

## GLOBALLY SIGNIFICANT MAIDEN JORC 2012 RESOURCE OF 13 MILLION TONNES AT 1.13% TREO

### HIGHLIGHTS

- Significant Maiden JORC 2012 Inferred Resource of 13Mt at 1.13% TREO
- Equivalent to more than 147 million kilograms TREO
- Neodymium Praseodymium oxide currently trading at circa US\$45 per kilogram
- Sagon now ranked in the Top-5 Australian rare earths projects on the ASX<sup>1</sup>
- Deposit outcrops and has dimensions amenable to low strip ratio open pit mining
- Drilling program and passive seismic survey planned for Q4 CY2019

### Cummins Range Rare Earths Project Maiden 2012 Mineral Resource

Australian rare earths developer, Sagon Resources Limited (ASX:SG1) (“Sagon” or “the Company”) is pleased to announce its Maiden JORC 2012 Mineral Resource for its 100% owned Cummins Range Rare Earths Project located in Western Australia.

The Maiden 2012 Inferred Mineral Resource for Cummins Range has been estimated at **13.0Mt at 1.13% Total Rare Earth Oxides (“TREO”)** comprising **147,000,000 kg TREO** using a cut-off grade of 0.5% TREO.

Cummins Range Inferred Mineral JORC 2012 Resource		
<i>Tonnes (Mt)</i>	<i>Grade (TREO)</i>	<i>TREO (kg)</i>
<b>13.0</b>	<b>1.13%</b>	<b>147,300,000</b>

Australian Rare Earth Projects Listed on the ASX Ranked According to Total Resource Size <sup>1</sup>						
<i>Company</i>	<i>ASX Code</i>	<i>Project</i>	<i>Market Cap</i>	<i>Total Mineral Resource</i>	<i>Grade (TREO)</i>	<i>Dominant REO Mineral</i>
Lynas Corporation	LYC	Mt Weld	A\$1.8bn	55.4Mt	5.40%	Monazite
Arafura Resources	ARU	Nolans Bore	A\$91m	56.0Mt	2.60%	Apatite
Hastings	HAS	Yangibana	A\$161m	21.6Mt	1.17%	Monazite
<b>Sagon Resources</b>	<b>SG1</b>	<b>Cummins Range</b>	<b>A\$16m</b>	<b>13.0Mt</b>	<b>1.13%</b>	<b>Monazite</b>
Northern Minerals	NTU	Browns Range	A\$142m	9.2Mt	0.66%	Xenotime

<sup>1</sup> Ranking based upon Total Mineral Resource size. Refer to the table on page 6 for additional information regarding the peer comparisons. Information sourced from LYC ASX Announcement dated 21 September 2018; ARU ASX Announcement dated 11 October 2018; HAS ASX Announcement dated 28 November 2018; NTU ASX Announcement dated 31 October 2018. Table excludes ASX-listed companies that own significant non-rare earth assets. Total mineral resources include measured, indicated and inferred categories where applicable. Market capitalisations calculated for each company as at 14 October 2019.

Sagon Executive Director, Jeremy Robinson:

*“We are pleased to commence with a significant Maiden JORC 2012 Resource which benchmarked against peers offers Sagon an exciting platform to move forward with. The Cummins Range ore-body is open along strike and at depth and we believe we can materially expand the Resource and look forward to the upcoming drilling program”.*

### Significant Scope to Expand Maiden Resource

Sagon considers the mineralisation at Cummins range to have significant potential for expansion. The Resource remain open along strike and at depth with significant scope to expand the Resource with no active exploration recorded since 2012.

Cummins Range is one of two known rare earth bearing carbonatites in Australia with the other being Mt Weld owned by Lynas Corporation Ltd. The known Resource occupies a small portion of the Cummins Range Intrusive Complex that is approximately 2km by 2km and this offers significant potential to expand the known Resource. Rare Earth Oxide mineralisation at Cummins Range occurs in a sub-horizontal geometry within a deeply weathered regolith which is developed over carbonatite and pyroxenite rocks.

At Cummins Range deep weathering is an important control on mineralisation and several “channels” or deeply weathered zones have been identified. Several of these channels remain open, the passive seismic surveying offers the possibility of mapping these structures so they can be targeted by further exploration drilling. Passive seismic has been shown to be effective in mapping weathered surfaces and river channels in uranium exploration.

Figure 1 below illustrates the extent to which the Resource remains open along strike in multiple directions:

