

ASX Release: 31 August 2022

## DRILLING EXPANDS PHOS DYKE PHOSPHATE ZONE AT CUMMINS RANGE

*Phosphate zone extended up to 200m to the north-east, highlighting opportunity for future valuable by-product stream alongside a rare earths operation*

### HIGHLIGHTS

- Strong phosphate mineralisation logged in the form of coarse apatite in ultramafic rocks in recent RC drilling designed to extend the Phos Dyke Phosphate Zone.
- 20 RC holes completed on a 40m x 40m drill pattern to the north-east of the Phos Dyke, over an area of up to 200m X 150m.
- Apatite mineralisation logged over down-hole widths of up to 130m, with an average width of 50m. Assays awaited for all RC holes.
- Rock phosphate prices continue to trade at historically high levels at above US\$320/t, reflecting supply restrictions coming out of Europe.
- Phosphate is currently in high demand for fertiliser production and food security.
- The phosphate market is also expanding rapidly with applications in the battery materials sector.
- 2022 drilling program continuing at Cummins Range, with diamond drilling now moving to in-fill drilling of the Rare Dyke primary mineralisation to allow its incorporation in the Mineral Resource Estimate.
- Large volume of samples currently in the laboratory awaiting assay.
- Scoping Study well advanced on the regolith zone, with results expected to be reported shortly.
- Preliminary metallurgical results for the primary zone expected in the coming weeks.

RareX Limited (ASX: REE; **RareX** or **the Company**) is pleased to advise that it has identified significant extensions to the high-grade zone of primary phosphate mineralisation immediately north of the Rare Dyke rare earths zone at its flagship 100%-owned **Cummins Range Rare Earths Project** in the Kimberley region of Western Australia.

Recent Reverse Circulation (**RC**) drilling was undertaken as part of the 2022 Growth Drilling Program at Cummins Range to test for extensions of the previously reported Northern Phosphate Zone (see ASX Release dated 14th February 2022), now known as the Phos Dyke Phosphate Zone.

As part of the 2022 drill program, 20 RC holes were completed in the Phos Dyke Phosphate Zone designed to test for extensions to the high-grade phosphate and rare earths in this area.

Encouragingly, recent drilling has intersected strong zones of primary phosphate mineralisation in the form of coarse apatite in ultramafic rocks. Strong monazite and bastnasite have also been intersected in multiple drill holes.

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The apatite occurs over broad intervals within an ultramafic rock called phoscorite, which is composed of apatite-phlogopite-magnetite-diopside. Figure 1 is an example in core and Figure 2 is an image of recent RC drilling of phoscorite.



Figure 1. Example of Phoscorite in core, Apatite= light brown, Diopside=green, Magnetite=dark grey, Phlogopite=black



Figure 2. Strong Apatite (light brown) mineralisation (>15% apatite) in phoscorite. Hole CDX0093 at 107m – 114m





**Figure 3. Strong (>5% monazite and bastnasite) mineralisation in Carbonatite dyke from 99-100m in hole CDX0084.  
Monazite=brown, Bastnasite=pink, Carbonatite=grey-white**

The 2022 RC drilling has been undertaken broadly on a 40m x 40m drill pattern to the north-east of Phos Dyke over 200 x 150m (Figure 5).

Apatite mineralisation has been intersected over down-hole widths up to 130m with an average width of 50m. Apatite and monazite/bastnasite mineralisation for this drilling is summarised in Table 1.

