

6th February 2012

ASX RELEASE



# NEW DRILL RESULTS FROM THE NGUALLA RARE EARTH PROJECT

## Highlights:

Peak Resources Limited (Peak) is pleased to report additional new assay results received from a further 15 holes of the recently completed resource drilling program at the Ngualla Rare Earth Project in southern Tanzania.

New assays received from drill holes on the most northern drill traverse of the Southern Rare Earth Zone ensure that the upcoming maiden resource will remain open to the north. Infill holes confirm the continuity of mineralisation in the centre of the deposit.

Further assays from reconnaissance exploration holes in the Northern Zone have returned wide rare earth, niobium – tantalum and phosphate intersections 620m to the west of recent results and confirm the potential for extensive zones of each of these commodities that are currently only sparsely tested by drilling.

## Rare Earth Mineralisation

Intersection highlights received from nine new holes within the Southern Rare Earth Zone include:

<b>NDD007:</b>	<b>49.08m at 5.08% REO</b> from surface and <b>95.51m at 5.06% REO</b> from 52.49m
<b>NRC126:</b>	<b>32m at 5.06% REO</b> from surface
<b>NRC128:</b>	<b>34m at 5.03% REO</b> from surface
<b>NRC130:</b>	<b>120m at 3.52% REO</b> from surface to EOH

Just 6% of sample assay results are now outstanding from the resource drilling program and the maiden JORC compliant resource estimate for the Ngualla rare earth mineralisation remains on schedule to be completed by the end of the first quarter of 2012.

## Niobium – Tantalum and Phosphate Mineralisation

Assay results from an additional five holes in the Northern Zone include:

<b>NRC146:</b>	<b>56m at 0.48% Nb<sub>2</sub>O<sub>5</sub>, 137ppm Ta<sub>2</sub>O<sub>5</sub> and 1.28% REO</b> from surface and <b>34m at 22.1% phosphate</b> from 28m
----------------	--

A drill hole in the north east of the Southern Rare Earth Zone, 650m to the south of drilling in the Northern Zone, also returned high grade niobium:

<b>NRC127:</b>	<b>8m at 1.31% Nb<sub>2</sub>O<sub>5</sub> and 179ppm Ta<sub>2</sub>O<sub>5</sub></b> from 8m
----------------	---

The grade, near surface nature and potential extent of this second style of mineralisation in the Northern Zone are encouraging and the Company looks forward to the results from the remaining 14 holes of the reconnaissance program.

REO = Total Rare Earth Oxide including yttrium. EOH = end of hole. See Table 1 for individual rare earth distribution and Tables 2 to 7 for drill intersection details.

Peak Resources Ltd  
Level 1, 11 Ogilvie Road  
Mount Pleasant, Western Australia 6153  
  
PO Box 1271, Canning Bridge  
Western Australia 6153

Directors:  
Alastair Hunter, Non-Executive Chairman  
Richard Beazley, Managing Director  
Dave Hammond, Technical Director  
Jonathan Murray, Non-Executive Director  
Linda Paini, Company Secretary

ASX Symbol: PEK  
Telephone: +61 8 9316 9599  
Email: [info@peakresources.com.au](mailto:info@peakresources.com.au)  
ACN 112 546 700  
[www.peakresources.com.au](http://www.peakresources.com.au)

