ASX / MEDIA ANNOUNCEMENT **26 May 2020**

High Neodymium-Praseodymium Enrichment Confirmed at Cummins Range Rare Earths Project

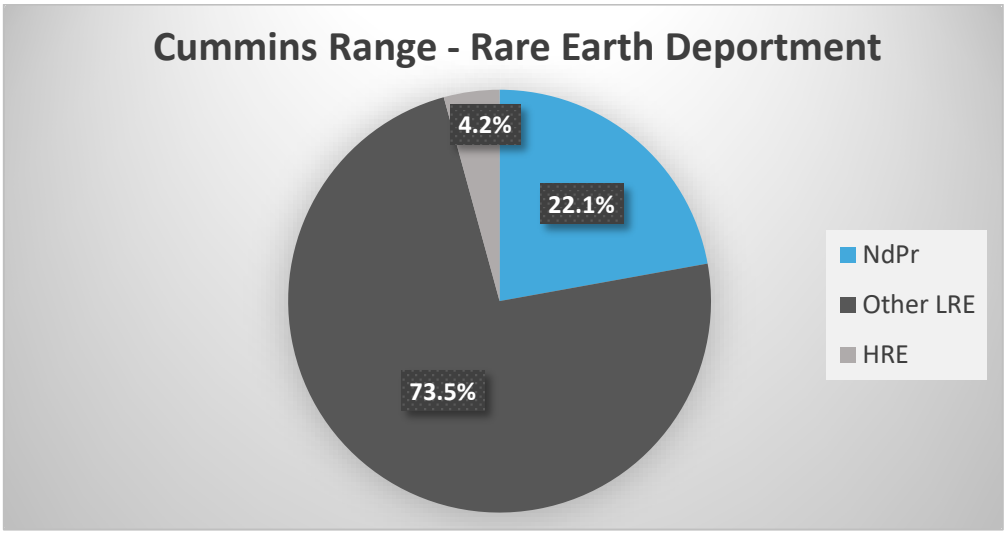
HIGHLIGHTS

- **High Neodymium-Praseodymium (NdPr) enrichment confirmed at Cummins Range Project**
- **Resource NdPr enrichment of 22.1% NdPr, with ultra-low Thorium at 50ppmThO_2**
- **NdPr is the key value-driver for Rare Earth deposits globally, being integral to the manufacture of EVs, wind turbines and military hardware**
- **Renewed interest in Rare Earths as geopolitical tensions rise as a result of COVID-19**
- **Low CAPEX strategy to supply Rare Earth concentrate to existing downstream refiners**
- **Progress being made with downstream Rare Earth processors and refiners**

RareX Limited (**RareX** or **the Company**) (ASX: REE) is pleased to advise that a review of the historical drill database at its 100%-owned Cummins Range Rare Earths Project located in the Kimberley Region of Western Australia has confirmed highly attractive enrichment characteristics, indicating high levels of Neodymium-Praseodymium (**NdPr**) and ultra-low levels of Thorium.

NdPr Content Confirmed at Cummins Range at 22.1% with ultra-low Thorium

RareX has completed a review of the historical drill database for the Cummins Range Rare Earths Project which has determined an average Neodymium-Praseodymium (**NdPr**) content of 22.1%[1]. It has also highlighted ultra-low Thorium content at 50ppm ThO_2. By comparison, most monazite derived from mineral sands averages in the range of 1-10% Thorium, giving Cummins Range a distinct advantage.



The NdPr content of the Total Rare Earth Oxide (TREO) grade is consistent with other known carbonatite rare earth deposits including Mt Weld (24.7% NdPr Enrichment; Lynas Corporation

[1] NdPr Enrichment is defined as the proportion of Nd_2O_3 and Pr_6O_{11}. The significant intersections are provided in Table 1 attached.

Limited ASX:LYC), Ngualla (21.3% NdPr Enrichment; Peak Resources Limited ASX:PEK) and Mountain Pass (16.3% NdPr Enrichment; MP Materials).

Rare Earth Market Update

There has been renewed recent interest in the rare earth sector given the current geopolitical climate and increasing rhetoric surrounding the COVID-19 pandemic.

China continues to be the largest global processor of rare earths. Earlier this month, US Republican Senator Ted Cruz introduced legislation to help revive the US rare earths industry with tax breaks for mine developers and manufacturers who buy their product (Source: Reuters).

Rare earth prices are extremely prone to geopolitical events and associated perceived supply shocks, with NdPr prices reaching over US$280/kg in 2011 following a diplomatic dispute between China and Japan following which China allegedly banned rare earth exports to Japan. The expectation is that rare earth prices will continue to increase as geopolitical tensions continue to rise as a result of perceived supply shocks associated with the increased geopolitical tensions resulting from the COVD-19 pandemic.

Prices of NdPr oxides increased for five straight days as of 14 May 2020 as a result of increased downstream stockpiling as demand resumes with the fading impact of the coronavirus pandemic. Prices for NdPr oxides climbed by approximately 4.2% from 14 April 2020. Producers of permanent magnet material and other downstream plants stepped up purchases (Source: Shanghai Metals Market). This has seen a recovery in rare earth prices following recent weakness, with NdPr oxide currently trading at circa US$38/kg. The expectation is that demand will continue to pick up alongside the post-pandemic economic recovery.

Cummins Range Rare Earths Project Strategy

Continued crackdown by Chinese authorities on the mining of ionic clay deposits in Southern China for environmental reasons combined with increasing demand for electric vehicles (**EV**) has seen China importing additional rare earth concentrate from offshore sources in order to satisfy domestic demand.

China's transition to a net importer of rare earths in the coming years underpins the Company's proposed strategy to export a rare earth concentrate directly to existing offshore rare earth refiners. The Company believes that this strategy will reduce high capital costs and technical risks historically associated with other rare earth projects, whilst allowing the Company to enter production in time to benefit from expected increases in the NdPr price.

Engagement with Downstream Processors and Refiners

The Company has been working with its strategic partner, Talaxis Group, to engage with downstream processors and refiners. RareX is having productive discussions with a number of interested parties, and notes strong demand for Neodymium-Praseodymium rich rare earth concentrates being encountered.

Resource Estimation

The Cummins Range Mineral Resource was reported by RareX on 15 October 2019. The model has not been updated since. Previously only the Total Rare Earth Oxide (TREO) grade was reported. The block model for Cummins Range modelled total rare earth oxides plus Yttrium (**TREOY**). This was further divided into total light rare earth oxides (**TLREO**) and total heavy rare earth oxides (**THREOY**). These were calculated by adding together all the constituent oxide species from drilling assays into heavy and light rare earth oxides and then modelling these using ordinary kriging. Light rare earth oxides

include La_2O_3, CeO_2, Pr_6O_{11}, Nd_2O_3, Sm_2O_3 and Eu_2O_3. Heavy rare earths include Gd_2O_3, Tb_4O_7, Dy_2O_3, Ho_2O_3, Er_2O_3, Tm_2O_3, Yb_2O_3, Lu_2O_3. In addition, Y_2O_3 has been included in the THREO category (THREOY). Each of these oxides were assayed as part of the routine assaying of drilling samples. The ratio of each of the oxides that make up the TREOY for each drill assay was calculated and the average within each of the reported cut-off grades was used to report the individual oxides. Table 1 shows the grades of rare earth oxides within the total Inferred Mineral Resource estimate as first reported by Rarex on 15 October 2019.

Table 1: Cummins Range Inferred Mineral Resource

5,000ppm TREOY cut-off grade	Rare Earth Element		Grade ppm
LREO, Light Rare Earth Oxides	La_2O_3	Lanthanum	2,780
	CeO_2	Cesium	5,160
	Pr_6O_{11}	**Praseodymium**	**560**
	Nd_2O_3	**Neodymium**	**1,910**
	Sm_2O_3	Samarium	250
	Eu_2O_3	Europium	60
HREO, Heavy Rare Earth Oxides	Gd_2O_3	Gadolinium	160
	Tb_4O_7	Terbium	20
	Dy_2O_3	Dysprosium	80
	Ho_2O_3	Holmium	10
	Er_2O_3	Erbium	20
	Tm_2O_3	Thulium	4
	Yb_2O_3	Ytterbium	10
	Lu_2O_3	Lutetium	2
Yttrium Oxide	Y_2O_3	Yttrium	270
Thorium	ThO_2		50
Total Rare Earth Oxides + Yttrium	**TREOY**	**13,000,000 tonnes**	**11,300ppm OR 1.13%**

Rounding errors may occur. Thorium is not a rare earth oxide but is included here to illustrate the low levels of this potential contaminant.

When the planned infill drilling program at Cummins Range is completed, the model will be updated with all the rare earth oxide grades estimated individually. This infill drilling, combined with the more detailed grade estimation and block modelling, will result in an upgraded resource classification from the current Inferred.

A list of all drilling results with all rare earth assays is attached in Appendix 1.

Information provided pursuant to ASX Listing Rule 5.8.1

Definitions

TREO is defined as the total 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) but excluding Promethium (Pm); plus Yttrium (Y).

Geology and Geological Interpretation

The area referred to in this report occurs within the Cummins Range carbonatite which is a 1.5 km diameter near-vertical pipe that has been deeply weathered but essentially outcropping with only thin aeolian sand cover in places. The mineralisation has been defined using a combination of grade and various regolith units defined by detailed geological logging of all holes.

Sampling and sub-sampling techniques

The geological database used for the Resource estimate consists of 314 assayed inclined RC holes representing 13986 assayed metres. The drill hole spacing is essentially 40x50 metres over most of the deposit. All sampling was conducted using standard 1 metre riffle splits from the RC drill cyclone.

Drilling Techniques

Drilling was RC drilling using a 5.25 inch face sampling bit.