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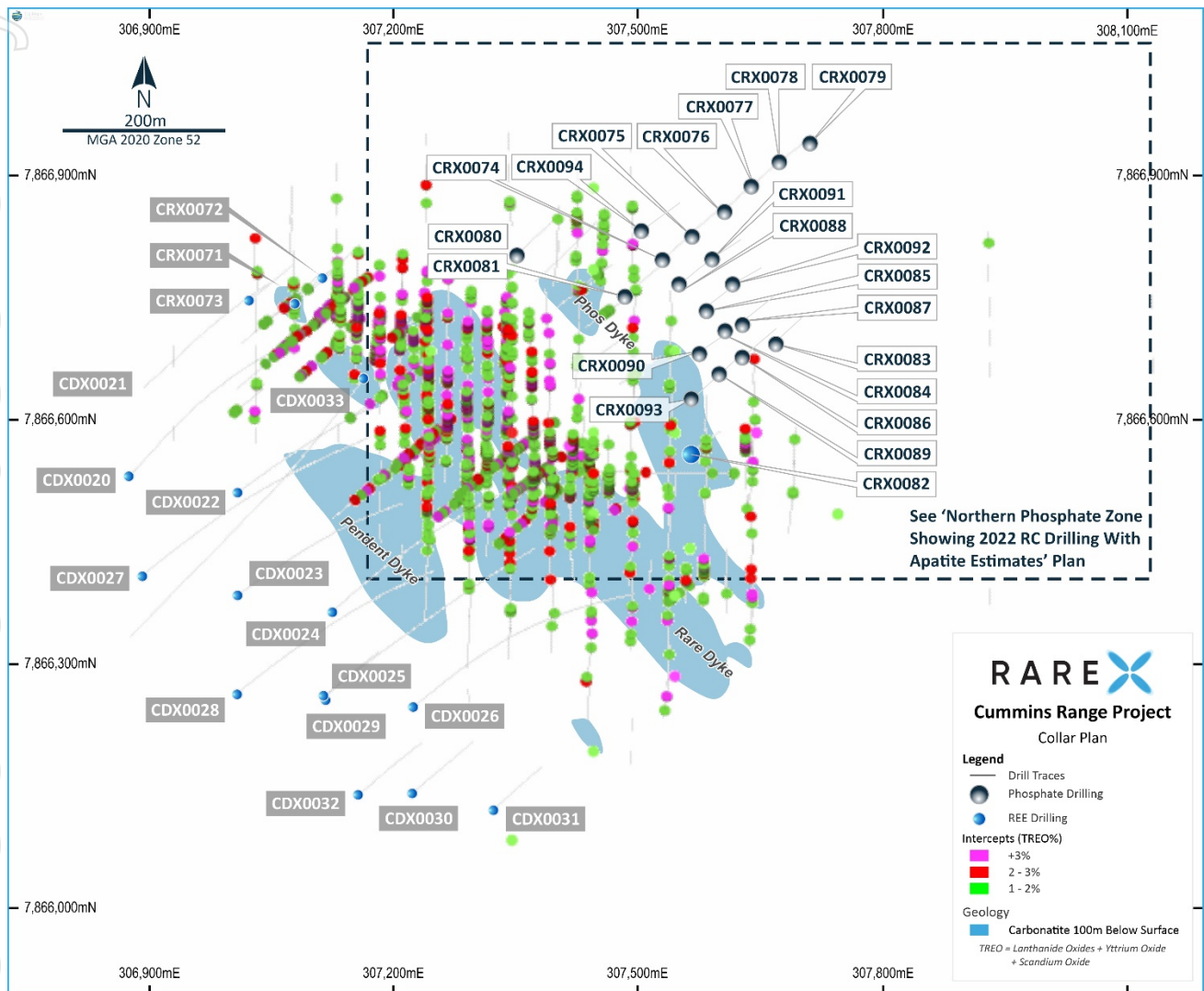
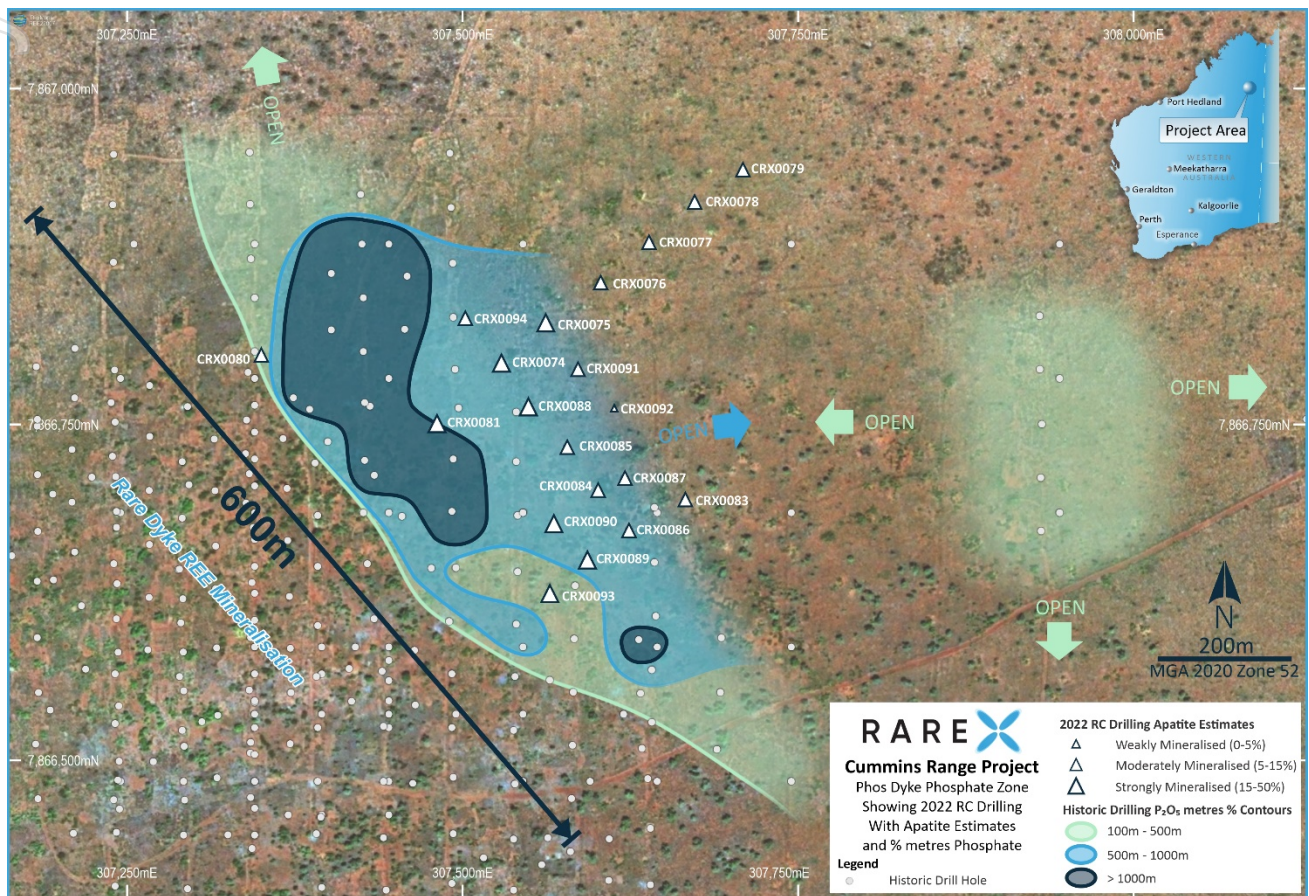