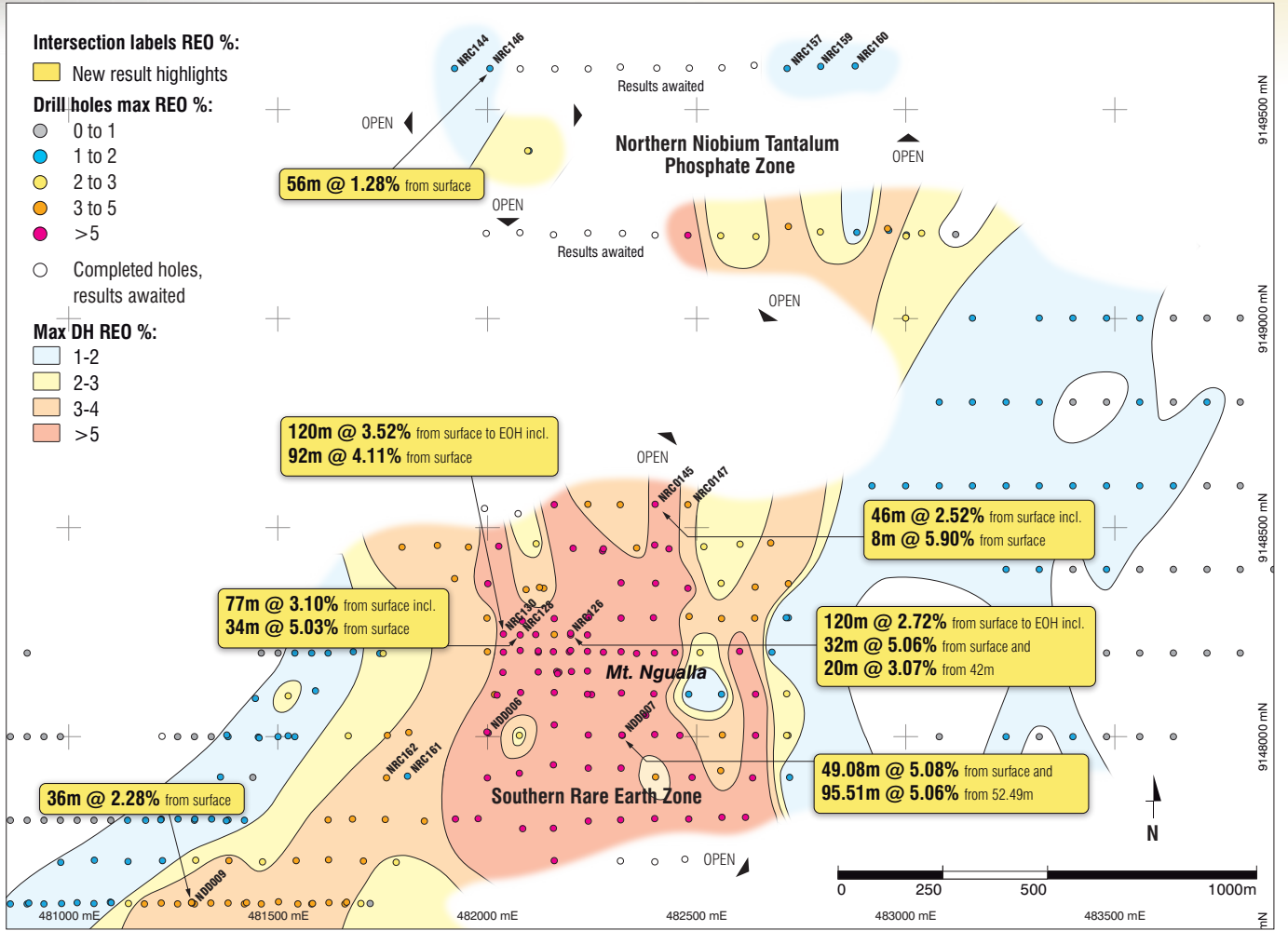


Figure 1: Plan of new rare earth intersection highlights (hole numbers labelled) and drilling completed to date, maximum down hole REO% contours, Southern Rare Earth and Northern Zones.

**Background**

Ngualla is one of the largest and better grade new rare earth discoveries of recent years, with mineralisation still open to the north and south. The Company has rapidly advanced the project since completing the first reconnaissance drill holes in June 2010. A 19,046m resource drilling program was recently completed on 30th November 2011.

The maiden JORC compliant rare earth resource for the Southern Rare Earth and South West Alluvial Zones is scheduled for completion by the end of the first quarter 2012.

Rare earth mineralisation extends from surface and is similar in style to Mt Weld (Lynas Corporation Ltd) in Western Australia, being rare earth enrichment in the deeply weathered regolith profile of a large carbonatite. The project also has potential to host large, near surface deposits of niobium – tantalum and phosphate within extensive colluvial deposits and the Northern Zone.