Classification Criteria

The Resource estimate has been categorised as Inferred at this time as the data utilised is generally of a preliminary nature with drilling on a comparatively wide 40mN-S (hole spacing) by 50mE-W (line spacing) grid pattern. In addition, a number of assumptions have been required to be employed in the creation of the model, which includes but is not limited to the following:

1. Assumed lithological and structural controls employed.
2. Assigned density profiles employed, based on 10 drill-holes.
3. Weathering logging employed in construction of oxidation profiles for modelling.

Sample Analysis Method

Routine assaying of 14 lanthanides as well as Y, Th, U, Al, Si, P, Mg, Fe, Ca, Ga, Hf, Nb, S, Sc, Ta, Ti and Zr has been undertaken by Genalysis/Intertek Laboratories in Perth using sodium peroxide fusion, nickel crucible/ICP-MS techniques.

Estimation Methodology

Grade estimation was done using ordinary kriging. Resource models have been estimated by Ordinary Kriging (OK) with the searches aligned consistent with the strike and dip of the mineralisation. The lithology / structure which host the mineralisation exhibit geometries which are consistent with those geometries defined by the spatial analysis of grade. A number of elements and associated fields were estimated during the course of the estimation which included (but was not limited to) TREO+Y2O3, TLREO, THREO, U3O8, ThO2 and P2O5 though a numbers of other path finder elements were analysed during the exploration phase.

Cut off grades

Cut-off grade has been selected based on potential open pit mining extraction.

Mining and metallurgical considerations

Mining and metallurgical factors or assumptions were not explicitly used in estimating the Mineral Resource but open pit mining methods will be utilised for any future mining operations. Metallurgical test work and associated mineralogical study work has been carried out both in Australia and China to support process flowsheet development and economic assessment.

Cummins Range Rare Earths Project

Cummins Range is located approximately 130km south west of Halls Creek township and airstrip in Western Australia and is 120km from the Great Northern Highway which runs from Port Hedland to Wyndham. Cummins Range is recognised as one of only two known rare earth bearing carbonatites in Australia with the other being Mt Weld owned by Lynas Corporation Ltd. Cummins Range has potential for high Neodymium and Praseodymium enrichment. No drilling has occurred at Cummins Range since 2011 with indications that the mineralisation remains open at depth and along strike.

This announcement has been authorized for release by the Board of RareX Limited.

For further information, please contact:

RareX Limited
Jeremy Robinson
Executive Director
Ph: 08 6143 6720

Media Enquiries
Nicholas Read
Read Corporate
Ph: 08 9388 1474

Competent Persons Statement

Information in this release that relates to current Exploration Results is based on and fairly represents information and supporting documentation prepared and compiled by Mr Guy Moulang, an experienced geologist consulting for RareX Limited. Mr Moulang is a Member of the Australian Institute of Geoscientist and has sufficient experience which is relevant to the styles of mineralisation and types of deposits under consideration and to the activities 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". Mr Moulang consents to the inclusion in this release of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Mineral Resources is based on and fairly represents information and supporting documentation prepared by Richard Maddocks, a Competent Person who is a Fellow of The Australasian Institute of Mining and Metallurgy. Mr. Maddocks is employed as an independent consultant to Auralia Mining Consulting. Mr. Maddocks has sufficient experience that is relevant to the style of mineralisation 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'. Mr. Maddocks consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Appendix 1: Historical Drill Results for Cummins Range Rare Earths Project

Hole ID	East	North	RL	Depth	Azimuth	Dip	From	To	Width	TREO_Y %	La_2O_3 ppm	CeO_2 ppm	Pr_6O_{11} ppm	Nd_2O_3 ppm	Sm_2O_3 ppm	Eu_2O_3 ppm	Gd_2O_3 ppm	Tb_4O_7 ppm	Dy_2O_3 ppm	Ho_2O_3 ppm	Er_2O_3 ppm	Tm_2O_3 ppm	Yb_2O_3 ppm	Lu_2O_3 ppm	Y_2O_3 ppm
KRC094	307183	7866470	391	46	180	-60	31	32	1	0.58	1,032	2,410	308	1,192	196	55	151	17.9	77.0	11.8	26.3	2.9	15.3	1.8	304
							38	40	2	0.80	2,337	3,842	365	1,063	116	28	69	6.8	29.9	4.4	9.3	1.0	5.3	0.8	114
KRC095	307181	7866510	392	46	180	-60	NSI																		
KRC096	307183	7866549	392	56	180	-60	43	47	4	0.63	1,803	3,116	306	878	78	17	42	4.1	15.6	2.2	5.0	0.5	2.5	0.3	52
KRC097	307182	7866590	392	67	180	-60	9	11	2	1.62	5,157	7,955	742	1,988	153	33	76	7.0	25.5	3.7	6.9	0.6	2.4	0.3	82
							20	21	1	1.09	3,398	5,135	513	1,446	133	33	80	8.3	34.9	5.0	10.1	0.9	3.9	0.4	123
							37	45	8	0.84	2,432	4,053	409	1,197	116	28	67	6.6	26.8	3.8	7.7	0.7	3.2	0.4	89
KRC098	307182	7866632	392	53	180	-60	8	17	9	1.20	3,621	5,787	571	1,624	148	34	81	7.8	29.3	3.9	7.5	0.7	2.9	0.3	92
KRC099	307182	7866669	392	60	180	-60	1	4	3	1.22	3,666	5,999	545	1,541	151	33	78	7.8	33.2	4.9	10.1	1.1	5.7	0.7	128
							28	31	**3**	**3.55**	11,089	17,722	1,567	4,377	329	64	125	10.4	36.3	4.8	9.1	1.0	4.8	0.6	119
							34	35	1	1.51	4,676	7,309	677	1,896	179	41	94	8.9	35.2	4.9	9.6	1.0	4.8	0.6	115
							39	40	1	1.00	3,166	4,992	443	1,204	101	21	45	3.8	14.2	2.1	3.9	0.5	2.1	0.4	48
KRC100	307182	7866711	392	78	180	-60	3	19	**16**	**1.12**	2,751	5,290	559	1,848	236	59	144	15.8	63.0	9.0	18.3	2.0	10.0	1.3	213
							24	30	6	2.95	8,967	14,676	1,340	3,664	319	69	153	13.8	56.2	8.0	15.9	1.6	6.7	0.9	199
							39	44	5	0.72	1,761	3,379	346	1,134	149	38	93	10.4	47.9	7.2	13.9	1.7	7.9	0.9	180
							52	63	**11**	**1.68**	4,951	8,023	761	2,323	239	56	129	13.3	55.1	7.8	15.1	1.6	7.7	1.0	199
							71	78	**7**	**2.48**	6,143	11,038	1,149	3,937	535	149	399	50.3	225.9	36.3	84.0	9.8	53.8	6.7	988
KRC101	307182	7866752	392	67	180	-60	37	67	**30**	**2.93**	8,278	13,872	1,335	4,208	476	116	278	30.9	134.2	19.6	39.5	4.4	21.8	2.7	504
KRC102	307181	7866791	392	43	180	-60	5	7	2	1.04	2,770	4,891	495	1,580	181	44	106	11.9	52.9	8.0	16.5	2.0	10.0	1.2	212
							26	35	9	0.86	1,886	3,798	411	1,397	205	53	150	19.1	91.9	16.7	38.9	5.0	27.0	4.2	513
KRC103	307130	7866793	393	73	180	-60	4	5	1	1.21	3,760	6,105	531	1,392	121	23	54	5.2	21.0	3.3	7.0	0.8	4.9	0.7	84
							23	38	**15**	**1.16**	2,931	5,656	547	1,717	207	47	121	13.6	57.0	8.9	18.4	2.2	11.6	1.8	214
							48	72	**24**	**1.34**	3,334	6,487	637	2,051	264	62	160	17.8	73.4	10.9	21.3	2.4	12.0	1.7	243
KRC104	307129	7866833	393	85	180	-60	48	49	1	1.37	2,659	6,099	779	2,775	395	101	265	27.7	110.9	15.8	30.9	3.2	15.3	1.9	378
							81	83	2	7.30	21,881	36,738	3,517	9,533	726	133	245	15.6	43.9	5.0	7.5	0.8	3.5	0.5	106
KRC105	307129	7866875	393	52	180	-60	10	11	1	1.25	3,274	5,974	627	1,936	212	50	125	13.7	59.0	9.3	20.0	2.4	12.4	1.6	225
KRC106	307128	7866913	393	46	180	-60	11	12	1	0.60	1,552	2,913	277	886	109	26	67	7.6	34.4	5.5	11.3	1.4	7.5	1.1	139
KRC107	307243	7866462	391	49	180	-60	2	3	1	0.68	1,654	3,249	344	1,106	141	36	90	9.5	40.2	6.0	12.0	1.3	7.1	0.9	142
							10	11	1	0.67	1,819	3,322	316	955	98	22	49	4.7	17.9	2.4	4.1	0.4	1.9	0.2	54
							21	23	2	1.46	4,465	7,346	645	1,811	147	30	61	5.2	19.2	2.6	4.6	0.5	2.3	0.3	55
KRC108	307243	7866498	392	63	180	-60	27	28	1	0.71	1,434	3,234	377	1,343	210	57	141	15.8	69.0	10.1	19.4	2.1	10.6	1.2	221
							40	41	1	0.51	985	2,224	285	1,033	156	43	109	12.3	51.5	7.8	15.7	1.6	7.1	0.8	179
KRC109	307243	7866539	392	69	180	-60	26	27	1	0.72	1,991	3,427	370	1,090	105	24	53	4.9	20.2	3.0	5.5	0.6	2.6	0.4	71
							47	48	1	0.57	1,174	2,541	322	1,124	157	40	100	10.9	46.4	6.5	12.9	1.3	6.3	0.7	140
							51	52	1	1.66	4,675	8,110	839	2,452	206	43	86	7.9	31.5	4.7	9.3	1.0	4.6	0.5	109
KRC110	307242	7866579	392	66	180	-60	2	24	**22**	**1.52**	4,591	7,302	720	2,076	182	39	84	7.9	32.6	4.7	9.4	1.0	4.7	0.7	112
							30	33	3	0.84	2,181	3,914	413	1,356	172	43	106	11.3	47.6	6.6	12.2	1.3	5.6	0.6	152
							39	40	1	2.67	8,334	13,132	1,201	3,389	270	55	114	10.3	38.6	5.0	8.3	0.9	3.2	0.5	115