Figure 4. Drill trace plan showing 2022 drilling and location of Figure 5.





**Figure 5. Phos Dyke Phosphate Zone, showing contoured historical drilling and apatite estimates for 2022 RC drilling. Source data for contours is located in Table 2 and apatite mineralisation widths are in Table 1 .**

The historical drilling around the Phos Dyke has intersected over 100m of high-grade phosphate in several holes. Significant intercepts are shown in Table 2 and are contoured in Figure 5.

The phosphate mineralisation extends from surface to beyond 150m depth with 85% of the historical drill-holes around the Phos Dyke finishing in apatite mineralisation. Only one diamond drill hole has been drilled in this area, CDX0015, which intersected 167m at 10% P<sub>2</sub>O<sub>5</sub> and 0.3% TREO, including 26.2m at 19% P<sub>2</sub>O<sub>5</sub> and 0.5% TREO.

### Igneous Phosphate v Sedimentary Phosphate

The phosphate at Cummins Range is the highly prized igneous phosphate (as opposed to sedimentary phosphate) which is clearly hosted in coarse-grained apatite (calcium phosphate) and therefore appears suitable for making a premium product technical grade phosphate concentrate 78-87% BPL for use in both the fertiliser and battery materials industries.

It should also be noted that historical drilling in these areas has also shown that the phosphate zone contains appreciable rare earths in monazite (rare earth phosphate) which, due to its relatively

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refractory nature, can also be recovered from the residues of processing the apatite to phosphoric acid and subsequent products.

## The Phosphate Market

The phosphate market is expanding significantly and, together with restricted supply out of Europe, has led to a significant increase in the price of phosphate products with rock phosphate 68-72% BPL FOB Morocco currently at over US\$300/t, with technical grade historically trading at a \$50-\$100/t premium – see graph below.



Figure 6. Rock Phosphate Prices (Source: Arianne Phosphates corporate presentation, June 2022)

RareX believes there is a growing demand for technical grade phosphate in lithium iron phosphate “LFP” battery cathode materials as this chemistry increases its market share over the coming years due to cost and sustainability of the metals used (i.e. no nickel and cobalt).

