57-71 **RE** Rare Earths

15 **P** Phosphorus

RAREX

Phosphate Enabled Rare Earths

ASX Release
25 January 2024

Cummins Range Mineral Resource Estimate Update

2023 infill drilling increases the indicated resource 10% to 77Mt, improving definition in readiness for DFS mine scheduling

Highlights

- **Updated Mineral Resource Estimate delivered for the Cummins Range Rare Earths & Phosphate Project:**
  - **524Mt at 0.31% TREO and 4.6% P_2O_5 for 1.6 million tonnes of contained TREO** and 24 million tonnes of contained P_2O_5
- **High-value NdPr content represents an excellent 22% of total contained TREO,** with 353Kt of NdPr contained
- **Cummins Range remains the largest** undeveloped rare earths project in Australia
- **2023 infill drilling has underpinned a 10% increase in the Indicated Resource category** to 77Mt at 0.46% TREO and 6.7% P_2O_5, principally in the early mine life pit shell area
- **Phosphate mineral characteristics are highly favourable** for use in lithium iron phosphate (LFP) batteries
- **Potential resource growth** following the identification of a potential proximate carbonatite swarm[1]
- **Rare earth prices expected to rebound** to c. $100/kg NdPr oxide in the short to medium term after a period of protracted suppression, with a very strong forecast compound annual growth rate (CAGR) of 6% out to at least 2035[2]

Engage with this announcement at the RareX ***investor hub***.

Australian rare earths and phosphate developer, RareX Limited (ASX: REE) (**RareX** or the **Company**), is pleased to report an update to the Mineral Resource Estimate (**MRE**) for its 100%-owned Cummins Range Rare Earths-Phosphate Project in the Kimberley region of Western Australia.

The 2023 drill program was focused on gaining further understanding of the metallurgical domains and continuity of high grade phosphate in the regolith. Drilling was also completed on the eastern edge of the Resource where pit designs required definition.

This drilling has underpinned an updated Resource estimate totalling 524Mt at 0.31% TREO and 4.6% P_2O_5, including a higher-grade TREO Resource of 44Mt at 1.02% TREO and 5.8% P_2O_5 based on a 6,500ppm TREO cut. The updated Resource confirms Cummins Range's status as Australia's largest undeveloped rare earths deposit and the second-largest rare earths deposit overall, and makes Cummins Range a significant potential source of NdPr magnet and LFP battery quality phosphate in northern Western Australia.

Cummins Range is a unique rare earths project due to its favourable phosphate mineralisation, which makes peer comparison analysis difficult. The Project's exposure to the two major sectors of the green energy transition - energy generation/use and energy storage - means the deposit underpins a rare project opportunity with reduced development and operational risk.

[1] ASX Announcement 13 November 2023: Geophysical Surveys Identify Potential New Ultramafic Pipes
[2] https://reachmarkets.com.au/news/rare-earths-industry-review/

Table 1. Cummins Range Mineral Resource Estimate, P_2O_5≥2.5%

RARE DYKE Classification	Tonnes (Mt)	P_2O_5 (%)	TREO + Y_2O_3 (ppm)	HREO (ppm)	Nd_2O_3 (ppm)	Pr_6O_{11} (ppm)	Nb_2O_5 (ppm)	Sc_2O_3 (ppm)	ThU (ppm)
Indicated	44.4	6.0	5560	280	880	260	990	90	80
Inferred	363.7	3.9	2960	160	480	140	570	70	40
Total	408.2	4.1	3240	180	520	160	610	70	40

PHOS DYKE Classification	Tonnes (Mt)	P_2O_5 (%)	TREO + Y_2O_3 (ppm)	HREO (ppm)	Nd_2O_3 (ppm)	Pr_6O_{11} (ppm)	Nb_2O_5 (ppm)	Sc_2O_3 (ppm)	ThU (ppm)
Indicated	33.0	7.6	3430	290	670	170	500	80	100
Inferred	83.1	5.6	2390	200	460	120	450	60	60
Total	116.2	6.2	2690	230	520	140	460	70	70

COMBINED Classification	Tonnes (Mt)	P_2O_5 (%)	TREO + Y_2O_3 (ppm)	HREO (ppm)	Nd_2O_3 (ppm)	Pr_6O_{11} (ppm)	Nb_2O_5 (ppm)	Sc_2O_3 (ppm)	ThU (ppm)
Indicated	77.4	6.7	4,650	280	790	230	780	90	90
Inferred	446.9	4.2	2,860	170	480	140	550	70	40
Total	524.3	4.6	3,120	190	520	150	580	70	50