Additional assay results have been received and are presented from the resource drilling program and also from reconnaissance drill holes in the more sparsely tested Northern Niobium – Tantalum - Phosphate Zone.

## Rare Earth Mineralisation

The latest assay results received from a further nine holes of the resource drilling program in the Southern Rare Earth Zone (SREZ) (Figure 1) include several wide and high grade intersections from surface:

DRILL HOLE	INTERSECTION
<b>NDD007:</b>	<b>49.08m at 5.08% REO</b> from surface and <b>95.51m at 5.06% REO</b> from 52.49m
<b>NRC126:</b>	<b>120m at 2.72% REO</b> from surface to EOH <i>including:</i> <b>32m at 5.06% REO</b> from surface
<b>NRC128:</b>	<b>34m at 5.03% REO</b> from surface
<b>NRC130:</b>	<b>120m at 3.52% REO</b> from surface to EOH

SREZ REO intersection details included in Table 2. Distribution of individual REO's shown in Table 1.

Some of the new results intersections are located on the northern drill traverse of the current drill pattern in the **Southern Rare Earth Zone** and ensure that the upcoming maiden resource will remain open to the north.

Infill holes confirm the continuity of mineralisation in the centre of the deposit and assay results for three diamond drill holes drilled for metallurgical samples compare closely with their reverse circulation (RC) twins.

Additional rare earth mineralised intersections were returned from the northern reconnaissance drill traverse in the **Northern Niobium – Tantalum – Phosphate Zone**, located one kilometre north of the Southern Rare Earth Zone. These latest results are the first from this area and include:

**NRC146: 56m at 1.28% REO** from surface

Northern Zone REO intersection details included in Table 3. Distribution of individual REO's shown in Table 1.

The rare earth mineralisation above is hosted by transported iron rich sediments that infill the irregular karstic surface of the carbonatite. Niobium – tantalum and phosphate also accompany the rare earths in this area (see following pages of this report).

The new results are located over one kilometre north of the Southern Rare Earth Zone (Figure 1) and confirm the potential for extensive zones of each of these commodities that are currently only sparsely tested by drilling.

The Northern Zone rare earth mineralisation contains a higher proportion of more valuable heavy and critical rare earths than the Southern Rare Earth Zone. Table 1 below compares the relative distribution of individual rare earths in the two zones at Ngualla and also to some large rare earth deposits.

**Table 1: Relative components of individual REO's (including scandium and yttrium) as a percentage of total REO for some large rare earth deposits and the Ngualla Southern Rare Earth and Northern Zones (>1% REO).**

		RARE EARTHS CONTENT (% OF TOTAL REO)					
		NGUALLA SREZ %	NGUALLA NORTH ZONE %	NOLANS BORE %	MOUNTAIN PASS %	BAIYUNEBO %	MT WELD %
Light RE	Lanthanum	27.5	22.0	19.7	33.2	27.1	25.6
	Cerium	48.4	44.7	47.5	49.1	49.9	45.7
	Praseodymium	4.67	5.07	5.82	4.34	5.15	5.42
	Neodymium	16.2	18.7	21.2	12.0	15.4	18.6
	Samarium	1.54	2.69	2.37	0.80	1.15	2.44
Heavy RE	Europium	0.30	0.71	0.4	0.12	0.19	0.55
	Gadolinium	0.68	1.72	1	0.17	0.4	0.97
	Terbium	0.05	0.19	0.08	-	-	0.09
	Dysprosium	0.11	0.71	0.33	-	0.3	0.16
	Other	0.07	0.98	0.21	0.16	0.03	0.04
	Yttrium	0.29	2.49	1.32	0.1	0.2	0.37
	<b>Total %</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

(source: Arafura Ltd website)