Hole ID	East	North	RL	Depth	Azimuth	Dip	From	To	Width	TREO_Y %	La_2O_3 ppm	CeO_2 ppm	Pr_6O_{11} ppm	Nd_2O_3 ppm	Sm_2O_3 ppm	Eu_2O_3 ppm	Gd_2O_3 ppm	Tb_4O_7 ppm	Dy_2O_3 ppm	Ho_2O_3 ppm	Er_2O_3 ppm	Tm_2O_3 ppm	Yb_2O_3 ppm	Lu_2O_3 ppm	Y_2O_3 ppm
							46	66	**20**	**1.04**	2,444	4,816	527	1,771	235	61	151	17.8	77.6	11.4	23.6	2.7	14.0	1.7	287
KRC111	307241	7866630	392	65	180	-60	14	18	4	0.89	2,395	4,222	423	1,310	154	38	91	10.4	45.9	6.4	12.7	1.5	7.1	0.9	152
							25	65	**40**	**1.41**	3,601	6,484	670	2,209	285	73	187	22.4	99.2	15.1	31.9	3.7	19.1	2.4	384
KRC112	307241	7866672	392	52	180	-60	2	4	2	1.27	3,668	6,148	589	1,718	182	41	95	10.0	45.4	6.6	14.5	1.8	9.5	1.2	180
							11	52	**41**	**3.85**	10,452	18,172	1,780	5,644	653	164	413	46.7	200.2	30.2	65.8	7.4	39.1	5.1	791
KRC113	307241	7866710	392	64	180	-60	1	9	8	4.71	12,710	22,380	2,183	7,025	819	203	502	55.1	228.9	33.2	69.2	7.7	39.2	4.8	833
							20	23	3	0.74	1,726	3,492	380	1,263	162	41	109	11.6	47.8	6.8	13.9	1.4	6.7	0.9	166
KRC114	307240	7866750	392	67	180	-60	2	63	**61**	**2.04**	5,739	9,730	948	2,960	304	74	175	19.0	79.3	11.4	23.4	2.6	12.8	1.7	290
KRC115	307240	7866789	392	52	180	-60	15	22	7	2.60	7,984	12,785	1,185	3,506	264	54	98	8.4	32.6	4.4	7.4	0.9	4.0	0.5	101
							40	42	2	0.81	2,210	3,841	392	1,262	127	31	67	6.6	25.4	3.4	6.6	0.8	3.2	0.4	75
KRC116	307239	7866869	393	58	180	-60	7	10	3	0.80	1,786	3,559	404	1,480	206	55	139	15.8	65.6	9.4	18.8	2.1	10.1	1.3	221
							31	32	1	0.68	1,879	3,157	341	1,043	112	27	60	6.6	30.4	4.7	10.2	1.3	6.4	1.1	120
							47	49	2	0.68	1,882	3,269	326	990	100	23	51	5.3	22.3	3.0	5.8	0.7	3.5	0.5	74
KRC117	307238	7866912	393	72	180	-60	50	52	2	2.03	6,049	10,056	970	2,686	228	47	93	8.0	27.4	3.4	5.7	0.6	2.7	0.3	78
KRC118	307239	7866949	393	28	180	-60	NSI																		
KRC119	307290	7866269	391	34	180	-60	NSI																		
KRC120	307288	7866310	391	35	180	-60	21	22	1	0.60	1,689	2,904	306	879	87	20	45	4.6	17.8	2.6	4.9	0.5	2.7	0.4	66
							33	34	1	0.53	1,416	2,610	277	812	75	17	36	3.7	15.7	2.3	4.8	0.6	3.1	0.4	61
KRC121	307292	7866469	391	58	180	-60	15	38	**23**	**1.88**	5,851	9,198	864	2,387	206	44	95	8.9	33.7	4.7	8.6	0.9	4.2	0.5	111
							54	58	4	1.20	4,148	5,885	505	1,352	82	15	25	1.9	5.5	0.7	1.1	0.1	0.5	0.1	14
KRC122	307292	7866509	392	61	180	-60	16	17	1	0.52	1,007	2,345	287	1,050	147	39	90	10.2	42.0	6.0	11.8	1.2	6.5	0.7	133
							42	43	1	0.53	1,052	2,352	289	1,077	157	43	100	11.1	45.3	6.1	11.8	1.1	5.0	0.5	144
							52	61	9	0.77	1,508	3,400	418	1,577	231	61	156	18.2	77.7	11.2	22.7	2.4	12.8	1.5	250
KRC123	307291	7866550	392	34	180	-60	NSI																		
KRC124	307291	7866579	392	84	180	-60	33	43	**10**	**1.52**	4,236	7,334	704	2,161	250	59	133	14.5	65.4	9.0	17.7	1.9	8.8	1.0	240
							51	64	**13**	**3.45**	11,172	17,011	1,466	3,994	336	70	140	13.2	58.6	8.0	15.0	1.6	6.5	0.8	198
							70	84	**14**	**1.40**	3,590	6,586	673	2,196	256	63	155	17.9	78.2	12.0	25.5	2.9	15.3	1.9	314
KRC125	307291	7866619	392	61	180	-60	58	61	3	1.01	2,228	4,573	536	1,838	263	69	176	19.6	86.8	12.3	23.7	2.6	12.4	1.4	279
KRC126	307341	7866872	392	60	180	-60	6	7	1	0.83	2,315	3,914	402	1,232	138	32	80	7.9	32.8	4.5	8.5	0.9	4.2	0.6	105
							10	13	3	1.66	5,149	8,120	795	2,170	179	36	74	6.5	25.3	3.4	6.2	0.7	2.7	0.4	76
							21	24	3	0.81	2,157	3,802	398	1,244	146	35	84	8.6	37.3	5.1	10.2	1.1	5.3	0.7	118
							27	28	1	0.92	2,632	4,371	449	1,345	138	31	71	6.9	28.6	4.0	7.5	0.9	4.1	0.5	89
							45	47	2	0.71	1,887	3,457	352	1,102	109	26	59	6.4	24.6	3.7	7.5	0.8	4.3	0.6	95
KRC127	307341	7866912	393	46	180	-60	26	27	1	0.51	1,188	2,429	256	889	109	28	63	6.9	25.4	3.4	6.2	0.6	2.6	0.4	83
KRC128	307340	7866951	393	46	180	-60	NSI																		
KRC129	307493	7866789	392	76	180	-60	13	14	1	1.20	2,969	5,810	579	1,918	230	54	126	14.1	55.1	7.9	15.1	1.5	6.9	0.9	188
							32	41	9	0.67	1,153	2,832	361	1,421	238	65	165	19.5	82.5	12.4	25.0	2.6	12.9	1.7	310
KRC130	307492	7866828	392	85	180	-60	14	18	4	0.68	1,290	2,953	362	1,393	219	58	145	16.6	69.2	9.9	19.5	2.0	9.7	1.2	250
							25	35	**10**	**3.04**	8,248	14,535	1,455	4,677	495	117	264	28.0	112.6	16.1	31.5	3.3	16.0	2.0	414
							44	48	4	0.52	818	2,195	288	1,165	200	54	137	16.2	67.0	9.7	19.4	1.9	9.1	1.2	244