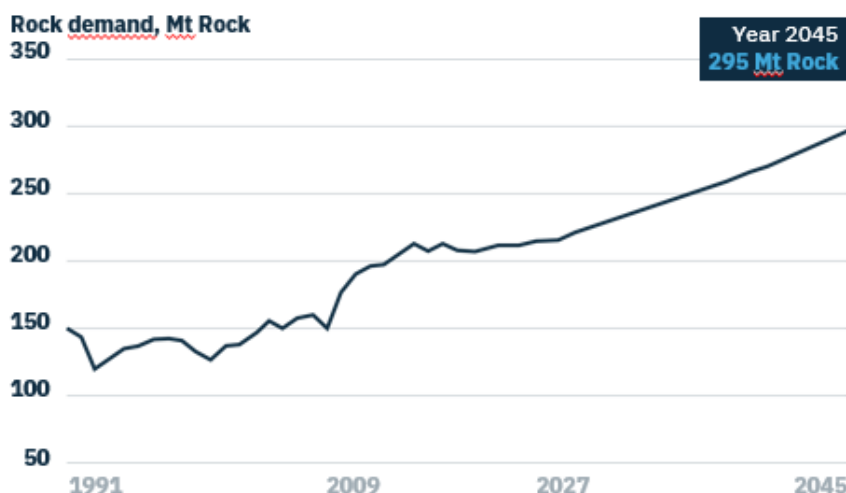


Figure 7. Projected Demand Growth (Source: CRU)

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## Ongoing Exploration and Development at Cummins Range

Drilling is ongoing at Cummins Range with diamond drilling now moving to infill drilling on the Rare Dyke to allow conversion to a resource. Sample transport and assay turnaround remains an issue with initial assays expected in the coming weeks.

The Scoping Study is now well advance on the regolith zone and will be reported shortly.

Preliminary primary metallurgical results are expected also within the next few weeks.

This announcement has been authorised by the Board of RareX Limited.

### Competent Person's Statement

The information in this announcement that relates to the geological model is based on and fairly represents information compiled by Mr Guy Moulang, an experienced geologist who is an employee of RareX Limited. Mr Moulang is a Member of the Australian Institute of Geoscientists and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity to which he is undertaking 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 announcement of the matters based on this information in the form and context in which it appears. Prior exploration results were reported in accordance with Listing Rule 5.7 and the Company confirms there have been no material changes since the information was first reported.



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## Appendix 1: Visual Observations, Significant Intercepts and Drill Collar Tables

**Table 1: Apatite and Monazite/Bastnasite Visual Estimates from 2022 RC drilling on the Phos Dyke**

Visual Estimates Apatite: 0-5% Weak, 5-15% Moderate, 15-50% Strong

Visual Estimates of Monazite/Bastnasite: 0.5-2% Weak, 2-5% Moderate, >5% Strong

Cautionary note: The Company stresses that the reported visually estimated percentages in the table below relate specifically to the abundance of apatite and rare earths mineralisation logged in the drill chips and is not an estimated grade for the interval. In relation to the disclosure of visual results, the Company cautions that visual estimates of mineral abundance should never be considered a proxy or substitute for a laboratory analysis. Assay results are required to determine the widths and grade of the visual mineralisation in preliminary geological logging. The Company will update the market when laboratory results become available.

Hole ID	From (m)	To (m)	Interval (m)	Apatite Mineralisation	Rare Earths Mineralisation
CRX0074	11	45	34	Strong	
CRX0074	76	107	31	Strong	
CRX0075	25	66	41	Strong	
CRX0075	85	100	15	Moderate	
CRX0076	47	57	10	Moderate	
CRX0080	101	123	22	Moderate	
CRX0081	17	60	43	Strong	
CRX0081	17	27	10	Strong	
CRX0081	28	60	32	Moderate	
CRX0081	74	82	8	Strong	
CRX0081	83	156	73	Strong	
CRX0083	3	18	15	Moderate	
CRX0083	25	39	14	Strong	
CRX0084	52	145	93	Moderate	
CRX0084	68	70	2		Strong
CRX0084	99	101	2		Strong
CRX0085	0	120	120	Moderate	
CRX0085	82	83	1		Strong
CRX0086	62	74	12	Moderate	
CRX0086	68	70	2		Strong
CRX0087	2	132	130	Moderate	
CRX0088	11	126	115	Strong	
CRX0089	8	109	101	Strong	
CRX0089	99	103	4		Strong
CRX0090	33	112	79	Strong	
CRX0090	98	100	2		Moderate
CRX0091	6	75	69	Moderate	
CRX0092	19	45	26	Weak	
CRX0092	45	46	1		Strong
CRX0093	14	18	4	Strong	
CRX0093	76	78	2		Weak
CRX0093	30	150	120	Strong	
CRX0094	25	63	38	Moderate	
CRX0094	66	70	4		Strong