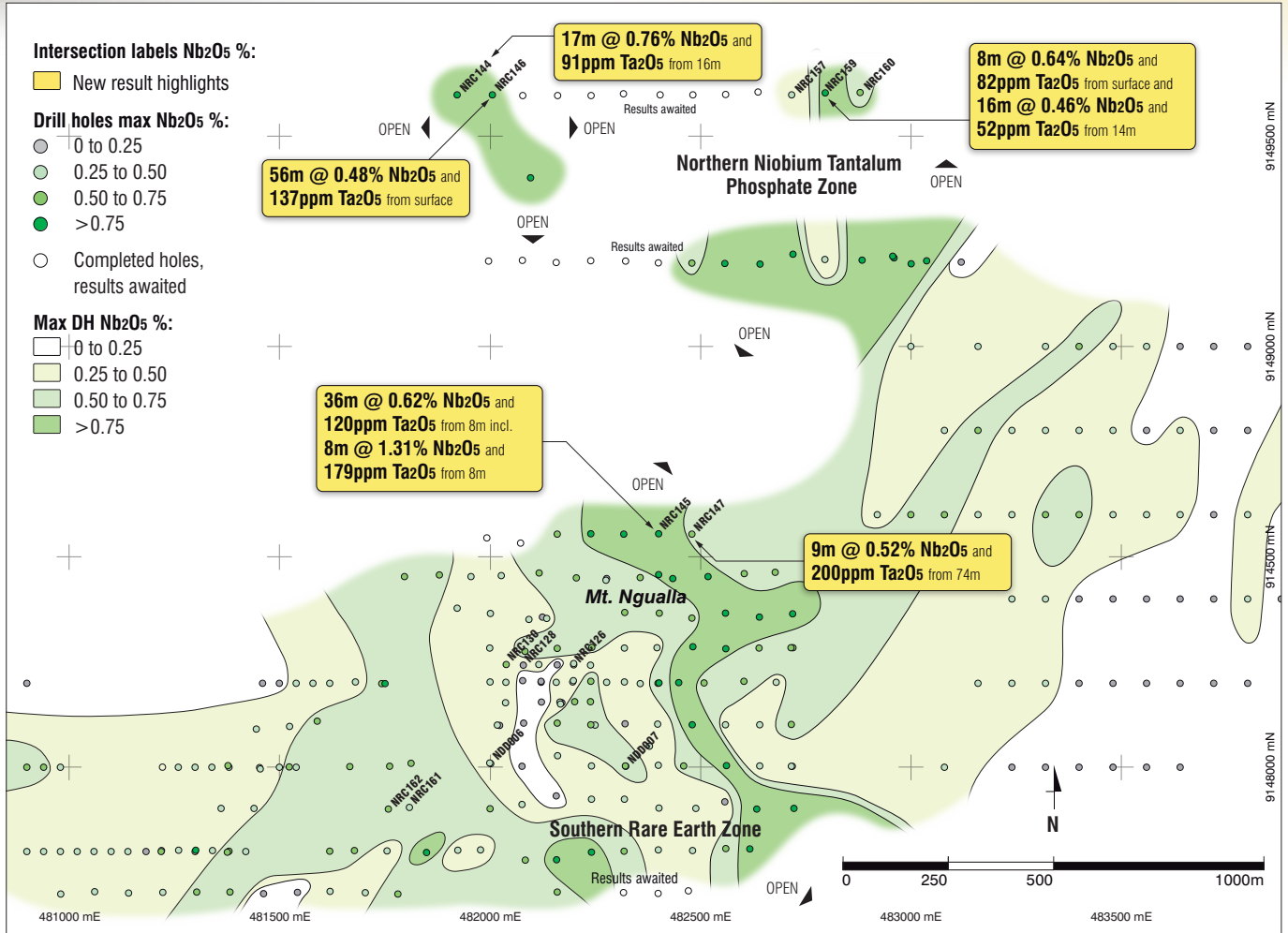


Figure 2: Plan view of maximum down hole Nb<sub>2</sub>O<sub>5</sub> in the Southern Rare Earth and Northern Zones of the Ngualla Carbonatite showing new and previous niobium – tantalum intersections highlights. Mineralisation remains open to the north, south and west.

### Niobium – Tantalum and Phosphate Mineralisation

The rare earth potential at Ngualla remains the Company’s primary focus. However, assay results received from reconnaissance exploration drilling in the Northern Niobium – Tantalum – Phosphate Zone confirm that the Ngualla Carbonatite is also highly prospective for niobium – tantalum and phosphate.