Hole ID	East	North	RL	Depth	Azimuth	Dip	From	To	Width	TREO_Y %	La_2O_3 ppm	CeO_2 ppm	Pr_6O_{11} ppm	Nd_2O_3 ppm	Sm_2O_3 ppm	Eu_2O_3 ppm	Gd_2O_3 ppm	Tb_4O_7 ppm	Dy_2O_3 ppm	Ho_2O_3 ppm	Er_2O_3 ppm	Tm_2O_3 ppm	Yb_2O_3 ppm	Lu_2O_3 ppm	Y_2O_3 ppm
							52	54	2	0.70	1,276	3,026	369	1,432	231	63	157	19.5	82.4	12.3	26.2	2.8	14.3	2.0	328
							69	70	1	0.51	843	2,193	285	1,093	183	53	129	15.3	64.9	9.2	17.8	1.9	8.9	1.0	213
KRC131	307492	7866868	392	70	180	-60	6	28	**22**	**0.90**	1,813	4,010	480	1,715	264	70	175	19.9	84.4	12.1	24.5	2.6	12.6	1.3	299
							36	37	1	0.69	1,367	3,120	375	1,326	208	55	138	16.0	66.8	9.6	19.7	2.0	8.8	0.9	228
							39	40	1	0.78	1,479	3,417	404	1,480	228	62	157	18.7	82.2	12.3	27.4	3.1	16.6	1.9	364
KRC132	307490	7866910	392	40	180	-60	7	8	1	0.85	2,211	4,069	404	1,254	150	36	85	9.6	42.2	6.3	13.3	1.5	8.2	0.9	170
KRC133	307490	7866950	392	46	180	-60	8	10	2	0.58	1,488	2,710	277	891	104	27	68	7.0	32.0	5.0	10.5	1.3	6.5	0.8	128
KRC134	307930	7866669	391	40	180	-60	NSI																		
KRC135	307930	7866709	391	40	180	-60	NSI																		
KRC136	307931	7866749	391	49	180	-60	NSI																		
KRC137	307929	7866790	391	43	180	-60	NSI																		
KRC138	307929	7866829	392	40	180	-60	27	28	1	2.00	5,993	9,804	950	2,812	221	43	85	6.2	21.8	2.8	5.1	0.5	2.8	0.3	69
KRC139	307930	7866109	391	40	180	-60	31	32	1	0.65	1,592	3,051	340	1,116	143	35	85	8.9	34.1	4.6	8.5	0.7	3.2	0.4	111
KRC140	307930	7866149	391	34	180	-60	11	13	2	0.68	1,495	3,125	382	1,285	182	47	112	11.4	39.8	4.8	8.3	0.7	2.6	0.2	120
							21	22	1	0.90	2,337	4,541	444	1,383	136	29	57	5.0	17.2	2.1	3.4	0.4	1.3	0.1	49
							27	32	5	0.86	2,464	4,145	417	1,255	125	30	66	6.6	25.0	3.5	7.1	0.7	3.6	0.5	87
KRC141	308230	7866350	391	40	180	-60	NSI																		
KRC142	308231	7866389	391	34	180	-60	NSI																		
KRC143	308231	7866430	391	31	180	-60	NSI																		
KRC144	308232	7866468	391	37	180	-60	25	27	2	2.60	7,680	13,014	1,248	3,441	276	50	112	8.5	29.4	3.8	6.6	0.7	3.1	0.3	87
KRC145	307633	7866507	392	49	180	-60	16	17	1	0.53	1,420	2,509	257	807	92	22	52	6.0	27.7	4.2	8.5	0.9	4.7	0.6	109
							35	36	1	1.08	3,411	5,263	471	1,352	116	24	55	5.3	23.1	3.7	7.5	0.8	4.7	0.6	93
KRC146	307632	7866548	392	71	180	-60	69	70	1	0.60	1,759	2,862	282	843	88	20	48	5.1	21.5	3.3	6.2	0.7	3.3	0.4	76
KRC147	307630	7866588	392	70	180	-60	0	4	4	1.42	3,462	6,474	693	2,318	304	77	202	23.6	105.3	16.8	35.6	4.1	21.4	2.6	442
							21	60	**39**	**1.81**	4,241	8,276	913	3,117	405	104	255	29.8	126.1	18.8	39.4	4.4	21.9	2.7	502
KRC148	307579	7866391	391	49	180	-60	2	8	6	0.50	1,079	2,337	263	916	130	33	81	9.0	36.0	5.1	10.2	1.1	5.2	0.6	127
							15	29	**14**	**0.77**	1,555	3,481	406	1,440	216	57	138	15.9	65.8	9.5	19.3	2.1	10.1	1.3	238
KRC149	307579	7866430	392	70	180	-60	3	8	5	1.80	5,174	8,651	877	2,552	241	52	121	12.6	51.0	7.7	16.1	1.8	9.1	1.2	192
							19	50	**31**	**1.52**	3,724	7,181	814	2,525	301	71	172	18.8	73.2	10.5	20.8	2.1	9.8	1.2	244
KRC150	307580	7866470	392	67	180	-60	NSI																		
KRC151	307581	7866510	392	58	180	-60	0	1	1	1.56	4,727	7,755	722	1,978	155	32	66	6.6	27.4	4.4	8.8	1.0	5.0	0.7	100
							3	4	1	1.43	4,413	7,207	646	1,732	120	22	42	3.2	12.9	1.8	3.5	0.4	1.7	0.3	43
							25	26	1	0.56	1,312	2,638	281	947	119	30	74	8.0	33.3	4.9	8.9	1.0	4.4	0.6	113
							50	51	1	0.54	1,404	2,649	263	808	86	19	48	5.4	23.5	3.7	7.2	0.9	4.0	0.5	88
KRC152	307581	7866549	392	67	180	-60	2	4	2	1.40	4,413	7,017	636	1,672	108	21	35	2.7	9.6	1.4	2.7	0.3	1.3	0.2	35
							18	19	1	0.55	840	2,566	337	1,213	171	43	93	10.1	41.7	6.0	9.9	1.1	4.3	0.5	115
							58	59	1	0.79	2,443	3,917	359	1,002	81	18	38	3.7	14.6	2.2	4.3	0.4	2.3	0.4	55
KRC153	307582	7866589	392	73	180	-60	12	17	5	0.51	761	2,047	269	1,103	214	61	159	20.7	92.0	14.3	28.8	3.2	14.7	1.7	309
							29	32	3	1.43	3,317	6,673	720	2,394	324	84	212	24.3	101.3	15.5	31.0	3.4	15.9	2.0	375
							44	64	**20**	**0.97**	2,507	4,679	453	1,457	170	42	104	11.1	49.5	7.8	15.8	1.9	9.0	1.2	202

Hole ID	East	North	RL	Depth	Azimuth	Dip	From	To	Width	TREO_Y %	La_2O_3 ppm	CeO_2 ppm	Pr_6O_{11} ppm	Nd_2O_3 ppm	Sm_2O_3 ppm	Eu_2O_3 ppm	Gd_2O_3 ppm	Tb_4O_7 ppm	Dy_2O_3 ppm	Ho_2O_3 ppm	Er_2O_3 ppm	Tm_2O_3 ppm	Yb_2O_3 ppm	Lu_2O_3 ppm	Y_2O_3 ppm
KRC154	308130	7866674	391	37	180	-60	NSI																		
KRC155	308128	7866752	391	37	180	-60	NSI																		
KRC156	307930	7866391	391	40	180	-60	NSI																		
KRC157	307929	7866432	391	43	180	-60	16	17	1	1.28	3,669	6,253	601	1,827	161	34	74	6.0	25.9	3.7	6.2	0.7	3.5	0.5	85
KRC158	307338	7866690	392	84	180	-60	4	79	**75**	**1.16**	2,716	5,454	599	1,989	252	64	156	17.0	71.1	10.4	20.3	2.1	9.4	1.1	241
KRC159	307337	7866727	392	73	180	-60	2	41	**39**	**2.15**	5,067	10,021	1,109	3,716	474	122	290	32.5	131.6	19.4	37.5	4.0	17.8	2.2	441
KRC160	307339	7866787	392	46	180	-60	4	16	12	0.51	1,184	2,315	255	876	122	32	79	8.9	39.3	6.0	12.6	1.4	6.5	0.8	147
							19	20	1	1.11	2,655	5,072	525	1,879	269	72	177	20.3	79.3	11.3	23.4	2.2	10.6	1.2	324
KRC161	307489	7866192	391	34	180	-60	NSI																		
KRC162	307491	7866232	391	31	180	-60	NSI																		
KRC163	307130	7866593	392	46	180	-60	27	28	1	0.84	2,347	4,084	403	1,225	115	26	58	5.4	20.9	2.8	4.8	0.5	2.2	0.3	63
KRC164	307030	7866588	392	37	180	-60	6	7	1	0.58	1,712	2,778	263	793	77	17	46	4.8	20.8	3.1	7.5	0.9	4.4	0.7	88
KRC165	306929	7866591	392	37	180	-60	NSI																		
KRC166	306929	7866690	393	55	180	-60	8	9	1	0.57	1,717	2,739	256	758	66	16	37	3.6	15.5	2.6	5.9	0.7	3.8	0.5	74
KRC167	307030	7866689	392	100	180	-60	72	73	1	0.71	1,711	3,300	362	1,204	155	39	94	9.9	40.4	5.5	11.0	1.2	5.0	0.7	140
							91	92	1	1.58	4,556	7,706	761	2,264	212	46	99	9.4	33.3	4.9	8.9	0.9	3.9	0.5	121
							95	100	5	1.21	3,556	5,837	605	1,665	152	33	74	6.8	26.7	3.6	6.8	0.7	3.6	0.5	88
KRC168	307132	7866711	392	67	180	-60	5	6	1	0.80	2,231	3,773	400	1,152	123	28	70	7.6	33.2	4.9	10.4	1.3	6.6	0.9	130
							10	27	17	0.88	1,979	3,956	481	1,566	218	57	146	15.7	66.8	9.2	18.0	1.9	9.5	1.3	228
							35	38	3	0.81	2,164	3,779	417	1,237	144	34	86	8.9	38.8	5.3	10.6	1.2	6.2	0.8	135
							45	53	8	2.19	6,351	10,392	1,065	3,044	327	80	194	20.1	85.3	11.8	22.4	2.3	11.2	1.5	285
KRC169	307031	7866790	393	65	180	-60	17	25	8	1.66	4,897	8,086	806	2,285	204	43	91	7.7	27.9	4.0	7.8	0.9	4.7	0.7	102
							62	65	3	0.54	1,590	2,645	259	747	69	16	34	3.1	13.0	1.9	3.5	0.4	1.9	0.3	45
KRC170	307133	7866754	392	82	180	-60	13	24	11	0.90	2,176	4,222	445	1,424	178	46	117	13.8	60.9	9.5	19.7	2.4	12.2	1.6	235
							39	53	**14**	**1.01**	2,444	4,578	489	1,601	216	59	155	18.8	82.9	13.4	28.1	3.4	17.5	2.4	355
							57	74	**17**	**0.96**	2,296	4,436	480	1,572	211	56	148	17.5	75.2	11.6	23.7	2.8	14.2	1.9	291
NRC001	307439	7866278	391	100	180	-60																			
NRC002	307442	7866320	391	100	180	-60	41	42	1	0.98	3,072	4,900	429	1,162	98	20	46	6.6	19.9	1.9	5.1	0.3	1.4	0.2	40
							79	83	4	1.69	5,521	8,278	713	1,953	155	32	74	7.8	23.9	2.6	6.0	0.5	1.9	0.3	60
NRC003	307444	7866360	391	100	180	-60	46	48	2	4.54	15,133	22,259	1,981	5,430	348	60	104	8.2	19.5	1.4	2.0	0.6	1.4	0.3	44
NRC004	307442	7866402	391	100	180	-60	29	30	1	3.78	11,930	18,799	1,648	4,792	337	60	123	8.0	17.0	1.8	4.6	0.3	0.5	0.3	44
							99	100	**1**	**10.49**	33,300	52,913	4,558	12,745	811	132	293	18.5	32.3	2.1	5.6	0.2	0.1	0.4	49
NRC005	307440	7866441	392	100	180	-60	75	77	2	1.52	5,083	7,471	624	1,740	119	21	51	4.7	14.4	1.7	3.4	0.3	1.0	0.2	25
NRC006	307440	7866483	392	100	180	-60	22	25	3	3.15	9,779	15,465	1,369	4,136	310	58	186	16.6	63.5	7.3	15.6	1.3	6.5	0.9	127
							59	62	3	3.19	9,435	16,211	1,462	4,359	269	43	122	8.5	19.9	1.9	4.2	0.3	1.1	0.2	32
NRC007	307440	7866524	392	100	180	-60	22	43	**21**	**1.18**	2,743	4,716	447	1,510	162	36	117	13.1	56.3	8.0	16.6	1.5	7.8	1.0	137
NRC008	307439	7866565	392	100	180	-60	1	55	54	1.73	4,710	8,301	779	2,594	292	70	161	17.8	70.7	10.0	20.7	2.0	9.4	1.2	239
							66	96	**30**	**1.47**	3,193	6,502	732	2,733	402	106	274	33.2	148.2	22.7	49.2	5.4	27.7	3.5	547
NRC009	307433	7866604	392	120	180	-60	101	103	2	4.31	14,033	21,652	1,904	4,664	382	74	148	14.6	55.4	5.4	10.3	0.9	2.1	0.5	122
NRC010	307428	7866645	392	100	180	-60	43	44	1	5.05	16,729	25,583	2,221	5,245	403	74	135	13.2	45.3	3.4	7.9	0.6	0.9	0.4	80