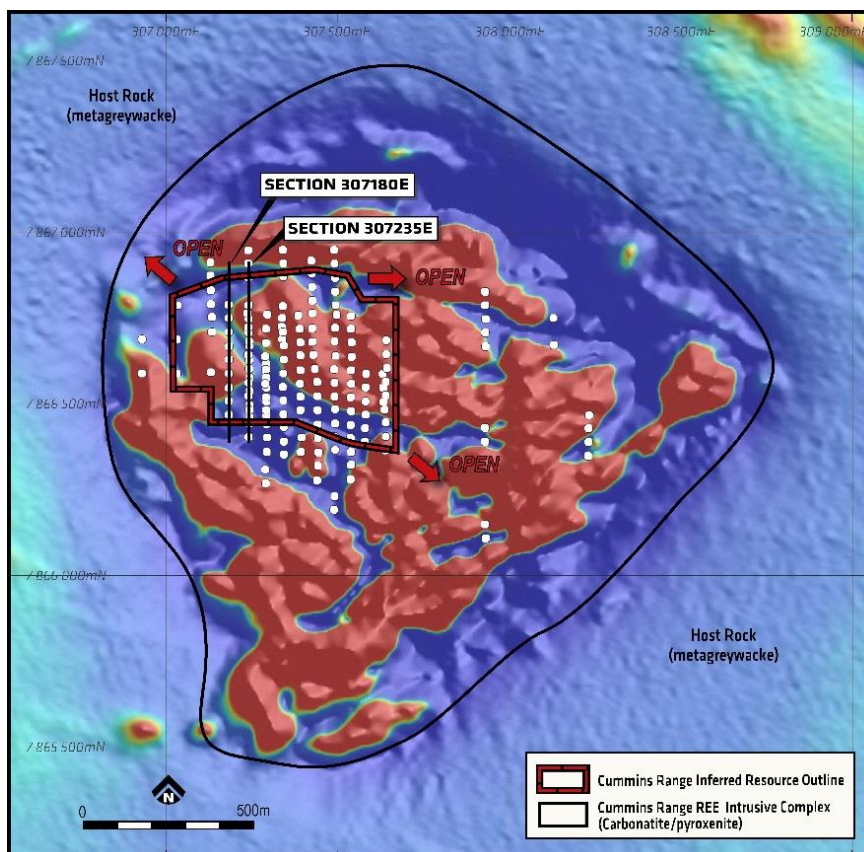


Figure 1 - Cummins Range Intrusive Complex

Figure 2 below illustrates that the Resource remains open at depth:

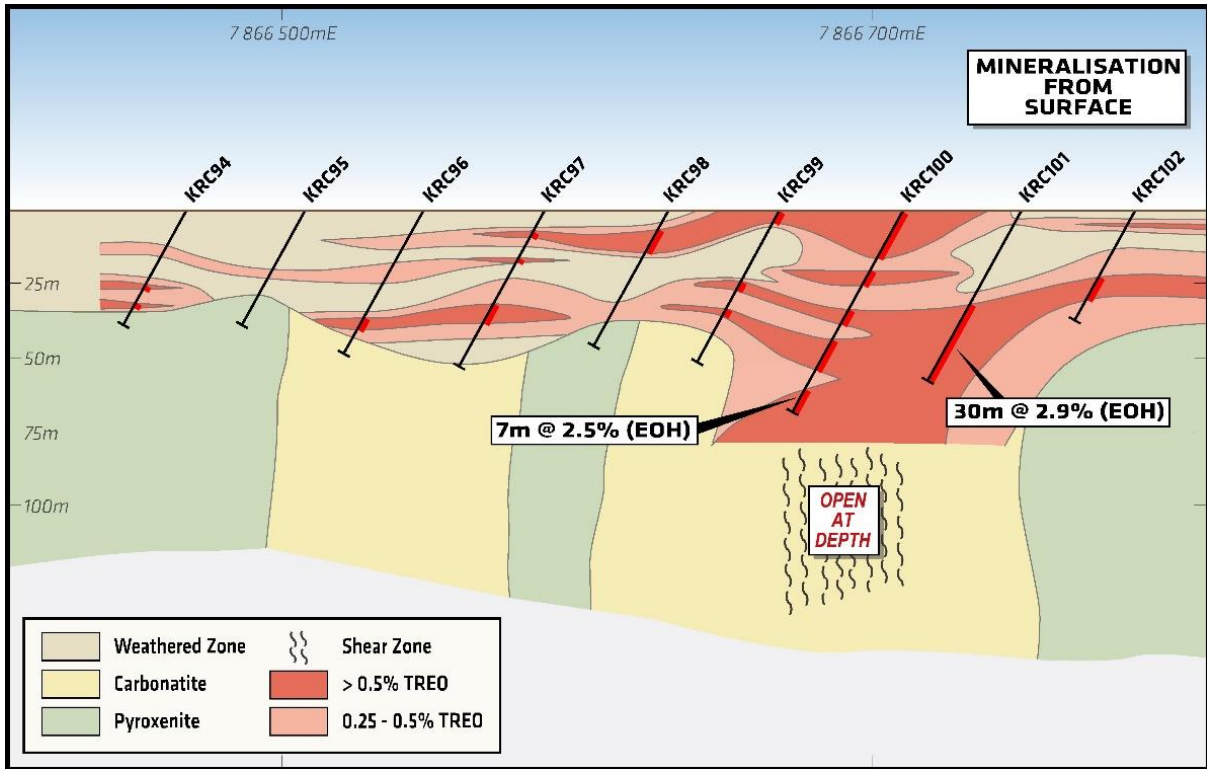


Figure 2 - Cummins Range Cross Section 307180E

Stage 1 of the drill program will include large diameter PQ drill core to provide samples for metallurgical test work and to better assess the grade of the Cummins Range Rare Earths Project

Sagon continues to collate and review all previous data and in conjunction with the upcoming planned passive seismic survey is expecting to enable better targets for extensional drilling around the known Resource.