New results from a further five holes of this year’s reconnaissance exploration drilling program in the Northern Zone, (Figure 2) returned wide intersections of these metals from surface in addition to the rare earth mineralisation described above and including:

DRILL HOLE	INTERSECTION (NIOBIUM – TANTALUM)
<b>NRC146:</b>	<b>56m at 0.48% Nb<sub>2</sub>O<sub>5</sub> and 137ppm Ta<sub>2</sub>O<sub>5</sub> from surface</b>
<b>NRC144:</b>	<b>17m at 0.76% Nb<sub>2</sub>O<sub>5</sub> and 91ppm Ta<sub>2</sub>O<sub>5</sub> from 16m</b>
<b>NRC159:</b>	<b>8m at 0.64% Nb<sub>2</sub>O<sub>5</sub> and 82ppm Ta<sub>2</sub>O<sub>5</sub> from surface and 16m at 0.46% Nb<sub>2</sub>O<sub>5</sub> and 52ppm Ta<sub>2</sub>O<sub>5</sub> from 14m</b>

Northern Zone niobium – tantalum intersection details included in Table 4.

A drill hole in the north east of the Southern Rare Earth Zone, 650m to the south of drilling in the Northern Zone, also returned high grade niobium:

<b>NRC127:</b>	<b>8m at 1.31% Nb<sub>2</sub>O<sub>5</sub> and 179ppm Ta<sub>2</sub>O<sub>5</sub> from 8m</b>
----------------	---

SREZ niobium – tantalum intersection details included in Table 5.