Hole ID	East	North	RL	Depth	Azimuth	Dip	From	To	Width	TREO_Y %	La_2O_3 ppm	CeO_2 ppm	Pr_6O_{11} ppm	Nd_2O_3 ppm	Sm_2O_3 ppm	Eu_2O_3 ppm	Gd_2O_3 ppm	Tb_4O_7 ppm	Dy_2O_3 ppm	Ho_2O_3 ppm	Er_2O_3 ppm	Tm_2O_3 ppm	Yb_2O_3 ppm	Lu_2O_3 ppm	Y_2O_3 ppm
							91	93	2	1.63	5,279	8,038	691	1,906	142	29	68	6.4	22.0	3.0	6.7	0.6	3.0	0.4	65
NRC011	307425	7866683	392	100	180	-60	36	37	1	1.10															
NRC012	307426	7866722	392	100	180	-60	46	49	3	0.99	2,747	4,619	480	1,549	177	41	102	11.2	46.7	6.9	14.1	1.0	6.1	0.9	170
							95	98	3	0.97	2,996	4,609	448	1,344	119	25	56	5.5	19.5	2.7	3.8	0.6	0.8	0.3	60
NRC013	307426	7866765	392	100	180	-60	NSI																		
NRC014	307425	7866803	392	100	180	-60	65	97	**32**	**1.22**	2,399	5,009	570	2,041	310	77	200	23.0	99.1	14.9	31.3	3.2	18.0	2.4	380
NRC015	307425	7866843	392	100	180	-60	28	33	5	1.62	4,195	7,682	785	2,598	322	74	177	19.4	79.2	11.2	22.6	2.1	12.3	1.4	261
							82	89	7	0.98	2,209	4,334	502	1,904	274	73	179	18.4	91.5	11.3	26.9	2.8	14.8	1.8	275
NRC016	307424	7866883	392	100	180	-60	8	25	17	0.66	1,101	2,687	359	1,529	268	76	190	19.8	102.0	13.1	30.7	2.9	17.1	2.1	298
							54	84	**30**	**1.22**	2,308	5,131	648	2,627	414	117	288	29.5	153.4	20.1	48.7	4.7	26.5	3.2	505
							88	100	12	0.84	1,645	3,548	437	1,765	273	76	189	19.1	98.7	12.8	30.0	2.7	19.2	2.0	314
NRC017	307423	7866920	392	100	180	-60	NSI																		
NRC018	307537	7866281	391	100	180	-60	44	46	2	4.95	16,498	24,321	2,195	5,910	374	64	115	8.5	19.5	1.4	1.7	0.6	0.6	0.3	38
NRC019	307538	7866323	391	100	180	-60	23	24	1	1.21	3,433	5,984	604	1,769	139	28	60	5.6	19.5	2.3	3.4	0.6	3.4	0.3	57
NRC020	307538	7866361	391	100	180	-60	60	61	1	0.87	2,543	4,262	422	1,237	104	22	46	4.0	13.8	1.1	3.4	0.6	3.4	0.3	41
NRC021	307537	7866402	391	100	180	-60	12	37	**25**	**1.47**	3,986	6,937	728	2,283	246	61	139	14.8	60.0	8.7	16.4	1.6	9.5	1.4	201
NRC022	307537	7866440	392	100	180	-60	13	26	**13**	**1.51**	3,469	6,847	807	2,766	364	94	226	25.8	106.9	15.6	30.3	3.1	16.2	2.3	360
NRC023	307538	7866481	392	100	180	-60	80	82	2	0.55	1,412	2,533	272	862	107	26	65	7.1	29.3	4.6	9.1	0.6	4.6	0.9	112
NRC024	307537	7866521	392	100	180	-60	58	61	3	5.77	19,620	28,034	2,611	6,720	426	76	126	11.4	23.0	2.7	3.0	0.6	1.5	0.3	52
NRC025	307538	7866561	392	100	180	-60	0	6	6	1.01	2,966	4,909	484	1,391	135	32	71	8.0	30.0	4.6	10.1	1.2	5.1	0.9	109
							30	34	4	1.16	2,707	5,225	593	2,007	298	84	208	23.8	103.3	15.5	32.0	3.4	21.6	2.2	332
NRC026	307539	7866600	392	100	180	-60	13	37	**24**	**0.68**	1,551	3,043	339	1,252	175	48	118	14.2	66.3	9.8	20.5	2.3	12.4	1.7	227
							47	55	8	0.77	1,366	3,240	404	1,638	269	77	196	24.1	112.6	16.2	32.7	3.5	18.0	2.4	367
NRC027	307540	7866639	392	100	180	-60	57	59	2	0.53	1,226	2,397	267	979	130	34	85	9.7	43.1	6.0	11.9	1.3	6.7	0.9	136
NRC028	307540	7866681	392	100	180	-60	75	97	**22**	**0.86**	1,858	3,711	430	1,660	241	64	162	19.8	88.8	13.7	28.2	3.1	19.2	2.5	336
NRC029	307539	7866721	392	100	180	-60	73	84	**11**	**0.75**	1,486	3,242	376	1,417	224	63	169	20.8	92.0	14.0	30.8	3.6	18.2	2.6	346
NRC030	307539	7866758	392	100	180	-60	75	82	7	0.65	1,201	2,702	340	1,339	229	62	158	19.8	87.7	14.4	28.7	4.1	23.4	3.2	305
NRC031	307342	7866354	391	100	180	-60	28	29	1	0.56	1,143	2,477	301	1,130	171	45	105	12.2	50.5	8.0	14.9	2.3	12.5	1.8	142
NRC032	307343	7866391	391	100	180	-60	38	62	**24**	**0.78**	1,752	3,635	395	1,402	185	47	110	12.4	52.0	6.9	12.0	1.1	6.7	0.9	159
NRC033	307342	7866433	391	98	180	-60	31	35	4	1.24	2,419	5,470	640	2,392	403	109	283	33.7	152.7	23.8	50.6	6.0	33.6	4.3	519
NRC034	307341	7866471	391	100	180	-60	16	23	7	2.10	5,890	10,397	997	3,100	272	54	111	11.3	39.5	5.4	8.7	0.7	4.3	0.7	117
							28	36	8	0.70	1,701	3,257	343	1,197	161	39	93	10.0	43.5	6.2	11.7	0.8	5.3	0.8	142
							40	46	6	2.30	6,475	11,415	1,079	3,365	284	54	109	11.0	36.9	5.0	8.6	0.7	4.0	0.7	107
							50	56	6	1.11	2,900	5,237	532	1,774	209	46	115	12.7	54.5	7.8	16.8	1.8	9.3	1.4	188
NRC035	307341	7866512	392	100	180	-60	22	43	**21**	**2.01**	6,098	9,345	921	2,894	300	69	158	17.6	71.4	10.3	20.8	2.3	10.7	1.7	214
NRC036	307340	7866551	392	100	180	-60	28	73	**45**	**1.12**	2,715	5,064	558	1,977	268	69	173	20.8	90.5	13.4	30.3	3.3	18.0	2.5	313
							86	98	**12**	**1.15**	2,833	5,359	581	2,002	247	60	147	17.0	69.5	10.1	21.3	2.3	12.1	1.7	216
NRC037	307341	7866590	392	100	180	-60	44	78	**34**	**2.32**	6,139	10,619	1,109	3,783	469	116	285	33.7	142.4	20.6	44.5	4.6	24.3	3.5	478
NRC038	307342	7866631	392	100	180	-60	42	100	**58**	**3.09**	8,909	14,607	1,402	4,551	488	114	270	29.8	119.8	16.9	32.2	3.4	17.1	2.6	389
NRC039	307343	7866672	392	100	180	-60	19	33	**14**	**1.29**	3,368	5,917	610	2,113	265	66	171	19.7	85.4	12.6	25.1	2.7	13.9	2.3	292