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**Table 2. Significant P<sub>2</sub>O<sub>5</sub> intercepts from historical drilling on the Phos Dyke (3% P<sub>2</sub>O<sub>5</sub> cut off)**

Hole ID	East	North	mRL	Depth (m)	From (m)	To (m)	Interval (m)	P <sub>2</sub> O <sub>5</sub> %	TREO %	NdPr %	THREO %
CDX0015	307374	7866770	392	204.6	2	169	167	10	0.33	26	16
Incl.	307374	7866770	392	204.6	115	141.2	26.2	19	0.53	26	15
Incl.	307374	7866770	392	204.6	177.7	204.6	26.9	5	0.19	25	16
CRX0027	307402	7866862	392	108	6	108	102	18	0.51	27	16
CRX0028	307402	7866820	392	114	6	106	100	11	0.34	27	16
CRX0029	307459	7866860	392	114	3	114	111	16	0.65	25	14
CRX0030	307457	7866821	392	114	8	114	106	18	0.61	25	14
CRX0046	307692	7866550	392	96	6	96	90	5	0.23	23	13
CRX0047	307693	7866591	391	96	5	96	91	6	0.25	25	16
CRX0048	307690	7866508	392	96	8	67	59	4	0.2	24	18
CRX0058	307584	7866630	391	84	6	77	71	6	0.27	26	18
CRX0064	307399	7866737	391	120	4	119	115	8	0.34	24	14
CRX0067	307434	7866712	391	120	6	120	114	10	0.43	24	13
CRX0068	307431	7866764	391	96	2	96	94	12	0.39	27	16
CRX0069	307455	7866682	391	120	5	120	115	6	0.26	25	15
CRX0070	307477	7866643	391	144	13	144	131	6	0.28	25	16
KRC126	307342	7866873	392	60	6	60	54	5	0.35	22	10
KRC127	307342	7866914	392	46	8	45	37	5	0.25	23	13
KRC128	307341	7866953	393	46	14	46	32	3	0.16	24	18
KRC129	307494	7866791	392	76	11	76	65	10	0.37	27	17
KRC130	307493	7866830	392	85	2	85	83	11	0.69	23	10
KRC131	307493	7866870	392	70	5	70	65	13	0.52	25	14
KRC132	307491	7866911	392	40				NSI			
KRC133	307490	7866952	392	46	9	46	37	3	0.16	24	16
KRC134	307931	7866671	391	40	9	40	31	4	0.17	25	17
KRC135	307931	7866710	391	40	10	40	30	6	0.2	26	17
KRC136	307932	7866750	391	49	10	49	39	7	0.21	26	17
KRC137	307930	7866791	391	43	15	43	28	5	0.17	26	18
KRC138	307930	7866831	392	40	12	40	28	4	0.22	23	13
KRC146	307633	7866550	392	71	3	71	68	6	0.27	26	16
KRC147	307631	7866590	391	70	0	70	70	17	1.25	22	10
KRC153	307583	7866590	391	73	5	73	68	7	0.54	22	11
NRC013	307427	7866766	392	100	2	100	98	7	0.25	28	18
NRC014	307426	7866804	392	100	3	100	97	16	0.68	25	13
NRC015	307426	7866844	392	100	4	100	96	14	0.55	26	15
NRC016	307425	7866884	392	100	5	100	95	12	0.8	26	16
NRC017	307424	7866921	392	100				NSI			
NRC026	307540	7866601	392	100	0	100	100	7	0.4	25	15
NRC027	307541	7866640	392	100	36	100	64	4	0.24	25	13
NRC028	307541	7866682	392	100	1	100	99	9	0.46	26	16
NRC029	307540	7866722	392	100	44	100	56	9	0.37	25	17
NRC030	307540	7866759	392	100	10	100	90	9	0.34	27	19
NRC047	307641	7866567	392	100	5	100	95	7	0.69	21	8
NRC048	307644	7866607	392	100	4	100	96	8	0.34	26	16
NRC049	307643	7866647	392	100	4	100	96	7	0.27	26	16
NRC050	307643	7866688	392	89	2	89	87	9	0.35	26	16
NRC090	307495	7866643	392	100	9	100	91	5	0.26	25	17
NRC091	307492	7866685	392	100	12	100	88	12	0.57	25	14
NRC092	307493	7866724	392	100	2	100	98	13	0.51	24	14
NRC093	307497	7866762	392	100	8	100	92	7	0.31	25	14