The Resource has been compiled by leading Perth based mining and resource consultants Auralia Mining Consultants. It is based on historical drilling completed by previous operators in 2007 and 2011. These historical exploration results have been reviewed and are now reported in accordance with JORC 2012 standards.

The Resource is currently classified as Inferred due to density measurements taken by previous operators being restricted to the NW quadrant of the Resource and on general a 50m by 40m drill spacing. Further density measurements on the diamond drill core will be taken as part of the upcoming drill program to assist in upgrading part of the resource to the Indicated category following infill drilling planned for next year.

### Deposit amenable to low strip ratio open pit mining

The Resource is likely amenable to simple low strip ratio open pit mining, it outcrops at surface, has dimensions of approximately 700m by 400m and on average is about 25m thick with mineralisation from surface in places to depth of only 75m as illustrated on the accompanying plans and cross sections.

Figure 3 below illustrates that the Resource outcrops at surface and has dimensions conducive to open pit mining:

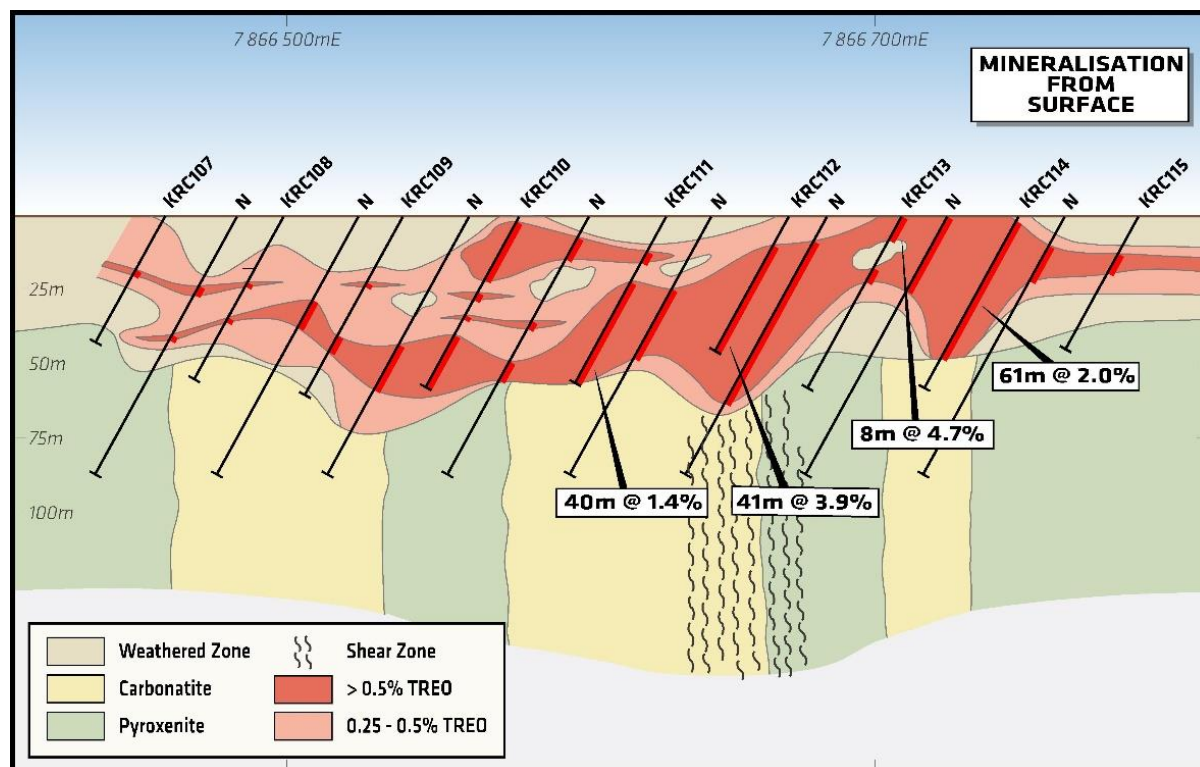


Figure 3 - Cummins Range Cross Section 307240E

### 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+Y<sub>2</sub>O<sub>3</sub>, TLREO, THREO, U<sub>3</sub>O<sub>8</sub>, ThO<sub>2</sub> and P<sub>2</sub>O<sub>5</sub> 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.

### **For further information, please contact:**

Jeremy Robinson  
Executive Director

### **ABOUT SAGON RESOURCES AND CUMMINS RANGE**

*Sagon is an ASX-listed specialist rare earths company focussed on developing the Cummins Range Rare Earth Project in the East Kimberly region of Western Australia. The Cummins Range deposit is a weathered carbonatite host to an Inferred Resource of 13Mt at 1.13% TREO for a contained 147 million kilograms of REO. The known Resource occupies a small portion of the Cummins Range Intrusive Complex that is approximately 2km by 2km and this offers significant potential to expand the known Resource.*

**PEER COMPARISON INFORMATION**

ASX Listed Rare Earth Resource Companies									
Company	Deposit	Stage	Measured (Mt)	Indicated (Mt)	Inferred (Mt)	Total Tonnes (Mt)	Grade (TREO)	Dominant REO Mineral	Information source
Lynas Resources	Mt Weld	Operating	17.5	12.0	25.9	55.4	5.40%	Monazite	<a href="#">ASX Announcement, 21<sup>st</sup> September 2018</a>
Arafura Resources	Nolans Bore	Development	4.9	30.0	21.0	56.0	2.60%	Apatite	<a href="#">ASX Announcement, 11<sup>th</sup> October 2018</a>
Hastings Technology Metals	Yangibana	Development	4.7	8.7	8.3	21.6	1.17%	Monazite	<a href="#">ASX Announcement, 28<sup>th</sup> November 2018</a>
Sagon Resources	Cummins Range	Development	0	0	13.0	13.0	1.13%	Monazite	-
Northern Minerals	Browns Range	Development	0	4.6	4.5	9.21	0.66%	Xenotime	<a href="#">ASX Announcement, 31<sup>st</sup> October 2018</a>



## COMPETENT PERSONS' STATEMENTS

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 the Company. 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.