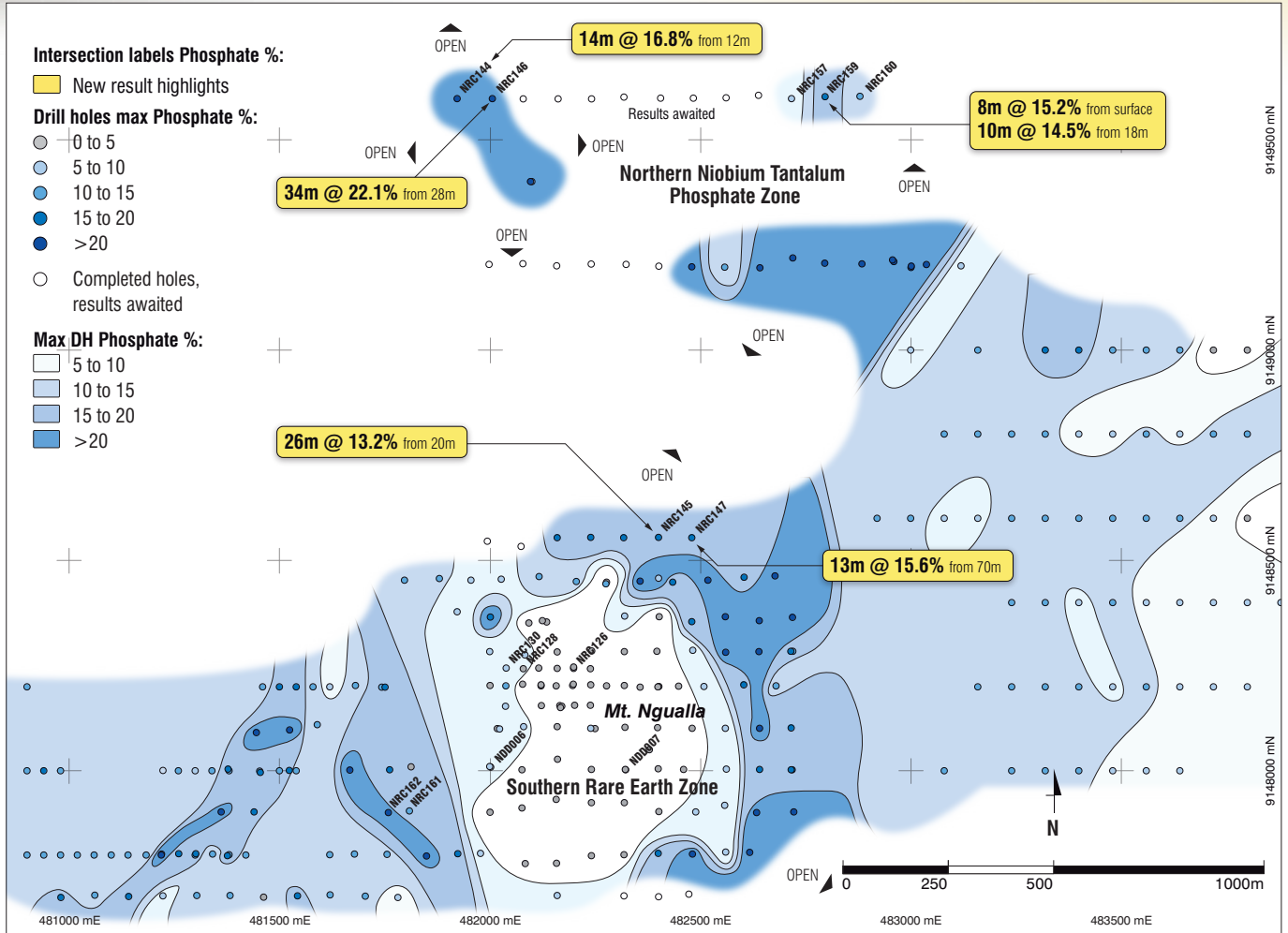


Figure 3: Plan view of maximum down hole phosphate in the Southern Rare Earth and Northern Zones of the Ngualla Carbonatite showing new and previous phosphate intersections highlights. Mineralisation remains open to the north, south and west.

DRILL HOLE	INTERSECTION (PHOSPHATE)
<b>NRC144:</b>	<b>14m at 16.8% phosphate</b> from 12m
<b>NRC146:</b>	<b>34m at 22.1% phosphate</b> from 28m
<b>NRC159:</b>	<b>8m at 15.1% phosphate</b> from surface and <b>10m at 14.5% phosphate</b> from 18m

Northern Zone phosphate intersection details included in Table 6.

There is potential for this second style of mineralisation to extend south from the Northern Zone for a distance of one kilometre, into the northern portions of the Southern Rare Earth Zone (see Figures 2 and 3). Further drilling is planned this year to evaluate this potential.

Assay results from the remaining 14 RC holes completed in the Northern Zone Niobium – Tantalum – Phosphate Zone are still awaited (Figures 2 and 3). Metallurgical and beneficiation characterisation test work is in progress on a bulk sample of rare earth, niobium – tantalum and phosphate mineralised diamond core under management of Peaks metallurgical consultants Bateman Engineering Ltd.

The large extent of this style of niobium – tantalum, phosphate and rare earth mineralisation suggests potential for a large tonnage deposit and further drilling will be considered on receipt of the results of this work.

## Update: Ngualla Project Status

Drilling operations at Ngualla were completed on 30th November 2011. Assay results from this program will continue to be received until mid-February 2012 with 5 RC and diamond holes in the Southern Rare Earth Zone and 14 RC holes still outstanding in the Northern Niobium – Tantalum – Phosphate Zone.

Beneficiation and metallurgical test work managed by consultants Bateman Engineering Ltd is continuing on a series of rare earth mineralised bulk core samples from the Southern Rare Earth Zone at Amdel Laboratories in Perth. An announcement on some initial results received from this work was made on 31st January 2012: ASX report 'Early encouragement from preliminary metallurgical test work – Ngualla Rare Earth Project'.

The maiden JORC compliant resource to be completed by consultants Hellman and Schofield Ltd will be released for the rare earth mineralisation in the Southern Rare Earth and South West Alluvial Zones by the end of the first quarter of 2012.



**Richard Beazley**

Managing Director

The information in this report that relates to Exploration Results is based on information compiled and/or reviewed by Dave Hammond who is a Member of The Australasian Institute of Mining and Metallurgy. Dave Hammond is the Technical Director of the Company. He has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Dave Hammond consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

**Table 2 – Southern Rare Earth Zone – Rare Earth RC and diamond drill Intersections +1% REO**Selected intersections +2% REO in *italics*.