Hole ID	East	North	RL	Depth	Azimuth	Dip	From	To	Width	TREO_Y %	La_2O_3 ppm	CeO_2 ppm	Pr_6O_{11} ppm	Nd_2O_3 ppm	Sm_2O_3 ppm	Eu_2O_3 ppm	Gd_2O_3 ppm	Tb_4O_7 ppm	Dy_2O_3 ppm	Ho_2O_3 ppm	Er_2O_3 ppm	Tm_2O_3 ppm	Yb_2O_3 ppm	Lu_2O_3 ppm	Y_2O_3 ppm
							38	45	7	0.93	2,431	4,242	444	1,531	190	47	120	13.7	57.6	8.3	15.5	1.7	8.1	1.3	183
							63	90	**27**	**2.08**	6,180	9,925	965	2,984	286	65	144	15.7	56.8	8.4	15.1	1.5	8.4	1.3	186
NRC040	307340	7866712	392	100	180	-60	4	9	**5**	**2.03**	4,882	9,357	1,037	3,517	461	118	284	33.0	129.3	20.4	39.8	4.1	20.5	2.8	482
							14	22	8	1.60	3,392	7,226	855	3,064	458	119	293	34.4	133.9	19.5	34.0	3.4	15.5	2.3	439
							28	47	**19**	**1.37**	3,394	6,287	688	2,321	300	77	184	21.3	82.8	13.0	24.9	2.6	13.5	2.0	304
							55	72	**17**	**1.26**	3,226	5,888	635	2,104	250	63	145	16.2	61.3	9.2	17.1	1.5	9.4	1.3	225
							81	88	7	1.45	4,319	6,967	682	2,059	193	42	91	10.1	34.8	5.4	9.5	0.7	5.5	0.7	120
NRC041	307338	7866752	392	100	180	-60	5	22	**17**	**1.73**	4,925	8,172	784	2,542	284	66	161	17.7	75.6	10.5	21.0	2.1	9.9	1.4	233
							40	43	**3**	**3.33**	10,649	16,194	1,429	4,239	364	74	170	17.0	64.2	8.1	13.9	1.2	5.5	0.8	164
NRC042	307638	7866366	391	100	180	-60	49	50	1	1.44	3,920	7,176	693	2,219	192	36	72	6.8	26.1	3.6	7.2	0.7	3.6	0.5	77
NRC043	307639	7866406	391	100	180	-60	40	44	**4**	**1.66**	4,858	8,210	753	2,292	192	38	76	7.5	30.4	4.3	8.2	0.8	3.9	0.6	80
							49	55	**6**	**1.22**	3,235	5,927	592	1,924	199	43	95	9.1	34.8	4.4	7.7	0.7	3.0	0.4	93
NRC044	307639	7866448	392	100	180	-60	68	70	2	1.66	4,562	8,322	803	2,501	197	36	73	6.5	24.5	3.0	6.1	0.5	2.9	0.4	64
							93	94	1	2.43	7,873	11,843	1,033	3,020	236	43	91	8.9	32.9	3.9	7.9	0.7	3.3	0.5	82
NRC045	307637	7866485	392	100	180	-60	9	10	1	2.69	7,922	13,375	1,252	3,817	289	51	97	8.9	32.3	4.0	8.0	0.8	4.0	0.6	89
NRC046	307640	7866527	392	100	180	-60	20	21	1	0.92	2,562	4,454	448	1,425	132	30	65	6.6	25.3	3.4	6.9	0.6	3.4	0.3	74
NRC047	307640	7866566	392	100	180	-60	37	42	**5**	**6.67**	19,707	32,879	3,156	9,337	759	150	310	28.5	104.2	13.3	26.5	2.5	13.2	1.5	300
							55	59	4	1.16	3,430	5,577	537	1,655	161	36	81	8.0	32.1	4.3	8.6	0.6	4.6	0.4	99
NRC048	307643	7866606	392	100	180	-60	13	19	6	0.69	1,370	2,931	357	1,394	220	59	154	18.0	82.1	12.0	26.5	2.7	14.4	1.9	288
NRC049	307642	7866646	392	100	180	-60	50	53	3	0.82	2,159	3,906	394	1,284	148	36	83	9.6	38.6	5.7	10.7	0.8	5.3	0.7	121
NRC050	307642	7866687	392	89	180	-60	23	27	4	0.87	2,191	4,152	429	1,382	173	42	92	10.2	45.9	6.6	11.7	1.0	6.0	0.4	135
NRC051	307240	7866405	391	100	180	-60	29	30	1	0.67	1,795	3,254	326	1,004	122	30	80	7.5	31.0	3.4	8.0	0.6	3.4	0.3	94
NRC052	307241	7866445	391	100	180	-60	1	3	2	0.56	1,183	2,634	287	988	141	35	88	10.3	40.8	6.3	10.9	1.1	7.4	1.0	144
NRC053	307242	7866484	392	100	180	-60	28	32	4	0.95	2,584	4,565	443	1,399	165	41	92	9.2	37.6	5.7	10.3	1.0	6.8	0.5	130
							93	97	4	0.80	2,166	3,911	374	1,155	124	30	70	6.5	29.0	4.6	8.3	0.7	3.7	0.3	98
NRC054	307240	7866526	392	100	180	-60	33	43	10	0.83	2,242	3,877	394	1,312	149	36	84	8.5	37.1	5.4	10.3	1.0	4.7	0.4	127
							72	100	**28**	**1.23**	3,270	5,805	594	1,979	220	53	123	12.3	54.7	8.6	16.3	1.7	8.6	0.8	196
NRC055	307240	7866563	392	100	180	-60	50	57	7	0.68	1,712	3,180	330	1,104	139	34	81	9.4	40.7	6.4	12.9	1.6	5.7	1.4	152
							62	68	6	0.92	2,495	4,431	437	1,379	144	32	74	8.2	34.1	5.3	10.7	1.2	5.1	0.9	126
							77	80	3	1.62	4,977	7,964	729	2,114	174	37	74	7.9	25.6	3.1	6.5	0.6	0.9	0.3	80
NRC056	307241	7866604	392	100	180	-60	8	12	4	1.03	2,750	4,907	498	1,579	171	40	95	10.4	45.9	6.9	12.6	1.6	5.3	1.0	155
							41	43	2	3.75	12,119	17,990	1,590	4,717	426	93	204	22.1	85.0	10.9	20.0	1.7	8.0	1.2	251
							58	63	5	0.62	1,240	2,614	325	1,284	209	59	140	16.6	73.5	11.2	22.9	2.5	11.6	1.7	250
NRC057	307239	7866645	392	100	180	-60	29	44	**15**	**1.85**	5,067	8,524	888	2,955	349	85	191	23.2	97.7	15.7	33.3	4.0	20.1	2.8	359
NRC058	307241	7866684	392	100	180	-60	23	74	**51**	**3.19**	8,654	14,497	1,512	4,883	607	159	384	45.0	206.8	34.7	73.8	8.4	44.9	6.3	926
NRC059	307238	7866725	392	100	180	-60	1	12	**11**	**2.95**	7,948	13,831	1,442	4,593	553	139	311	35.1	148.0	23.0	44.0	5.1	26.6	3.7	534
NRC060	307237	7866765	392	100	180	-60	63	68	5	0.80	2,671	3,785	347	1,010	88	19	41	4.5	16.3	2.5	3.7	0.6	3.6	0.4	53
NRC061	307292	7866362	391	100	180	-60	94	95	1	0.82	2,624	3,863	352	1,035	109	25	62	7.2	28.7	3.4	9.1	0.6	6.8	0.9	94
NRC062	307294	7866403	391	100	180	-60	75	77	2	0.59	1,211	2,593	306	1,125	178	49	120	13.5	58.5	8.6	16.6	2.3	10.8	1.4	195
							80	82	2	0.65	1,269	2,845	345	1,331	208	56	142	16.2	66.0	9.2	20.0	2.3	10.8	1.5	231