Information in this release that relates to Exploration Results and Exploration Targets is based on and fairly represents information and supporting documentation prepared by Mr Joe Treacy, a Member of the Australasian Institution of Mining and Metallurgy and the Australian Institute of Geoscientists. Mr Treacy is a consultant Sagon Resources Limited and shareholder. Mr Treacy 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 Treacy consents to the inclusion in this release of the matters based on his information in the form and context in which it appears.

**Significant Intersections Table**

Hole ID	East	North	RL	Depth	Azimuth	Dip	From	To	Width	TREO_Y %	Date Drilled
KRC094	307183	7866470	391	46	180	-60	31	32	1	0.58	Sep-11
							38	40	2	0.80	
KRC095	307181	7866510	392	46	180	-60	NSI				Sep-11
KRC096	307183	7866549	392	56	180	-60	43	47	4	0.63	Sep-11
KRC097	307182	7866590	392	67	180	-60	9	11	2	1.62	Sep-11
							20	21	1	1.09	
							37	45	8	0.84	
KRC098	307182	7866632	392	53	180	-60	8	17	9	1.20	Sep-11
KRC099	307182	7866669	392	60	180	-60	1	4	3	1.22	Sep-11
							28	31	3	5.17	
							34	35	1	1.51	
							39	40	1	1.00	
KRC100	307182	7866711	392	78	180	-60	3	19	16	1.12	Sep-11
							24	30	6	2.95	
							39	44	5	0.72	
							52	63	11	1.68	
							71	78	7	2.48	
KRC101	307182	7866752	392	67	180	-60	37	67	30	2.93	Sep-11
KRC102	307181	7866791	392	43	180	-60	5	7	2	1.04	Sep-11
							26	35	9	0.86	
KRC103	307130	7866793	393	73	180	-60	4	5	1	1.21	Sep-11
							23	38	15	1.16	
							48	72	24	1.34	
KRC104	307129	7866833	393	85	180	-60	48	49	1	1.37	Sep-11
							81	83	2	7.30	
KRC105	307129	7866875	393	52	180	-60	10	11	1	1.25	Sep-11
KRC106	307128	7866913	393	46	180	-60	11	12	1	0.60	Sep-11
KRC107	307243	7866462	391	49	180	-60	2	3	1	0.68	Sep-11
							10	11	1	0.67	
							21	23	2	1.46	
KRC108	307243	7866498	392	63	180	-60	27	28	1	0.71	Sep-11
							40	41	1	0.51	
KRC109	307243	7866539	392	69	180	-60	26	27	1	0.72	Sep-11
							47	48	1	0.57	
							51	52	1	1.66	
KRC110	307242	7866579	392	66	180	-60	2	24	22	1.52	Sep-11
							30	33	3	0.84	
							39	40	1	2.67	
							46	66	20	1.04	
KRC111	307241	7866630	392	65	180	-60	14	18	4	0.89	Sep-11
							25	65	40	1.41	
KRC112	307241	7866672	392	52	180	-60	2	4	2	1.27	Sep-11
							11	52	41	3.85	



Hole ID	East	North	RL	Depth	Azimuth	Dip	From	To	Width	TREO_Y %	Date Drilled
KRC113	307241	7866710	392	64	180	-60	1	9	8	4.71	Sep-11
							20	23	3	0.74	
KRC114	307240	7866750	392	67	180	-60	2	63	61	2.04	Sep-11
KRC115	307240	7866789	392	52	180	-60	15	22	7	2.60	Sep-11
							40	42	2	0.81	
KRC116	307239	7866869	393	58	180	-60	7	10	3	0.80	Sep-11
							31	32	1	0.68	
							47	49	2	0.68	
KRC117	307238	7866912	393	72	180	-60	50	52	2	2.03	Sep-11
KRC118	307239	7866949	393	28	180	-60	NSI				Sep-11
KRC119	307290	7866269	391	34	180	-60	NSI				Sep-11
KRC120	307288	7866310	391	35	180	-60	21	22	1	0.60	Sep-11
							33	34	1	0.53	
KRC121	307292	7866469	391	58	180	-60	15	38	23	1.88	Sep-11
							54	58	4	1.20	
KRC122	307292	7866509	392	61	180	-60	16	17	1	0.52	Sep-11
							42	43	1	0.53	
							52	61	9	0.77	
KRC123	307291	7866550	392	34	180	-60	NSI				Sep-11
KRC124	307291	7866579	392	84	180	-60	33	43	10	1.52	Sep-11
							51	64	13	3.45	
							70	84	14	1.40	
KRC125	307291	7866619	392	61	180	-60	58	61	3	1.01	Oct-11
KRC126	307341	7866872	392	60	180	-60	6	7	1	0.83	Oct-11
							10	13	3	1.66	
							21	24	3	0.81	
							27	28	1	0.92	
							45	47	2	0.71	
KRC127	307341	7866912	393	46	180	-60	26	27	1	0.51	Oct-11
KRC128	307340	7866951	393	46	180	-60	NSI				Oct-11
KRC129	307493	7866789	392	76	180	-60	13	14	1	1.20	Oct-11
							32	41	9	0.67	
KRC130	307492	7866828	392	85	180	-60	14	18	4	0.68	Oct-11
							25	35	10	3.04	
							44	48	4	0.52	
							52	54	2	0.70	
							69	70	1	0.51	
KRC131	307492	7866868	392	70	180	-60	6	28	22	0.90	Oct-11
							36	37	1	0.69	
							39	40	1	0.78	
KRC132	307490	7866910	392	40	180	-60	7	8	1	0.85	Oct-11
KRC133	307490	7866950	392	46	180	-60	8	10	2	0.58	Oct-11
KRC134	307930	7866669	391	40	180	-60	NSI				Oct-11
KRC135	307930	7866709	391	40	180	-60	NSI				Oct-11