~ = NDD009 is a vertical diamond hole in the SW Alluvial Zone but is included in the following Table.

Hole ID	East	North	Hole Depth (m)	From (m)	To (m)	Interval (m)	REO %
NRC126	482,199	9,148,246	120 <i>(incl. and</i>	0	120	120*	2.72
				<b>0</b>	<b>32</b>	<b>32</b>	<b>5.06</b>
				<b>42</b>	<b>62</b>	<b>20</b>	<b>3.07</b>
NRC128	482,079	9,148,242	83 (Incl.	0	77	77	3.10
				0	34	34	5.03)
NRC130	482,038	9,148,244	120 <i>(Incl.</i>	0	120	120*	3.52
NRC145	482,401	9,148,555	120 <i>(Incl.</i>	0	46	46	2.52
				<b>0</b>	<b>8</b>	<b>8</b>	<b>5.90</b>
				50	56	6	1.41
				62	64	2	1.88
				82	85	3	1.76
				108	120	12*	1.27
NRC147#	482,480	9,148,554	120	0	2	2	1.36
				32	38	6	2.06
				42	58	16	2.15
				78	82	4	1.70
NRC161#	481,809	9,147,905	120	58	60	2	1.52
NRC162 ^	481,759	9,147,901	80	0	14	14	2.04
				20	22	2	1.03
				26	32	6	1.61
NDD006	482,002	9,148,008	115	1	95.69	94.69	1.88
				99.6	109.18	9.58	1.91
NDD007	482,322	9,148,002	200	0.2	49.28	49.08	5.08
				52.49	148	95.51	5.06
				152.94	179.85	26.91	1.98
				182	199	17	1.37
NDD009~	481,293	9,147,602	51 <i>(Incl.</i>	0	36	36	2.88
				<b>0</b>	<b>30.32</b>	<b>30.32</b>	<b>3.14</b>
				39.32	42.32	3	1.59
				47.5	49.8	2.3	1.51

Note: REO = Total Rare Earth Oxides including yttrium. See Table 1 for relative distribution of individual rare earth oxides. Samples are 2m composites from angled -60° west RC and diamond drilling. Intersections calculated using 1% REO lower cut and a maximum of 2m internal dilution. Analysis by SGS laboratory, Perth, by 4 acid digest and ICP or XRF. Co-ordinate system is Arc 1960 UTM zone 36S. \* = hole ended in mineralisation. # partial results, some assays still pending. ^ = vertical hole.

**Table 3 – Northern Zone – Rare Earth RC drill intersections, +1% REO**

Hole ID	East	North	Hole Depth (m)	From (m)	To (m)	Interval (m)	REO %
NRC144	481,922	9,149,597	80	0	4	4	1.13
				16	22	6	1.10
				30	33	3	1.18
NRC146	482,006	9,149,597	80	0	56	56	1.28
NRC157	482,717	9,149,597	55	14	16	2	1.12
NRC159	482,797	9,149,602	80	2	8	6	1.38
				14	16	2	1.45
				18	24	6	1.14
				28	30	2	1.54
NRC160	482,880	9,149,603	80	0	4	4	1.32

Note: REO = Total Rare Earth Oxides including yttrium. See Table 1 for relative distribution of individual rare earth oxides. Samples are 2m composites from angled -60° west RC drilling. Intersections calculated using 1% REO lower cut and a maximum of 2m internal dilution. Analysis by SGS laboratory, Perth, by 4 acid digest and ICP or XRF. Co-ordinate system is Arc 1960 UTM zone 36S.

**Table 4: Northern Zone – Niobium - Tantalum RC drill intersections, +0.25% niobium oxide**

Intersections with a minimum width of 8m at >0.25% niobium oxide are reported.

