oxides, Lanthanum to Lutetium plus Yttrium as defined above under REO.
<b>Xenotime</b>	A rare earth phosphate mineral comprising predominantly yttrium phosphate (YPO <sub>4</sub> ). Dysprosium, Erbium and Terbium can substitute for Yttrium.