Hole ID	East	North	RL	Depth	Azimuth	Dip	From	To	Width	TREO_Y %	La_2O_3 ppm	CeO_2 ppm	Pr_6O_{11} ppm	Nd_2O_3 ppm	Sm_2O_3 ppm	Eu_2O_3 ppm	Gd_2O_3 ppm	Tb_4O_7 ppm	Dy_2O_3 ppm	Ho_2O_3 ppm	Er_2O_3 ppm	Tm_2O_3 ppm	Yb_2O_3 ppm	Lu_2O_3 ppm	Y_2O_3 ppm
NRC063	307291	7866443	391	100	180	-60	22	26	4	0.85	2,514	4,038	386	1,212	122	27	60	6.8	26.4	3.7	7.6	0.8	4.4	0.5	87
NRC064	307291	7866483	391	100	180	-60	19	45	**26**	**0.95**	2,612	4,526	449	1,482	157	36	86	9.7	37.4	5.4	10.8	1.1	6.1	0.8	123
NRC065	307290	7866521	392	100	180	-60	46	68	**22**	**1.17**	3,033	5,524	561	1,867	225	54	133	15.4	64.1	9.9	20.8	2.3	12.5	1.7	221
NRC066	307288	7866561	392	100	180	-60	47	64	17	0.73	1,557	3,243	365	1,374	195	51	142	17.6	75.6	12.3	26.9	3.3	17.6	2.4	302
							69	100	**31**	**1.08**	2,484	4,913	538	1,968	264	68	182	21.9	91.6	14.1	29.3	3.4	17.6	2.3	321
NRC067	307289	7866601	392	100	180	-60	41	70	**29**	**1.55**	4,483	7,205	700	2,262	266	65	165	16.8	75.0	10.3	21.1	2.0	10.1	1.3	231
							85	100	**15**	**1.63**	4,847	7,538	725	2,290	265	63	169	17.8	82.8	12.3	28.1	3.0	16.8	2.3	291
NRC068	307288	7866641	392	100	180	-60	10	66	**56**	**3.34**	9,366	15,890	1,484	4,774	570	141	366	40.1	183.0	25.8	55.5	5.8	31.7	4.2	605
							71	80	**9**	**4.05**	12,039	19,175	1,881	5,813	573	136	308	33.6	133.5	19.2	37.4	4.0	20.3	2.8	448
NRC069	307290	7866679	392	100	180	-60	7	14	**7**	**2.66**	8,467	12,658	1,179	3,486	305	70	154	16.4	64.2	9.4	18.1	1.9	9.6	1.4	216
NRC070	307290	7866721	392	100	180	-60	2	35	**33**	**3.65**	11,207	17,397	1,644	4,952	471	110	242	27.3	106.6	15.9	31.7	3.4	17.4	2.4	358
							80	96	**16**	**1.19**	3,052	5,512	585	1,957	238	61	143	16.5	68.6	10.1	20.1	2.2	11.1	1.5	228
NRC071	307294	7866762	392	100	180	-60	16	22	6	1.07	3,076	5,195	499	1,533	137	31	63	6.7	24.3	3.7	7.0	0.7	3.2	0.5	91
NRC072	307393	7866362	391	100	180	-60	32	33	1	1.04	2,239	4,723	535	1,951	283	74	192	23.9	102.5	15.2	29.6	3.3	16.6	2.1	323
NRC073	307394	7866404	391	100	180	-60	80	81	1	1.30	4,351	6,345	537	1,529	107	20	37	3.4	9.2	1.1	1.1	0.6	0.6	0.3	23
NRC074	307390	7866444	391	100	180	-60	12	16	4	1.13	3,342	5,303	515	1,637	170	40	94	9.7	36.4	5.1	10.0	0.9	4.4	0.6	122
NRC075	307391	7866483	391	100	180	-60	0	7	7	0.67	1,772	3,175	329	1,073	119	28	67	7.2	28.9	4.3	9.7	1.0	5.3	0.8	112
							33	49	**16**	**1.02**	2,505	4,742	508	1,731	220	53	135	15.1	59.8	8.6	16.4	1.7	8.5	1.2	182
NRC076	307391	7866523	392	100	180	-60	18	33	15	0.95	2,509	4,488	460	1,506	173	42	103	11.9	50.0	7.6	15.8	1.8	10.0	1.5	176
							53	64	**11**	**2.17**	6,421	10,421	1,011	3,052	290	66	141	15.4	62.1	8.7	15.9	1.8	8.2	1.2	191
							70	79	9	1.06	2,387	4,856	555	1,959	263	68	161	18.7	78.3	11.1	19.7	2.0	8.7	1.2	247
NRC077	307390	7866561	392	100	180	-60	43	100	**57**	**2.49**	6,780	11,628	1,201	3,941	447	109	253	29.4	124.2	18.1	34.7	4.0	19.2	2.8	427
NRC078	307391	7866599	392	86	180	-60	30	68	**38**	**3.10**	8,355	14,326	1,447	4,966	584	143	357	41.0	178.0	27.0	56.6	6.1	32.2	4.5	634
NRC079	307391	7866643	392	100	180	-60	1	9	**8**	**1.39**	3,766	6,449	654	2,251	259	63	156	17.3	70.3	10.0	20.1	2.1	10.7	1.5	237
NRC080	307391	7866681	392	100	180	-60	25	29	**4**	**2.31**	6,923	11,456	1,060	3,146	240	45	78	8.5	28.9	3.6	6.5	0.7	3.3	0.5	81
NRC081	307389	7866720	392	100	180	-60	26	29	3	1.34	4,091	6,605	608	1,776	143	28	60	5.6	17.7	2.5	4.6	0.4	2.3	0.3	57
NRC082	307385	7866760	392	100	180	-60	71	72	1	7.60	24,560	38,057	3,327	9,050	615	102	164	13.4	24.6	3.1	3.8	0.2	1.1	0.3	62
NRC083	307492	7866367	391	100	180	-60	27	32	5	1.25	3,901	6,169	559	1,614	117	22	37	3.4	8.8	1.2	1.8	0.2	1.3	0.2	27
NRC084	307491	7866407	391	100	180	-60	70	79	**9**	**1.00**	2,971	5,036	447	1,331	97	18	35	3.0	8.6	1.0	2.2	0.2	0.9	0.2	22
NRC085	307492	7866444	392	100	180	-60	0	2	**2**	**4.07**	12,716	20,233	1,725	5,244	386	68	137	11.4	37.7	4.7	9.7	0.9	4.1	0.6	107
NRC086	307492	7866486	392	100	180	-60	22	28	**6**	**3.25**	10,252	16,409	1,441	3,916	260	47	84	7.3	18.9	1.7	2.9	0.3	1.1	0.2	37
NRC087	307491	7866523	392	100	180	-60	0	37	**37**	**1.64**	4,521	7,731	755	2,517	284	67	170	18.5	78.5	11.4	22.7	2.5	12.8	1.8	261
NRC088	307491	7866563	392	100	180	-60	41	51	**10**	**1.20**	3,614	5,857	525	1,571	142	33	73	8.3	31.0	4.3	8.0	0.9	4.1	0.5	89
NRC089	307489	7866602	392	100	180	-60	11	22	**11**	**1.39**	3,740	6,724	655	2,107	234	58	137	15.5	61.5	8.6	16.7	1.8	8.3	1.1	200
NRC090	307494	7866642	392	100	180	-60	91	92	1	2.57	8,164	12,520	1,169	3,393	232	48	77	7.0	17.7	2.2	3.2	0.3	1.8	0.2	54
NRC091	307491	7866684	392	100	180	-60	50	100	**50**	**0.75**	1,567	3,261	384	1,467	218	59	149	17.5	73.9	11.0	22.7	2.4	13.0	1.9	279
NRC092	307492	7866723	392	100	180	-60	39	66	**27**	**0.70**	1,327	3,001	355	1,399	226	61	160	18.4	86.3	12.7	26.7	3.0	15.6	2.1	313
NRC093	307496	7866761	392	100	180	-60	4	21	**17**	**0.81**	1,664	3,562	413	1,583	245	65	169	19.4	89.8	13.1	27.1	2.9	15.4	2.0	332

Appendix 2: JORC Tables

Cummins Range Section 1 Sampling Techniques and Data		
Criteria	**JORC Code Explanation**	
Sampling techniques	*Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling* *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* *Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work* ***has*** *been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or* *mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	Samples were collected from RC drilling techniques. Samples were collected on 1m intervals after going through a cyclone and riffle splitter. Samples are considered representative with no inherent sampling issues or bias.
Drilling Techniques	*Drill type (eg core, reverse circulation, open- hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	RC drilling was completed over two campaigns, Navigator Resources drilled 93 angled holes to an average depth of 100m in 2007. A face sampling bit was used and holes were 133mm diameter. Additional holes were drilled in 2011 by Kimberley Rare Earth (KRE). A total of 314 RC holes have been used in the resource estimation
Drill Sample Recovery	*Method of recording and assessing core and chip sample recoveries and results assessed.* *Measures taken to maximise sample recovery and ensure representative nature of the samples.* *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	All samples are RC chip samples. Samples were collected as both 4m composites for initial assaying and 1m samples for follow up assaying of anomalous zones. Dry 4m composites were spear sampled using a PVC tube and wet 4m composites were samples with an aluminium scoop. The 1m samples were collected via a 1:9 riffle splitter. Most holes had good sample recovery although a limited number of holes encountered high ground water inflow and karst type weathering in void formations at depth exceeding 40m. Difficult drilling conditions including binding clays, voids and water flow in several holes curtailed a component of the planned drilling resulting in a reduced program over the central resource area. Such ground conditions are characteristic of the most strongly mineralized zones of the Cummins Range rare earth resource.
Logging	*Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* *The total length and percentage of the relevant intersections logged.*	Logging of all holes was carried out on 1m intervals using both quantitative and qualitative descriptions. The recorded details included; lithology, grainsize, weathering, colour, alteration, sulphide quantity and type, structure and veining.

Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.* *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* *Whether sample sizes are appropriate to the grain size of the material being sampled.*	Each sample is being assayed for the full suite of rare earths plus uranium, thorium, phosphorus, scandium, niobium, tantalum and a range of gangue elements to assist metallurgical characterisation, utilising sodium peroxide fusion Ni crucible/ICP-MS techniques. Routine assaying of 14 lanthanides as well as Y, Th, U, Al, Si, P, Mg, Fe, Ca, Ga, Hf, Nb, S, Sc, Ta, Ti and Zr has been undertaken by Genalysis/Intertek Laboratories in Perth using sodium peroxide fusion, nickel crucible/ICP-MS techniques.
Quality of assay data and laboratory tests	*The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	The Navigator drilling was assayed by Genalysis in Perth. The 4 meter composite samples underwent a 4 acid digest followed by ICP-OES (inductively coupled plasma mass spectrometry) analysis. The 1m split samples underwent a peroxide fusion digest followed by ICP-OES and ICP-MS analysis. All samples were assayed for a large suite of elements including rare earth elements. QAQC testing was limited to intra-laboratory testing. KRE assayed their samples at Genalysis/Intertek in Perth. Samples were assayed for 14 lanthanides as well as Y, Th, U, Al, Si, P, Mg, Fe, Ca, Ga, Hf, Nb, S, Sc, Ta, Ti and Zr using sodium peroxide fusion, nickel crucible/ICP-MS techniques. TREOY is defined as the total 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) but excluding Promethium (Pm); plus Yttrium (Y).
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.* *The use of twinned holes* *The verification of significant intersections by either independent or alternative company personnel.* *Discuss any adjustment to assay data*	The geological database used for the Resource Estimates consists of 314 assayed inclined RC holes representing 13986 assayed metres. The drill hole spacing is essentially 40x50 metres over most of the deposit. All sampling was conducted using standard 1 metre riffle splits from the RC drill cyclone. No holes were twinned. Significant assay intersections have been verified by the Competent Person.
Location of data points	*Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* *Specification of the grid system used* *Quality and adequacy of topographic control*	Drillhole collar locations have been surveyed using a differential GPS with accuracy to <1m
Data spacing and distribution	*Data spacing for reporting of Exploration Results* *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* *Whether sample compositing has been applied*	Drilling has been conducted on a nominal 40m X 50m spacing over the deposit. This spacing is considered appropriate for Mineral Resource estimation. Initial sampling was on 4m intervals but subsequent 1m samples have been collected and used for resource estimation.