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Table 3. Collar Table 2022 RC drilling on Phos Dyke

Hole ID	East MGA	North MGA	RLUTM	End Depth (m)	Azimuth	Dip	Type	Status
CRX0071	307080	7866743	393	144	50	60	RC	Awaiting Assays
CRX0072	307113	7866776	393	96	50	60	RC	Awaiting Assays
CRX0073	307023	7866747	393	138	50	60	RC	Awaiting Assays
CRX0074	307528	7866794	390	120	50	60	RC	Awaiting Assays
CRX0075	307561	7866824	390	114	50	60	RC	Awaiting Assays
CRX0076	307602	7866854	390	114	50	60	RC	Awaiting Assays
CRX0077	307638	7866884	390	102	50	60	RC	Awaiting Assays
CRX0078	307672	7866914	390	102	50	60	RC	Awaiting Assays
CRX0079	307708	7866938	390	102	50	60	RC	Awaiting Assays
CRX0080	307349	7866800	390	126	50	60	RC	Awaiting Assays
CRX0081	307480	7866749	390	156	50	60	RC	Awaiting Assays
CRX0082	307564	7866558	390	96	50	60	RC	Awaiting Assays
CRX0083	307666	7866694	391.9	96	50	60	RC	Being processed
CRX0084	307601	7866701	391.9	157	50	60	RC	Being processed
CRX0085	307578	7866733	391.9	120	50	60	RC	Being processed
CRX0086	307624	7866671	391.9	126	50	60	RC	Being processed
CRX0087	307621	7866710	391.9	132	50	60	RC	Being processed
CRX0088	307549	7866763	391.9	126	50	60	RC	Being processed
CRX0089	307593	7866649	391.9	114	50	60	RC	Being processed
CRX0090	307568	7866676	391.9	114	50	60	RC	Being processed
CRX0091	307586	7866791	391.9	96	50	60	RC	Being processed
CRX0092	307613	7866762	391.9	96	50	60	RC	Being processed
CRX0093	307565	7866624	391.9	150	50	60	RC	Being processed
CRX0094	307502	7866829	391.9	120	50	60	RC	Being processed



**Appendix 2: JORC Code, 2012 Edition – Table 1**

<b>Cummins Range Section 1 Sampling Techniques and Data</b>		
<b>Criteria</b>	<b>JORC Code Explanation</b>	<b>Commentary</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. 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>	<ul style="list-style-type: none"> <li>• The Cummins Range Rare Earth deposit is being drilled tested with RC drilling and diamond drilling.</li> <li>• The RC drill rig used a 5 ½ inch diameter hammer. Each 1m bulk sample was collected in a plastic bag.</li> <li>• Diamond drill sizes used are PQ, HQ and NQ2</li> <li>• Each metre was analysed with a portable XRF, and recovery and geology logs were completed.</li> <li>• Sample interval selection was based on geological controls and mineralisation</li> <li>• Each 1m RC sample has a 4% cone split from the drill rig. Samples submitted to the laboratory vary in length from 1m to 4m.</li> <li>• Each core sample was cut in half with an automatic core saw. The half core sample was sent to the laboratory with intervals ranging from 0.3m to 1.3m.</li> <li>• Samples are assayed for 35 elements using peroxide fusion with a ICP-OES and ICP-MS finish</li> </ul>
<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>	<ul style="list-style-type: none"> <li>• Prefix CRX drill holes are reverse circulation (RC) drilling</li> <li>• Prefix CDX are diamond drilling.</li> </ul>
<b>Drill Sample Recovery</b>	<p><i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></p> <p><i>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>	<ul style="list-style-type: none"> <li>• Recoveries for all drill holes were recorded for each metre. Recoveries for the RC drilling in this announcement are &gt;95%</li> </ul>
<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>	<ul style="list-style-type: none"> <li>• All metres drilled had a geology log completed. Geology logs were aided using geochemical analysis from a portable XRF.</li> <li>• The detail of logging is appropriated for Mineral Resource estimation.</li> </ul>