Notes:
1. Due to effects of rounding, the total may not represent the sum of all components
2. TREO (ppm) includes: Light Rare Earth Oxides (LREO): La_2O_3, CeO_2, Pr_6O_{11}, Nd_2O_3; and Heavy Rare Oxides (HREO): Sm_2O_3, Eu_2O_3, Gd_2O_3, Tb_4O_7, Dy_2O_3, Ho_2O_3, Er_2O_3, Tm_2O_3, Yb_2O_3, Lu_2O_3; + Y_2O_3
3. ThU comprises ThO_2 + U_3O_8 (ppm)
4. Mineral Resource is reported from all blocks, classified as either Indicated or Inferred, where interpolated block grade is >2.5%P_2O_5

A phosphate cut-off was chosen for the MRE as it better represents the geology and economic potential of the deposit in that it captures the phosphate and almost all of the rare earths.

Substantial quantities of phosphate, now classified by the Australian Federal Government as a Strategic Mineral[3], will be mined with the rare earth mineral and RareX intends to extract value from both the phosphate and rare earths.

In the 2023 field season[4] an improved geological model was created, which defined several domains within the regolith that will allow accurate mining study work to be completed for the production of rare earths phosphate concentrate (**REPC**), potentially preceded by monetised rock phosphate direct shipping ore (**DSO**). Metallurgical studies[5] have shown lower grade rare earths and phosphate are easily upgraded to a high grade REPC. The rare earths can then be extracted from the REPC at a phosphoric acid production plant, potentially supplying the LFP (lithium ferro phosphate) battery supply chain[6]. Using this product approach allows RareX to extract the most value from the two commodities within the large Cummins Range resource.

[3] https://www.industry.gov.au/news/updates-australias-critical-minerals-list
[4] ASX Announcement 05 September 2023: Cummins Range 2023 Drilling Campaign Complete
[5] ASX announcement 29 August 2023: Cummins Range Project Metallurgical and Geotechnical Update
[6] ASX announcement 12 Octover 2023: Cummins Range Project Product Strategy Update

Overview

RareX is pleased to present an updated Mineral Resource Estimate (**MRE**) for its 100%-owned Cummins Range Rare Earths-Phosphate Project in Western Australia. The Rare Earths and Phosphate MRE is based on the Cummins Range Carbonatite Pipe at the Cummins Range Project, located 130km south-west of Halls Creek in the Kimberley region of Western Australia.

The 2km x 2km carbonatite pipe is entirely contained in tenement E80/5092, which also contains multiple geochemical and geophysical anomalies which are being prepared for exploration in mid-2024[7].

In April 2023, RareX announced an MRE which included drilling from 2020-2022. This 2024 updated Resource includes an additional 50 drill holes that were drilled in 2023 for a total of 4,451m, including five diamond drill holes into the Rare Dyke and the Phos Dyke, and 45 RC holes into the Phos Dyke. Collar details and significant intercepts are shown in Tables 5, 6 and 7.

An enhanced Scoping Study was announced in August 2023[8], which outlined a staged approach to phosphate and REPC production delivering an economically robust project, which would be viable even in current rare earth pricing scenarios in part due to the phosphate content contained within a clean apatite mineral.

The additional value of the phosphate significantly enhances the economics of the Project considering the pervasive occurrence of the mineral apatite throughout the 2km x 2km pipe and the ease of processing.

Subsequent to the enhanced Scoping Study, RareX has signed terms sheets to de-risk the bulk supply chain, including with Newhaul for product haulage services, MudArk for 4Ha of land adjacent to the bulk loading facility (BLF) at Wyndham Port, and with KMG, the owner of the BLF, for loading capacity[9]. These terms sheets provide for accurate cost modelling, with the negotiation of long form binding operational contracts now underway. An MOU is also in place with Agrimin (ASX: AMN) to collaborate on product haulage, port handling and trans-shipment facilities.

Compared to other phosphate deposits in Australia and the world, Cummins Range has a significant advantage given its proximity to Wyndham Port on the northern Kimberley coast, on a mostly sealed highway. The Kimberley Port Authority has applied for Wyndham Port to be licenced as a port of first entry.