Orientation of data in relation to geological structure	*Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	The orientation of drilling is not considered to be biased towards any geological characteristics.
Sample security	*The measures taken to ensure sample security*	Samples were transported to Perth from site. Security of samples is not known.

Cummins Range Section 2 Reporting of Exploration Results		
Criteria	***JORC Code Explanation***	
Mineral tenement and land tenure status	*Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	The Cummins Range REO deposit is located on tenement E80/5092 and is 100% owned by Element 25 Pty Ltd. [To be updated] Sagon Resources has recently announced the purchase of RareX Pty Ltd. RareX has purchased the tenement from Element 25 with a potential capped royalty payment of $1m should a positive PFS study be completed within 36 months of purchase finalisation.
Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	CRA Exploration defined REO mineralisation at Cummins Range in 1978 using predominantly aircore drilling. Navigator Resources progressed this discovery with additional drilling after purchasing the tenement in 2006. Navigator announced a resource estimate in 2008. KRE drilled additional holes and upgraded the resource estimate in 2012.
Geology	*Deposit type, geological setting and style of mineralisation.*	The Cummins Range REO deposit occurs within the Cummins Range carbonatite which is a 1.5 km diameter near-vertical pipe that has been deeply weathered but essentially outcropping with only thin aeolian sand cover in places. The mineralisation has been defined using a combination of grade and various regolith units defined by detailed geological logging of all holes.
Drill hole information	*A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* • *easting and northing of the drill hole collar* • *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* • *dip and azimuth of the hole* • *down hole length and interception depth* • *hole length.* *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	Drill hole information is presented in tabular form in the body of the announcement.

Data aggregation methods	*In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated.*	Exploration results have been reported using a cut-off of 0.5% TREOY with a maximum of 2m internal dilution. All assays reported are based on 1m intervals and have been averaged with no top cuts applied.
Relationship between mineralisation widths and intercept lengths	*These relationships are particularly important in trhe reporting of Exploration Results If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	Mineralisation is flat lying and holes are angled at -60 degrees so mineralisation widths and sample intervals are closely correlated
Diagrams	*Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	Maps and diagrams are included in the body of the announcement
Balanced reporting	*Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	Representative reporting of assays results is balanced. All holes have assays reported where grades of above 0.5% TREOY where encountered
Other substantive exploration data	*Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	No other substantive exploration data in material.
Further work	*The nature and scale of planned further work (eg tests for lateral extensions or large scale step out drilling. Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	The resource is open along strike so additional exploration work should be planned.

Cummins Range Section 3 Estimation and Reporting of Mineral Resources		
Criteria	***JORC Code Explanation***	
Database integrity	*Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* *Data validation procedures used.*	RC drilling data has been inspected. Comparisons have been made to previous ASX announcements. Raw assay lab data sheets have not been sighted but can be retrieved from the assay lab if necessary
Site visits	*Comment on any site visits undertaken by the Competent Person and the outcome of those visits. If no site visits have been undertaken indicate why this is the case.*	The competent person has not visited site. The site is at an exploration phase with no surface expression.
Geological interpretation	*Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* *Nature of the data used and of any assumptions made.* *The effect, if any, of alternative interpretations on Mineral Resource estimation.* *The use of geology in guiding and controlling Mineral Resource estimation.* *The factors affecting continuity both of grade and geology.*	The data used in the resource estimation was limited to RC drilling data only. Aircore and RAB drilling results were not included. The interpretation is consistent with a flay lying weathered horizon with enrichment for REO's. The estimation has been driven by the flat lying nature of the oxidised mineralisation. Mineralisation is continuous between drilling sections both for grade and geology.
Dimensions	*The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	The mineralised zone is approximately 500m X 500m in areal extent. Mineralisation extends from surface to about 100m vertical depth.
Estimation and modelling techniques	*The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domains, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* *The assumptions made regarding recovery of by-products.* *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).* *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* *Any assumptions behind modelling of selective mining units.* *Any assumptions about correlation between variables.* *Description of how the geological interpretation was used to control the resource estimates.* *Discussion of basis for using or not using grade cutting or capping* *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	Ordinary Kriging was used to estimate TREO grades from one metre composites within the mineralised zone using three estimation passes. To report individual oxide species the ratio of each assayed oxide component to the total (either TLREO or THREOY) was estimated and then applied to the reported resource. Cross-sectional geological interpretations were completed for the entire area referred to in this report and used to create wireframes to define the boundaries of different loads. The wireframes were used to code the data set upon which the resources were estimated in a block model with dimensions of 10 x 12.5 x 2 metres (x, y, z). Density profiling was completed using data collected by down-hole gamma-gamma logging completed by Surtron within 10 separate RC holes all located within the NW quadrant of the model. Densities range between 1.52 and 2.32 tonnes/m3. The density profile from the NW quadrant was extrapolated over the entire model and therefore the ultimate tonnage is subject to change once density measurements are obtained from the central core of the deposit.
Moisture	*Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	All estimations have been made on a dry tonnage basis.

Cut-off parameters	*The basis of the adopted cut-off grade(s) or quality parameters applied.*	Various cut-off grades have been presented. Cut off grades are based on varying commodity price scenarios.
Mining factors or assumptions	*Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	Mining factors or assumptions were not explicitly used in estimating the Mineral Resource but open pit mining methods will be utilised for any future mining operations.
Metallurgical factors or assumptions	*The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	Metallurgical test work and associated mineralogical study work has been carried out both in Australia and China to support process flowsheet development and economic assessment. The primary objective of this work was to determine the potential upgradeability (into concentrate) for Cummins Range ore, and to improve understanding of the mineralogical distribution, liberation and deportment of rare earths within the mineralisation. This work assessed froth flotation and other mineral processing techniques. To facilitate the test work programs, a large composite sample was prepared from a carefully selected range of drill intercepts samples collected during the 2011 KRE drilling campaign. A series of sub-samples taken from the composite were assayed with an average grade of 3.43% TREO and a standard deviation of 0.23% TREO, confirming the homogeneity of the sample. The grade and composition of the sample is expected to approximate material from a potential high grade stage 1 pit at Cummins Range. A 600kg portion of the composite was subjected to concentration and mineralogical studies at a research institute in China, and a second 50kg sample was similarly tested at the Ian Wark Research Institute in Adelaide.
Environmental factors or assumptions	*Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	Contractors were engaged to conduct a baseline flora and fauna survey of the project site to support the environmental understanding of the site and the approvals process.

Bulk density	*Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	Density values were derived from a dataset obtained from the probing of 10 drill-holes. The assignment of density values to the data set was via analysis of the correlation of density with oxidation profile and mineralised zone. Three dominant density trends emerged which generally coincided with the following: 1. Zone above the BOCO and below topographic surface 1.517, 2. Zone below the BOCO but above the top of the main mineralised zone in the transitional zone, 2.148 3. Below the top of the main mineralised zone but above the TOFR, 2.319
Classification	*The basis for the classification of the Mineral Resources into varying confidence categories.* *Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data.* *Whether the result appropriately reflects the Competent Person's view of the deposit.*	Blocks in the resource model have been allocated a confidence category based on the number and location of samples used to estimate the grade of each block which are a consequence of taking into account such issue as sample recovery, geological variability and QAQC etc. The approach is based on the principle that larger numbers of samples, which are more evenly distributed throughout the search neighbourhood, will provide a more reliable estimate. The search parameters used to decide the classification of a block within the resource in this study are: Minimum number of samples found in the search neighbourhood For Measured and Indicated categories, this parameter is set to sixteen. For Inferred category, a minimum of eight samples is required. This parameter ensures that the block estimate is generated from a reasonable number of sample data.Minimum number of spatial quadrants informed. The space around the centre of a block being estimated is divided into octants by the axial planes of the data search ellipsoid. This parameter ensures that the samples informing an estimate are relatively evenly spread around the block and do not all come from one drill hole. For Measured and Indicated categories, all four quadrants must contain at least 16 samples combined. For Inferred panels a minimum of 2 quadrants must contain at least 8 samples combined. The distance to informing data. A three pass approach was adopted. For the Measured category, the search radii are set to 45mE by 55mN by 8mRL respectively for the first pass. For Indicated and Inferred, the search radii are set to 90mE by 110mN by 16mRL respectively and the data criteria are reduced by half to minimum data of 8 in at least two octants by use of an expansion equal to 1.0. The method of estimating the individual oxide species is based on applying ratios to the modelled TLREO and THREOY. For a higher classification level the individual oxide lanthanides will be required to be geostatistically analysed and modelled. The results of the classification reflects the Competent Person's view of the deposit.
Audits or reviews	*The results of any audits or reviews of Mineral Resource estimates*	The Mineral Resource estimate was conducted by a reputable consultancy in 2012. This work has been reviewed by the competent person.

Discussion of relative accuracy/ confidence	*Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	The Mineral Resource Estimate is categorised appropriate to the level of confidence. Assaying of all REO elements has been conducted. The estimate relates to a local estimate based on geological, geostatistical and assaying techniques and procedures. Individual rare earth oxides were not modelled individually. The model only modelled Total Light Rare Earth Oxide (TLREO) and Total Heavy Rare Earth Oxide with Yttrium (THREOY). To report the individual oxide components the ratio of each oxide was estimated for every assay within the TREO cut-off grade ranges. These ratios were then applied to the modelled TLREO and THREOY grades.