Hole ID	East	North	RL	Depth	Azimuth	Dip	From	To	Width	TREO_Y %	Date Drilled
KRC136	307931	7866749	391	49	180	-60	NSI				Oct-11
KRC137	307929	7866790	391	43	180	-60	NSI				Oct-11
KRC138	307929	7866829	392	40	180	-60	27	28	1	2.00	Oct-11
KRC139	307930	7866109	391	40	180	-60	31	32	1	0.65	Oct-11
KRC140	307930	7866149	391	34	180	-60	11	13	2	0.68	Oct-11
							21	22	1	0.90	
							27	32	5	0.86	
KRC141	308230	7866350	391	40	180	-60	NSI				Oct-11
KRC142	308231	7866389	391	34	180	-60	NSI				Oct-11
KRC143	308231	7866430	391	31	180	-60	NSI				Oct-11
KRC144	308232	7866468	391	37	180	-60	25	27	2	2.60	Oct-11
KRC145	307633	7866507	392	49	180	-60	16	17	1	0.53	Oct-11
							35	36	1	1.08	
KRC146	307632	7866548	392	71	180	-60	69	70	1	0.60	Oct-11
KRC147	307630	7866588	392	70	180	-60	0	4	4	1.42	Oct-11
							21	60	39	1.81	
KRC148	307579	7866391	391	49	180	-60	2	8	6	0.50	Oct-11
							15	29	14	0.77	
KRC149	307579	7866430	392	70	180	-60	3	8	5	1.80	Oct-11
							19	50	31	1.52	
KRC150	307580	7866470	392	67	180	-60	NSI				Oct-11
KRC151	307581	7866510	392	58	180	-60	0	1	1	1.56	Oct-11
							3	4	1	1.43	
							25	26	1	0.56	
							50	51	1	0.54	
KRC152	307581	7866549	392	67	180	-60	2	4	2	1.40	Oct-11
							18	19	1	0.55	
							58	59	1	0.79	
KRC153	307582	7866589	392	73	180	-60	12	17	5	0.51	Oct-11
							29	32	3	1.43	
							44	64	20	0.97	
KRC154	308130	7866674	391	37	180	-60	NSI				Oct-11
KRC155	308128	7866752	391	37	180	-60	NSI				Oct-11
KRC156	307930	7866391	391	40	180	-60	NSI				Oct-11
KRC157	307929	7866432	391	43	180	-60	16	17	1	1.28	Oct-11
KRC158	307338	7866690	392	84	180	-60	4	79	75	1.16	Oct-11
KRC159	307337	7866727	392	73	180	-60	2	41	39	2.15	Oct-11
KRC160	307339	7866787	392	46	180	-60	4	16	12	0.51	Oct-11
							19	20	1	1.11	
KRC161	307489	7866192	391	34	180	-60	NSI				Oct-11
KRC162	307491	7866232	391	31	180	-60	NSI				Oct-11
KRC163	307130	7866593	392	46	180	-60	27	28	1	0.84	Oct-11
KRC164	307030	7866588	392	37	180	-60	6	7	1	0.58	Oct-11