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<b>Sub-sampling techniques and sample preparation</b>	<p><i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></p> <p><i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></p> <p><i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></p> <p><i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></p> <p><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></p> <p><i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></p>	<ul style="list-style-type: none"> <li>• A 4% split from the cone splitter on the drill rig is used for the laboratory assay. Samples are often composited and samples can range from 1-4m.</li> <li>• This RC sampling technique meets the industry standards and is appropriate for this style of mineralisation and for resource estimation.</li> <li>• Diamond core was cut in half with an automatic core saw and half the core was sent to the laboratory. This is an appropriate method for this style of mineralization and for resource estimation.</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<p><i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total</i></p> <p><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></p> <p><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 reported assays were analysed by Nagrom. The following techniques were used:</p> <ul style="list-style-type: none"> <li>• 35 elements were assayed for using peroxide fusion with a ICP-OES and ICP-MS finish</li> <li>• In addition to internal checks by Nagrom, RareX incorporates a QA/QC sample protocol utilizing prepared standards, blanks and duplicates for 8% of all assayed samples.</li> </ul>
<b>Verification of sampling and assaying</b>	<p><i>The verification of significant intersections by either independent or alternative company personnel.</i></p> <p><i>The use of twinned holes.</i></p> <p><i>The verification of significant intersections by either independent or alternative company personnel.</i></p> <p><i>Discuss any adjustment to assay data.</i></p>	<ul style="list-style-type: none"> <li>• Significant intercepts were calculated by RareX geological staff.</li> <li>• The intercepts have not been verified by independent persons</li> <li>• There are numerous drill holes with in the Cummins Range resource of comparable tenure</li> <li>• All assay results are reported to RareX in parts per million (ppm). RareX geological staff then convert the parts per million to ppm oxides using the below element to stoichiometric oxide conversion factors. La<sub>2</sub>O<sub>3</sub> 1.1728, CeO<sub>2</sub> 1.2284, Pr<sub>6</sub>O<sub>11</sub> 1.2082, Nd<sub>2</sub>O<sub>3</sub> 1.1664, Sm<sub>2</sub>O<sub>3</sub> 1.1596, Eu<sub>2</sub>O<sub>3</sub> 1.1579, Gd<sub>2</sub>O<sub>3</sub> 1.1526, Dy<sub>2</sub>O<sub>3</sub> 1.1477, Ho<sub>2</sub>O<sub>3</sub> 1.1455, Er<sub>2</sub>O<sub>3</sub> 1.1435, Tm<sub>2</sub>O<sub>3</sub> 1.1421, Yb<sub>2</sub>O<sub>3</sub> 1.1387, Lu<sub>2</sub>O<sub>3</sub> 1.1371, Sc<sub>2</sub>O<sub>3</sub> 1.5338, Y<sub>2</sub>O<sub>3</sub> 1.2699, Nb<sub>2</sub>O<sub>5</sub> 1.4305, P<sub>2</sub>O<sub>5</sub> 2.2916</li> </ul>
<b>Location of data points</b>	<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></p> <p><i>Specification of the grid system used.</i></p>	<ul style="list-style-type: none"> <li>• Drill hole collars were located by handheld GPS</li> <li>• All coordinates are in MGA Zone 52H 1994</li> </ul>



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	<i>Quality and adequacy of topographic control.</i>	<ul style="list-style-type: none"> <li>Topographic control is maintained by the use of previously surveyed drill holes. The Cummins Range deposit is located on flat terrain.</li> <li>Down hole surveys were taken every 10m using an Axis Gyro tool</li> </ul>
<b>Data spacing and distribution</b>	<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>	<ul style="list-style-type: none"> <li>The purposed of the RC drilling on the Phos Dyke is to extend the phosphate and rare earths mineralization to the north east. Drill spacing of 40m x 40m grid is appropriate to establish geological and grade continuity.</li> <li>2m to 4m RC composites were completed in areas where higher grades were not expected</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<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> <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>	<ul style="list-style-type: none"> <li>The angled drill holes were directed as best as possible across the known geology.</li> </ul>
<b>Sample security</b>	<i>The measures taken to ensure sample security</i>	<ul style="list-style-type: none"> <li>Drill samples are delivered to Halls Creek by RareX staff. Then the samples are transported from Halls Creek to Perth via a reputable transport company.</li> </ul>