Hole ID	East	North	Hole Depth (m)	From (m)	To (m)	Interval (m)	Nb <sub>2</sub> O <sub>5</sub> %	Ta <sub>2</sub> O <sub>5</sub> ppm
<b>NRC144</b>	481,922	9,149,597	80	16	33	17	0.76	91
<b>NRC146</b>	482,006	9,149,597	80	0	56	56	0.48	137
<b>NRC159</b>	482,797	9,149,602	80	0	8	8	0.64	82
				14	30	16	0.46	52

Note: Samples are 2m composites from angled -60° west RC drilling. Intersections calculated using a 0.25% Nb<sub>2</sub>O<sub>5</sub>% lower cut and a maximum of 2m internal dilution. Analysis by SGS laboratory, Perth, by XRF fusion for Nb and pressed powder for Ta. Co-ordinate system is Arc 1960 UTM zone 36S.

**Table 5: Southern Rare Earth Zone – Niobium - Tantalum RC drill intersections, +0.25% niobium oxide**

Intersections with a minimum width of 8m at >0.25% niobium oxide are reported. Selected intersections > 0.5% in *italics*.

~ = NDD009 is a vertical diamond hole in the SW Alluvial Zone but is included in the following Table.

Hole ID	East	North	Hole Depth (m)	From (m)	To (m)	Interval (m)	Nb <sub>2</sub> O <sub>5</sub> %	Ta <sub>2</sub> O <sub>5</sub> ppm
<b>NRC126</b>	482,199	9,148,246	120	12	24	12	0.31	47
<b>NRC145</b>	482,401	9,148,555	120	8	44	36	0.62	120
				<b>8</b>	<b>16</b>	<b>8</b>	<b>1.31</b>	<b>179</b>
<b>NRC147</b>	482,480	9,148,554	120	74	83	9	0.52	200
<b>NRC162</b> ^	481,759	9,147,901	80	0	16	16	0.33	74
<b>NDD007</b>	482,322	9,148,002	200	32.7	40.9	8.2	0.28	24
				148	157	9	0.37	10
<b>NDD009</b> ~	481,293	9,147,602	51.3	0	16.91	16.91	0.35	77
				22.2	36.32	14.12	0.41	93
				39.32	50.07	10.75	0.80	71

Note: Samples are 2m composites from angled -60° west RC drilling. Intersections calculated using a 0.25% Nb<sub>2</sub>O<sub>5</sub>% lower cut and a maximum of 2m internal dilution. Analysis by SGS laboratory, Perth, by XRF fusion for Nb and pressed powder for Ta. Co-ordinate system is Arc 1960 UTM zone 36S. # partial results, some assays still pending. ^ = vertical hole

**Table 6: Northern Zone – Phosphate RC drill intersections, >10% phosphate**

Intersections with a minimum width of 8m at >10% phosphate are reported.

Hole ID	East	North	Hole Depth (m)	From (m)	To (m)	Interval (m)	P <sub>2</sub> O <sub>5</sub> %
<b>NRC144</b>	481,922	9,149,597	80	12	26	14	16.8
<b>NRC146</b>	482,006	9,149,597	80	<b>28</b>	<b>62</b>	<b>34</b>	<b>22.1</b>
<b>NRC159</b>	482,797	9,149,602	80	0	8	8	15.1
				18	28	10	14.5

Note: Samples are 2m composites from angled -60° west RC drilling. Intersections calculated using 10% phosphate lower cut and a maximum of 2m internal dilution. Analysis by SGS laboratory, Perth, by XRF. Co-ordinate system is Arc 1960 UTM zone 36S.

**Table 7: Southern Rare Earth Zone – Phosphate RC drill intersections, >10% phosphate**

Intersections with a minimum width of 8m at >10% phosphate are reported.

Hole ID	East	North	Hole Depth (m)	From (m)	To (m)	Interval (m)	P <sub>2</sub> O <sub>5</sub> %
<b>NRC145</b>	482,401	9,148,555	120	20	46	26	13.2
<b>NRC147</b>	482,480	9,148,554	120	70	83	13	15.6

Note: Samples are 2m composites from angled -60° west RC drilling. Intersections calculated using 10% phosphate lower cut and a maximum of 2m internal dilution. Analysis by SGS laboratory, Perth, by XRF. Co-ordinate system is Arc 1960 UTM zone 36S.