Hole ID	East	North	RL	Depth	Azimuth	Dip	From	To	Width	TREO_Y %	Date Drilled
KRC165	306929	7866591	392	37	180	-60	NSI				Oct-11
KRC166	306929	7866690	393	55	180	-60	8	9	1	0.57	Oct-11
KRC167	307030	7866689	392	100	180	-60	72	73	1	0.71	Oct-11
							91	92	1	1.58	
							95	100	5	1.21	
KRC168	307132	7866711	392	67	180	-60	5	6	1	0.80	Oct-11
							10	27	17	0.88	
							35	38	3	0.81	
							45	53	8	2.19	
KRC169	307031	7866790	393	65	180	-60	17	25	8	1.66	Oct-11
							62	65	3	0.54	
KRC170	307133	7866754	392	82	180	-60	13	24	11	0.90	Oct-11
							39	53	14	1.01	
							57	74	17	0.96	
NRC001	307439	7866278	391	100	180	-60					Jun-07
NRC002	307442	7866320	391	100	180	-60	41	42	1	0.98	Jun-07
							79	83	4	1.69	
NRC003	307444	7866360	391	100	180	-60	46	48	2	4.54	Jun-07
NRC004	307442	7866402	391	100	180	-60	29	30	1	3.78	Jun-07
							99	100	1	10.49	
NRC005	307440	7866441	392	100	180	-60	75	77	2	1.52	Jun-07
NRC006	307440	7866483	392	100	180	-60	22	25	3	3.15	Jun-07
							59	62	3	3.19	
NRC007	307440	7866524	392	100	180	-60	22	43	21	1.18	Jun-07
NRC008	307439	7866565	392	100	180	-60	54	55	1	1.72	Jun-07
							66	96	30	1.47	
NRC009	307433	7866604	392	120	180	-60	101	103	2	4.31	Jun-07
NRC010	307428	7866645	392	100	180	-60	43	44	1	5.05	Jun-07
							91	93	2	1.63	
NRC011	307425	7866683	392	100	180	-60	36	37	1	1.10	Jun-07
NRC012	307426	7866722	392	100	180	-60	46	49	3	0.99	Jun-07
							95	98	3	0.97	
NRC013	307426	7866765	392	100	180	-60	NSI				Jun-07
NRC014	307425	7866803	392	100	180	-60	65	97	32	1.22	Jun-07
NRC015	307425	7866843	392	100	180	-60	28	33	5	1.62	Jun-07
							82	89	7	0.98	
NRC016	307424	7866883	392	100	180	-60	8	25	17	0.66	Jun-07
							54	84	30	1.22	
							88	100	12	0.84	
NRC017	307423	7866920	392	100	180	-60	NSI				Jun-07
NRC018	307537	7866281	391	100	180	-60	44	46	2	4.95	Jun-07
NRC019	307538	7866323	391	100	180	-60	23	24	1	1.21	Jun-07
NRC020	307538	7866361	391	100	180	-60	60	61	1	0.87	Jun-07
NRC021	307537	7866402	391	100	180	-60	12	37	25	1.47	Jun-07

Hole ID	East	North	RL	Depth	Azimuth	Dip	From	To	Width	TREO_Y %	Date Drilled
NRC022	307537	7866440	392	100	180	-60	13	26	13	1.51	Jun-07
NRC023	307538	7866481	392	100	180	-60	80	82	2	0.55	Jun-07
NRC024	307537	7866521	392	100	180	-60	58	61	3	5.77	Jun-07
NRC025	307538	7866561	392	100	180	-60	0	6	6	1.01	Jun-07
							30	34	4	1.16	
NRC026	307539	7866600	392	100	180	-60	13	37	24	0.68	Jun-07
							47	55	8	0.77	
NRC027	307540	7866639	392	100	180	-60	57	59	2	0.53	Jun-07
NRC028	307540	7866681	392	100	180	-60	75	97	22	0.86	Jun-07
NRC029	307539	7866721	392	100	180	-60	73	84	11	0.75	Jun-07
NRC030	307539	7866758	392	100	180	-60	75	82	7	0.65	Jun-07
NRC031	307342	7866354	391	100	180	-60	28	29	1	0.56	Jul-07
NRC032	307343	7866391	391	100	180	-60	38	62	24	0.78	Jul-07
NRC033	307342	7866433	391	98	180	-60	31	35	4	1.24	Jul-07
NRC034	307341	7866471	391	100	180	-60	16	23	7	2.10	Jul-07
							28	36	8	0.70	
							40	46	6	2.30	
							50	56	6	1.11	
NRC035	307341	7866512	392	100	180	-60	22	43	21	2.01	Jul-07
NRC036	307340	7866551	392	100	180	-60	28	73	45	1.12	Jul-07
							86	98	12	1.15	
NRC037	307341	7866590	392	100	180	-60	44	78	34	2.32	Jul-07
NRC038	307342	7866631	392	100	180	-60	42	100	58	3.09	Jul-07
NRC039	307343	7866672	392	100	180	-60	19	33	14	1.29	Jul-07
							38	45	7	0.93	
							63	90	27	2.08	
NRC040	307340	7866712	392	100	180	-60	4	9	5	2.03	Jul-07
							14	22	8	1.60	
							28	47	19	1.37	
							55	72	17	1.26	
							81	88	7	1.45	
NRC041	307338	7866752	392	100	180	-60	5	22	17	1.73	Jul-07
							40	43	3	3.33	
NRC042	307638	7866366	391	100	180	-60	49	50	1	1.44	Jul-07
NRC043	307639	7866406	391	100	180	-60	40	44	4	1.66	Jul-07
							49	55	6	1.22	
NRC044	307639	7866448	392	100	180	-60	68	70	2	1.66	Jul-07
							93	94	1	2.43	
NRC045	307637	7866485	392	100	180	-60	9	10	1	2.69	Jul-07
NRC046	307640	7866527	392	100	180	-60	20	21	1	0.92	Jul-07
NRC047	307640	7866566	392	100	180	-60	37	42	5	6.67	Jul-07
							55	59	4	1.16	
NRC048	307643	7866606	392	100	180	-60	13	19	6	0.69	Jul-07
NRC049	307642	7866646	392	100	180	-60	50	53	3	0.82	Jul-07