RareX Chief Executive Officer, James Durrant, said: *"The Resource is now well defined in the early pit shell giving us confidence in our metallurgical and economic modelling – critical for a rare earth project. Near term drilling at Cummins Range can now focus on the potential presence of a nearby carbonatite cluster which, if appropriately mineralised, has the potential to contribute to higher project valuations from either scale or mine life.*

"I would like to acknowledge the exceptional efforts of the RareX team under the leadership of our Exploration Manager, Guy Moulang, in safely and cost effectively delivering improved Resource definition to what remains Australia's largest undeveloped rare earths project by contained tonnes of rare earths, and what is shaping up to be one of Australia's most capitally efficient and lowest operating cost rare earths developments.

"We look forward to continuing to de-risk the project though the next milestones of offtake, definitive engineering and project approvals, which we're confident will occur in parallel with a recovery in rare earth prices from their current unsustainable levels."

[7] ASX Announcement 13 November 2023: Geophysical Surveys Identify Potential New Ultramafic Pipes
[8] ASX Announcement 22 August 2023: Enhanced Scoping Study for Cummins Range
[9] ASX Announcements on 10 January 2024, 27 November 2023 and 08 November 2023

Project Location

The Cummins Range Rare Earth Project is located in the Kimberley region of Western Australia, south-west of the town of Halls Creek, as shown below.

Access to the Project from Halls Creek is via the Great Northern Highway and then the Tanami Road to Ruby Plains Station. From there, access is along station tracks. Halls Creek also has a sealed airstrip and connects to the ports of Wyndham and Darwin via the Great Northern Highway.

On 12 May 2022, the Western Australian Government announced the decision to seal the Tanami Road. The Western Australian State Budget 2022/23 has allocated an additional $100 million, alongside the recently announced $400 million Federal allocation, to completely seal the Tanami Road in Western Australia.