Cummins Range Section 2 Reporting of Exploration Results		
Criteria	JORC Code Explanation	Commentary
<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>	<ul style="list-style-type: none"> <li>The Cummins Range REO deposit is located on tenement E80/5092 and is 100% owned by Cummins Range Pty Ltd which is a wholly owned subsidiary of RareX Ltd. Cummins Range Pty Ltd has purchased the tenement from Element 25 with a potential capped royalty payment of \$1m should a positive PFS be completed within 36 months of purchase finalisation.</li> </ul>
<b>Exploration done by other parties</b>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	<ul style="list-style-type: none"> <li>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</li> </ul>

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		estimate in 2008. Kimberly Rare Earths drilled additional holes and upgraded the resource estimate in 2012.
<b>Geology</b>	<i>Deposit type, geological setting and style of mineralisation.</i>	<ul style="list-style-type: none"> <li>The Cummins Range REO deposit occurs within the Cummins Range carbonatite complex which is a 2.0 km diameter near-vertical diatreme pipe that has been deeply weathered but essentially outcropping with only thin aeolian sand cover in places. The diatreme pipe consists of various mafic to ultramafic rocks with later carbonatite intrusions. The primary ultramafic and carbonatite rocks host low to high grade rare earth elements with back ground levels of 1000-2000ppm TREO and high grade zones up to 17% TREO. The current resource sits primarily within the oxidised/weathered zone which extends to 120m below the surface. Metallurgical studies by previous explorers and by RareX show the rare earth elements are hosted by monazite and bastnasite which are a common and favourable hosts for rare earth elements.</li> </ul>
<b>Drill hole information</b>	<p><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:</i></p> <p><i>easting and northing of the drill hole collar</i>  <i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i>  <i>dip and azimuth of the hole</i>  <i>down hole length and interception depth</i>  <i>hole length.</i></p> <p><i>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></p>	<ul style="list-style-type: none"> <li>All drill hole locations are shown on the drill plan and collar details are tabled within the announcement</li> </ul>
<b>Data aggregation methods</b>	<p><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.</i></p> <p><i>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade</i></p>	<ul style="list-style-type: none"> <li>Significant intercepts were calculated using weighted averaging</li> <li>A lower cut off grade of 3% P2O5 was used with a maximum of 5m dilution. The cut off grade and dilution are thought to</li> </ul>



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	<p>results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</p> <p>The assumptions used for any reporting of metal equivalent values should be clearly stated.</p>	<p>be appropriate due to likely open cut mining methods that would be used on the outcropping ore body.</p> <ul style="list-style-type: none"> <li>No metal equivalent values have been used</li> </ul>
<p><b>Relationship between mineralisation widths and intercept lengths</b></p>	<p>These relationships are particularly important in the reporting of Exploration Results</p> <p>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</p> <p>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').</p>	<ul style="list-style-type: none"> <li>The angled drill holes were directed as best as possible across the known geology.</li> <li>The true widths of the phosphate and rare earths intercepts in this announcement are likely &gt;80% of the true width. The current geological model interprets the Phos Dyke and surrounding lithologies to be similar to the Rare Dyke dipping to the south west. Current drilling is aimed at 50 degrees and 60 degrees dip cutting the interpreted lithologies at a high angle.</li> </ul>
<p><b>Diagrams</b></p>	<p>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.</p>	<ul style="list-style-type: none"> <li>A drill hole plan and contoured plan view of the Phos Dyke are included. Sectional views will be included once the assays are received.</li> </ul>
<p><b>Balanced reporting</b></p>	<p>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.</p>	<ul style="list-style-type: none"> <li>Reporting is considered balanced</li> </ul>
<p><b>Other substantive exploration data</b></p>	<p>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.</p>	<ul style="list-style-type: none"> <li>RareX have a JORC compliant resource of 18.8Mt at 1.15% TREO, 0.14% Nb<sub>2</sub>O<sub>3</sub> and 10% P<sub>2</sub>O<sub>5</sub>. Metallurgical studies are currently being conducted.</li> </ul>
<p><b>Further work</b></p>	<p>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.</p>	<ul style="list-style-type: none"> <li>Awaiting assays for diamond and RC drilling</li> <li>Metallurgical tests are being conducted</li> <li>Scoping studies are being conducted</li> <li>Drilling will continue at Cummins Range until November.</li> </ul>