Hole ID	East	North	RL	Depth	Azimuth	Dip	From	To	Width	TREO_Y %	Date Drilled
NRC050	307642	7866687	392	89	180	-60	23	27	4	0.87	Jul-07
NRC051	307240	7866405	391	100	180	-60	29	30	1	0.67	Jul-07
NRC052	307241	7866445	391	100	180	-60	1	3	2	0.56	Jul-07
NRC053	307242	7866484	392	100	180	-60	28	32	4	0.95	Jul-07
							93	97	4	0.80	
NRC054	307240	7866526	392	100	180	-60	33	43	10	0.83	Jul-07
							72	100	28	1.23	
NRC055	307240	7866563	392	100	180	-60	50	57	7	0.68	Jul-07
							62	68	6	0.92	
							77	80	3	1.62	
NRC056	307241	7866604	392	100	180	-60	8	12	4	1.03	Jul-07
							41	43	2	3.75	
							58	63	5	0.62	
NRC057	307239	7866645	392	100	180	-60	29	44	15	1.85	Jul-07
NRC058	307241	7866684	392	100	180	-60	23	74	51	3.19	Jul-07
NRC059	307238	7866725	392	100	180	-60	1	12	11	2.95	Jul-07
NRC060	307237	7866765	392	100	180	-60	63	68	5	0.80	Jul-07
NRC061	307292	7866362	391	100	180	-60	94	95	1	0.82	Jul-07
NRC062	307294	7866403	391	100	180	-60	75	77	2	0.59	Jul-07
							80	82	2	0.65	
NRC063	307291	7866443	391	100	180	-60	22	26	4	0.85	Jul-07
NRC064	307291	7866483	391	100	180	-60	19	45	26	0.95	Jul-07
NRC065	307290	7866521	392	100	180	-60	46	68	22	1.17	Jul-07
NRC066	307288	7866561	392	100	180	-60	47	64	17	0.73	Jul-07
							69	100	31	1.08	
NRC067	307289	7866601	392	100	180	-60	41	70	29	1.55	Jul-07
							85	100	15	1.63	
NRC068	307288	7866641	392	100	180	-60	10	66	56	3.34	Jul-07
							71	80	9	4.05	
NRC069	307290	7866679	392	100	180	-60	7	14	7	2.66	Jul-07
NRC070	307290	7866721	392	100	180	-60	2	35	33	3.65	Jul-07
							80	96	16	1.19	
NRC071	307294	7866762	392	100	180	-60	16	22	6	1.07	Jul-07
NRC072	307393	7866362	391	100	180	-60	32	33	1	1.04	Jul-07
NRC073	307394	7866404	391	100	180	-60	80	81	1	1.30	Jul-07
NRC074	307390	7866444	391	100	180	-60	12	16	4	1.13	Jul-07
NRC075	307391	7866483	391	100	180	-60	0	7	7	0.67	Jul-07
							33	49	16	1.02	
NRC076	307391	7866523	392	100	180	-60	18	33	15	0.95	Jul-07
							53	64	11	2.17	
							70	79	9	1.06	
NRC077	307390	7866561	392	100	180	-60	43	100	57	2.49	Jul-07
NRC078	307391	7866599	392	86	180	-60	30	68	38	3.10	Jul-07

Hole ID	East	North	RL	Depth	Azimuth	Dip	From	To	Width	TREO_Y %	Date Drilled
NRC079	307391	7866643	392	100	180	-60	1	9	8	1.39	Jul-07
NRC080	307391	7866681	392	100	180	-60	25	29	4	2.31	Jul-07
NRC081	307389	7866720	392	100	180	-60	26	29	3	1.34	Jul-07
NRC082	307385	7866760	392	100	180	-60	71	72	1	7.60	Jul-07
NRC083	307492	7866367	391	100	180	-60	27	32	5	1.25	Jul-07
NRC084	307491	7866407	391	100	180	-60	70	79	9	1.00	Jul-07
NRC085	307492	7866444	392	100	180	-60	0	2	2	4.07	Aug-07
NRC086	307492	7866486	392	100	180	-60	22	28	6	3.25	Aug-07
NRC087	307491	7866523	392	100	180	-60	0	37	37	1.64	Aug-07
NRC088	307491	7866563	392	100	180	-60	41	51	10	1.20	Aug-07
NRC089	307489	7866602	392	100	180	-60	11	22	11	1.39	Aug-07
NRC090	307494	7866642	392	100	180	-60	91	92	1	2.57	Aug-07
NRC091	307491	7866684	392	100	180	-60	50	100	50	0.75	Aug-07
NRC092	307492	7866723	392	100	180	-60	39	66	27	0.70	Aug-07
NRC093	307496	7866761	392	100	180	-60	4	21	17	0.81	Aug-07

<b>Cummins Range Section 1 Sampling Techniques and Data</b>		
<b>Criteria</b>	<b>JORC Code Explanation</b>	
<b>Sampling techniques</b>	<p><i>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.</i></p> <p><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></p> <p><i>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.</i></p>	<p>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.</p>
<b>Drilling Techniques</b>	<p><i>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).</i></p>	<p>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</p>
<b>Drill Sample Recovery</b>	<p><i>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.</i></p> <p><i>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.</i></p>	<p>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.</p>
<b>Logging</b>	<p><i>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.</i></p> <p><i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></p> <p><i>The total length and percentage of the relevant intersections logged.</i></p>	<p>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.</p>
	<p><i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></p>	