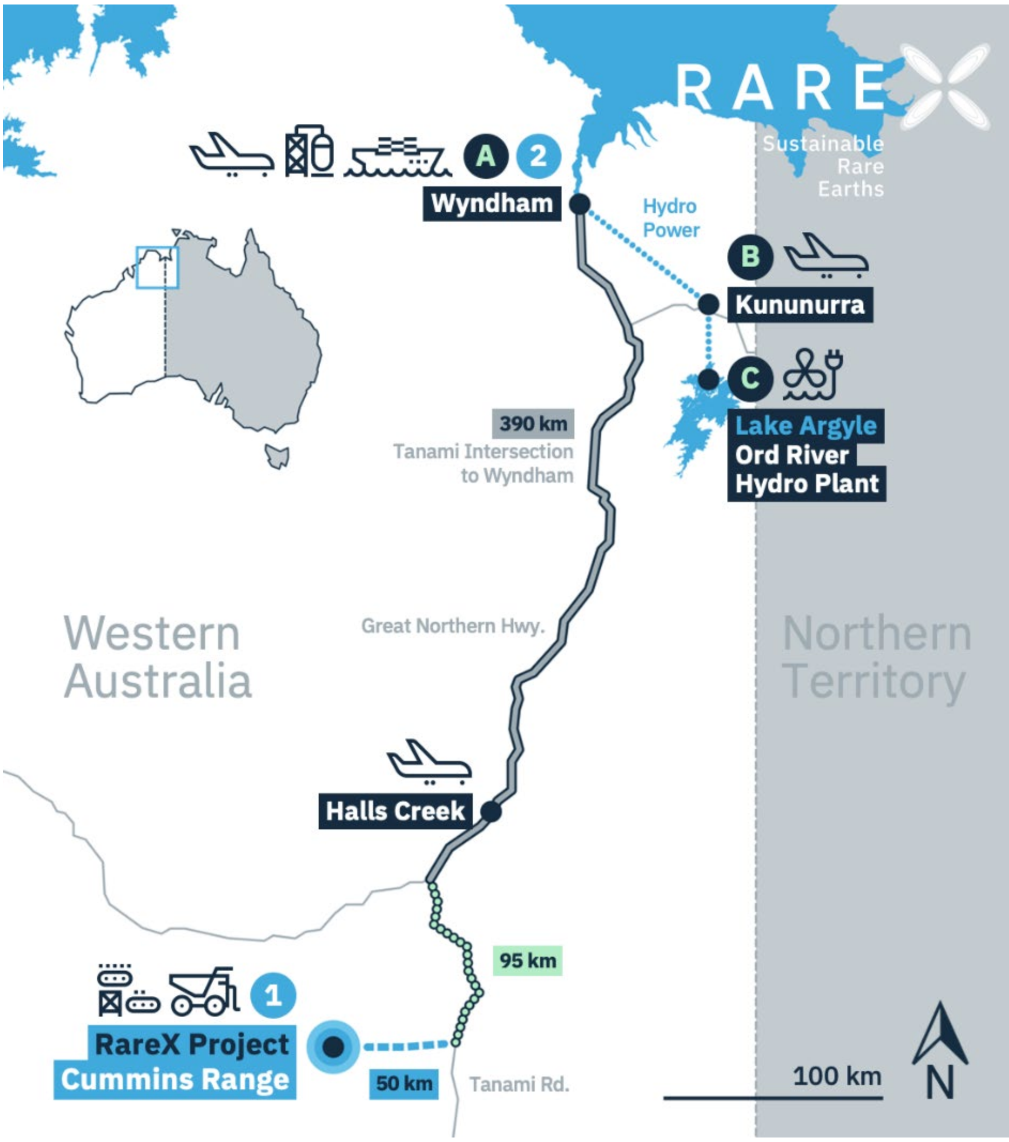

Figure 1. Map of Project Location and Key Project Infrastructure

The decision to seal the Tanami Road will improve safety, accessibility and flood resilience to better support communities and industries in the north-east of Western Australia. The Tanami upgrade will help RareX develop steady-state operations throughout the year, in particular, during the wet season.

The first ten-kilometre section of Tanami Road has been sealed and is now open to traffic, Construction and sealing of the 41km section, through the hills south of Great Northern Highway, is continuing and planned to be completed in 2024/25. Detailed road design for the next 73km of road to Wolf Creek Crater is continuing along with preliminary road design for a further 45 kilometres of road to Billiluna and work to secure the remaining Environmental and Heritage Approvals. Heritage surveys by Jaru Traditional Owners for the first 114km of road and materials sources to 60km mark have been largely completed, and further environmental surveys are progressing. Development of concept designs for the remaining 200km of road to the Northern Territory Border has commenced[10].

The infrastructure is ideally suited for bulk commodity transport and logistics with the Tanami Road upgrade meaning the whole supply chain will be on sealed roads. Wyndham Port is being upgraded and improved as a strategic port and the Ord River Hydro Power Station has reserve capacity for energy supply.

The Kimberley Port Authority is working through the process with the Commonwealth Government for Wyndham Port to be licensed as a port of first entry, setting the scene for a strategic upgrade of this important piece of infrastructure, which is already powered by hydro-electricity.

Rare Dyke and Phos Dyke Resource

RareX engaged ERM to estimate an updated Mineral Resource Estimate (**MRE**) for the Cummins Range carbonatite dykes. The MRE is reported in accordance with the JORC Code (2012) and is shown in full in Table 1.

ERM is satisfied that the techniques and methods used by RareX are consistent with industry standards as stipulated by the JORC Code (2012). The quality assurance and quality control **(QA / QC**) supports the data that RareX has provided.

The MRE is considered to have reasonable prospects for eventual economic extraction on the following basis:

- the resource is situated in a favourable mining jurisdiction, with no known impediments to land access or tenure status;
- the volume, orientation and grade of the Mineral Resource is amenable to mining extraction via bulk tonnage open pit or underground mining methods;
- preliminary metallurgical test work shows extraction and concentration of rare earths and phosphate can be achieved using traditional processing techniques; and
- an enhanced Scoping Study was completed in August 2023 (ASX release: 22 August 2023), which outlines an open cut mine and flotation beneficiation facility at site producing a phosphate mineral concentrate and a rare earth-phosphate mineral concentrate, which can be hauled along mainly sealed roads to Wyndham Port. The Scoping Study further demonstrated potential for economic extraction.

The phosphate Mineral Resource was estimated using ordinary kriging interpolation techniques and reported at a 2.5% P_2O_5 cut-off grade.

The Rare Dyke and Phos Dyke MRE is estimated over 800m of north-west – south-east strike, 700m of width, and 500m down-dip.

[10] https://www.mainroads.wa.gov.au/projects-initiatives/all-projects/regional/tanami-road-upgrade/

The MRE has been split in two, due to spatial and mineralogical differences. Each of the Dykes has been reported as a regolith resource and a fresh rock resource, along with Mineral Resource confidence levels (Indicated or Inferred).

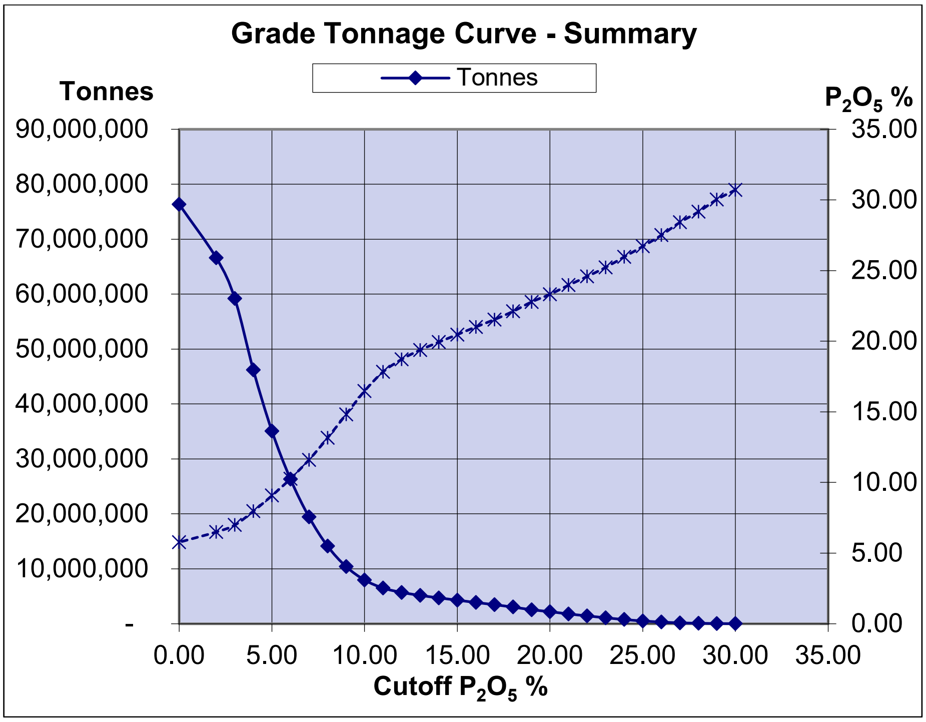

Figure 2. Resource Grade Tonnage Curve for Phosphate

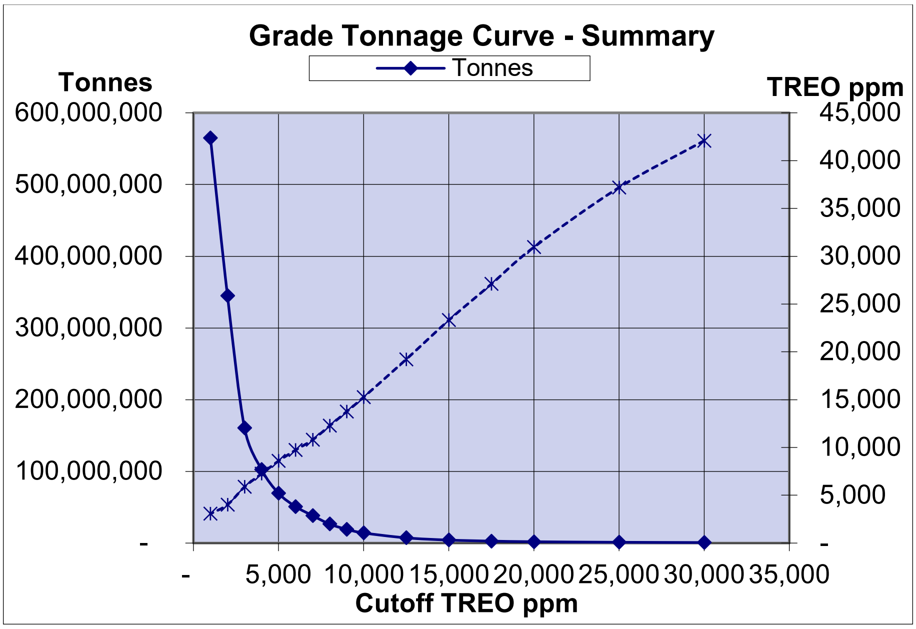

Figure 3. Resource Grade Tonnage Curve for TREO

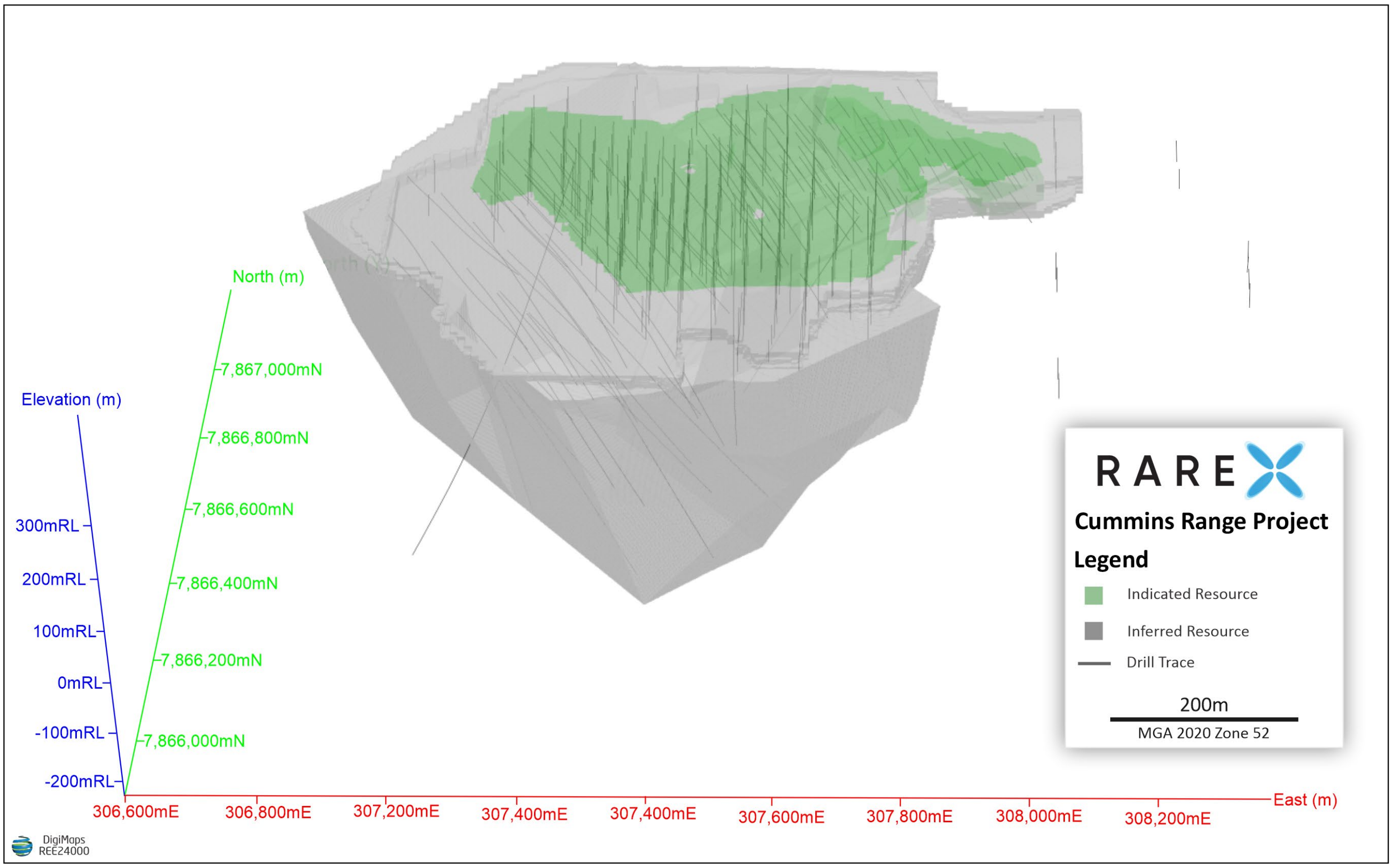

Figure 4. 3D image of Cummins Range Mineral Resource

Geology Model

The Cummins Range pipe is a phosphorous-rare earth rich system with phosphorous and rare earths mineralisation found in variable quantities over the entire pipe. Drilling in the north-western portion of the pipe is the focus of this MRE.

The Cummins Range deposit is centred around two sub-parallel carbonatite dykes (Rare Dyke and Phos Dyke) that strike at 320 degrees and dip at 60 degrees to the south-west. The Rare Dyke and the Phos Dyke have intruded into the clinopyroxenite forming large apatite rich carbonatised alteration holes.

Within the carbonatites and wall rock alteration zones are monazite-bastnaesite-parisite rich veins that reach up to >20m wide. These phosphorous and rare earth rich rocks are present to significant depths with intersections drilled 600m below surface. The pyroxenites, carbonatites and alteration zones contain consistent disseminated to massive apatite and variable rare earths.

Sitting on top of the larger dyke (Rare Dyke) is a well-developed weathering profile hosting high grade rare earths, phosphate, scandium, and niobium mineralisation. The weathering profile can extend to greater than 100m depth. A combination of residual, or eluvial, chemical weathering and primary mineralisation has contributed to the strong enrichment of rare earths and phosphate.