<p><b>Sub-sampling techniques and sample preparation</b></p>	<p><i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i>  <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>  <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>  <i>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.</i>  <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></p>	<p>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.</p>
<p><b>Quality of assay data and laboratory tests</b></p>	<p><i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total</i>  <i>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.</i>  <i>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.</i></p>	<p>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).</p>
<p><b>Verification of sampling and assaying</b></p>	<p><i>The verification of significant intersections by either independent or alternative company personnel.</i>  <i>The use of twinned holes.</i>  <i>The verification of significant intersections by either independent or alternative company personnel.</i>  <i>Discuss any adjustment to assay data.</i></p>	<p>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.</p>
<p><b>Location of data points</b></p>	<p><i>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.</i>  <i>Specification of the grid system used.</i>  <i>Quality and adequacy of topographic control.</i></p>	<p>Drillhole collar locations have been surveyed using a differential GPS with accuracy to &lt;1m</p>
<p><b>Data spacing and distribution</b></p>	<p><i>Data spacing for reporting of Exploration Results.</i>  <i>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.</i>  <i>Whether sample compositing has been applied.</i></p>	<p>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.</p>
<p><b>Orientation of data in relation to</b></p>	<p><i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></p>	<p>The orientation of drilling is not considered to be biased towards any geological characteristics.</p>



<b>geological structure</b>	<i>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.</i>	
<b>Sample security</b>	<i>The measures taken to ensure sample security</i>	Samples were transported to Perth from site. Security of samples is not known.

<b>Cummins Range Section 2 Reporting of Exploration Results</b>		
<b>Criteria</b>	<b>JORC Code Explanation</b>	
<b>Mineral tenement and land tenure status</b>	<i>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.</i>	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.
<b>Exploration done by other parties</b>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	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.
<b>Geology</b>	<i>Deposit type, geological setting and style of mineralisation.</i>	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.
<b>Drill hole information</b>	<i>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.</i>	Drill hole information is presented in tabular form in the body of the announcement.
<b>Data aggregation methods</b>	<i>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.</i>	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.
	<i>These relationships are particularly important in the reporting of Exploration Results</i>	

<b>Relationship between mineralisation widths and intercept lengths</b>	<p><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></p> <p><i>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').</i></p>	<p>Mineralisation is flat lying and holes are angled at -60 degrees so mineralisation widths and sample intervals are closely correlated</p>
<b>Diagrams</b>	<p><i>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.</i></p>	<p>Maps and diagrams are included in the body of the announcement</p>
<b>Balanced reporting</b>	<p><i>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.</i></p>	<p>Representative reporting of assays results is balanced. All holes have assays reported where grades of above 0.5% TREOY where encountered</p>
<b>Other substantive exploration data</b>	<p><i>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.</i></p>	<p>No other substantive exploration data in material.</p>
<b>Further work</b>	<p><i>The nature and scale of planned further work (eg tests for lateral extensions or large scale step out drilling.</i></p> <p><i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></p>	<p>The resource is open along strike so additional exploration work should be planned.</p>

### Cummins Range Section 3 Estimation and Reporting of Mineral Resources

Criteria	<i>JORC Code Explanation</i>	
Database integrity	<i>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.</i>	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	<i>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.</i>	The competent person has not visited site. The site is at an exploration phase with no surface expression.
Geological interpretation	<i>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.</i>	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 flat 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	<i>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.</i>	The mineralised zone is approximately 500m X 500m in areal extent. Mineralisation extends from surface to about 100m vertical depth.
Estimation and modelling techniques	<i>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.</i>	Ordinary Kriging was used to estimate TREO grades from one metre composites within the mineralised zone using three estimation passes. 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/m <sup>3</sup> . 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	<i>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</i>	All estimations have been made on a dry tonnage basis.
Cut-off parameters	<i>The basis of the adopted cut-off grade(s) or quality parameters applied.</i>	Various cut-off grades have been presented. Cut off grades are based on varying commodity price scenarios.

Mining factors or assumptions	<i>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.</i>	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	<i>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.</i>	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 department 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	<i>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.</i>	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	<i>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.</i>	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

<p>Classification</p>	<p><i>The basis for the classification of the Mineral Resources into varying confidence categories.</i></p> <p><i>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.</i></p> <p><i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i></p>	<p>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:</p> <p>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.</p> <p>Minimum number of spatial quadrants informed.</p> <p>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.</p> <p>The distance to informing data.</p> <p>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.</p> <p>The results of the classification reflects the Competent Person's view of the deposit.</p>
<p>Audits or reviews</p>	<p><i>The results of any audits or reviews of Mineral Resource estimates</i></p>	<p>The Mineral Resource estimate was conducted by a reputable consultancy in 2012. This work has been reviewed by the competent person.</p>
<p>Discussion of relative accuracy/ confidence</p>	<p><i>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.</i></p> <p><i>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.</i></p> <p><i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i></p>	<p>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.</p>