A majority of the rare earths mineralisation in the regolith is contained in monazite with the remainder contained in bastnaesite and crandallite. Weathering processes have created an increase of monazite and apatite concentrations with portions of the regolith phosphate having potential for direct shipping ore (**DSO**).

Large volumes of apatite rich phoscorite surround the Phos Dyke with consistent low grade rare earths in the form of monazite. Many of the drill holes bottomed in phoscorite and the extent of this rock type is open to the north, east and south.

The geological model was simplified to three geological units:

1. Regolith – combination of all the domains in the regolith profile with the base of the weakly weathered oxidation boundary marking the lower boundary.
2. Ultramafic/pyroxenite – undifferentiated ultramafics, including altered ultramafics and phoscorite.
3. Carbonatite – dolomitic and calcic carbonatite.

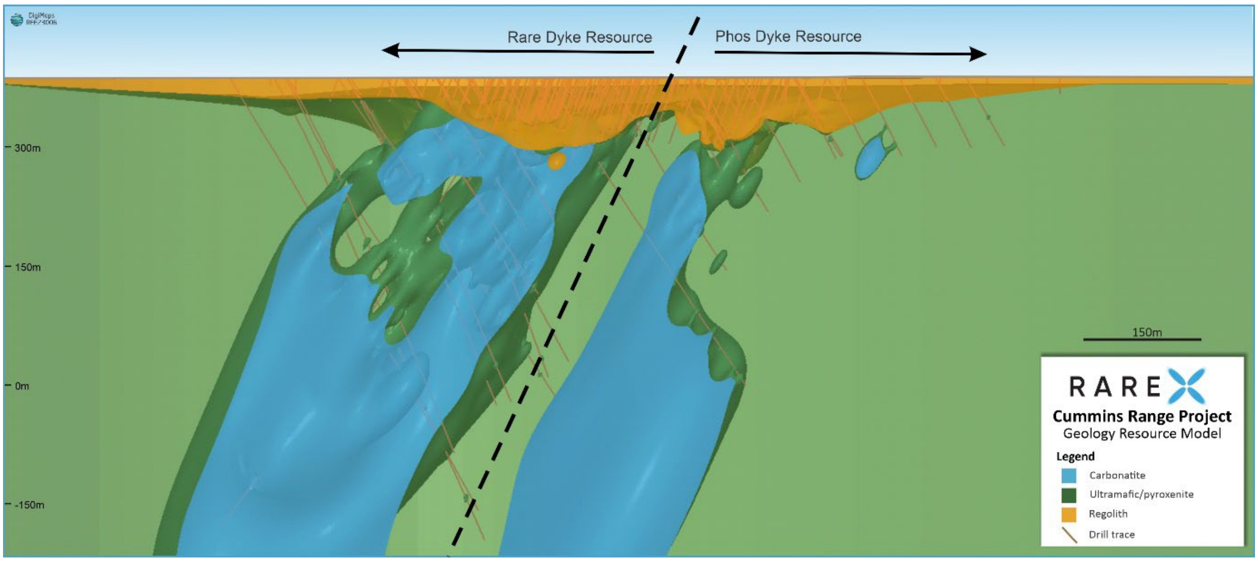

Figure 5. Cross section of Cummins Range

Drilling Techniques

The drilling data base provided for the MRE was composed of data collected from three exploration companies, Navigator Resources Ltd, Kimberley Rare Earths Ltd and RareX Ltd. Table 3 below summarises the drilling completed on Cummins Range:

Table 2. Drill Holes used in the Cummins Range 2023 MRE

Company	Hole Type	No of Holes	Metres	Average Depth (m)	Year Drilled
Navigator	RC	93	9,293	100	2007
Kimberley Rare Earths	RC	77	4,229	55	2011
RareX	RC	156	17,091	112	2020-2023
	DDH	18	3279.7	203	2021-2023
	RC/DDH	28	11,533	401	2021-2023
MRE Total		**372**	**45,426**		

Navigator and Kimberley Rare Earths drilled RC holes contributing 30% of the drilled metres in the MRE. The remaining 70% was drilled by RareX using RC and diamond drilling methods. RareX used a combination of RC and diamond drilling for 28 of the drill holes.

Sampling

Navigator Sampling

- Bulk samples were collected in green plastic bags, along with a 9:1 split from the cyclone.
- 4m composites were taken during the time of drilling using a PVC spear for dry samples and an aluminium scoop for wet samples.
- All composites that returned >1000ppm Ce were resampled on 1m intervals before commencement of the 2007 wet season. The 1m intervals were bagged from the drill rig 9:1 cone split.

Kimberley RC Sampling

- No details on RC sampling have been recorded for the 77 drill holes completed by Kimberley. All drilled metres were sampled on 1m intervals, and it is assumed Kimberley used industry standards, which is sampling the 1m split from the cyclone on the drill rig.

RareX RC Sampling

- For the 2020-2021 drill seasons the bulk sample was collected in green plastic bags and no split was taken. The cyclone was cleaned after every 3m drill run and where sticky clays were intersected, the driller would lift the hammer off the bottom and clean the cyclone after each metre. Wet samples were left open for water to evaporate.
- Sampling intervals were determined by geology with the aid of a Niton pXRF. Sample intervals ranged from 4m, 3m, and 2m composites in areas of no expected rare earths mineralisation. Mineralised zones were sampled on 1m intervals.
- The bulk bags were put through a 50/50 or 75/25 riffle splitter multiple times to achieve the desired 3kg sample. The splitter was cleaned between each sample and bulk samples were not put through the splitter until dry to avoid cross contamination.
- In the 2022-23 drill season instead of splinting the entire bulk bags as done in previous years, the cone split from the drill rig cyclone was used which is 5% to 8% of the metre drilled.

Sampling Analytical Methods and QA/QC

The analytical method used to assay has remained consistent through all the drilling used in the MRE with a peroxide fusion digest, with an ICP-OES and ICP-MS finish. 4-acid digest was used by navigator as a qualifier and is described below. Table 4 summaries the assay details for all the holes.

Table 3. Assay methods and laboratory for drill holes

Company	Holes	Sample Type	Laboratory	Analysis Method for REE, P, Sc, Nb
Navigator	NRC001-NRC093	4m Composites	Intertek	4 acid digest, ICP-OES and ICP-MS finish
Navigator	NRC001-NRC093	1m Samples	Intertek	Peroxide Fusion Digest, ICP-OES and ICP-MS finish
Kimberley	KRC094-KRC170	1m Samples	Intertek	Peroxide Fusion Digest, ICP-OES and ICP-MS finish
RareX	CRX0001-CRX0104 CDX0001-CDX0050	1-4m Samples	Nagrom	Peroxide Fusion Digest, ICP-OES and ICP-MS finish
RareX	CRX0005-CRX0149 CDX0047,CDX0048,CDX0051, CDX0052	1-4m Samples	Bureau Veritas	Peroxide Fusion Digest, ICP-OES and ICP-MS finish

Navigator assayed for 40 elements: Ag, Al, Ba, Ca, Ce, Cr, Cu, Dy, Er, Eu, Fe, Ga, Gd, Ho, K, La, Lu, Mg, Mn, Nb, Nd, P, Pb, Pr, Sc, Si, Sm, Sr, Ta, Tb, Th, Ti, Tm, U, V, Y, Yb, Zn, Zr. Laboratory QA/QC makes up 10% of the assays.

Kimberley Rare Earths assayed for 30 elements: Al, Ca, Ce, Dy, Er, Eu, Fe, Ga, Gd, Ho, La, Lu, Mg, Nb, Nd, P, Pr, Sc, Sm, Ta, Tb, Th, Ti, Tm, U V, Y, Yb, Zr. Laboratory QA/QC was conducted and assessed during previous resource estimates. However, RareX have not been able to obtain the raw data.

RareX assayed for 42 elements with Nagrom: Ba, Fe, Mg, Mn, Ce, Dy, Er, Eu, Gd, Ho, La, Lu, Nb, Nd, Pr, P, S, Si, Zr, Sm, Sn, Ta, Tb, Th, Tm, U, W, Y, Tb, Hf, Al, C, K, Ag, As, Be, Na, S, Sr, Sc, Zn, Li and Pb. RareX used standards, duplicates and blanks comprising 10% of the samples in RC assay batches and 6% in the diamond assay batches.

RareX assayed for 31 elements with Bureau Veritas: Ba, Fe, Mg, Mn, Ce, Dy, Er, Eu, Gd, Ho, La, Lu, Nb, Nd, Pr, P, S, Si, Sc, Zr, Sm, Ta, Tb, Th, Tm, U, Y, Tb, Hf, C, and Sr. RareX used standards, duplicates and blanks comprising 10% of the samples in RC assay batches and 6% in the diamond assay batches.

A batch of 178 pulps from 2020-2022 drill programs were sent to an alternate laboratory to be assay via Peroxide Fusion with ICP-OES and ICP-MS finish as umpire checks. The elements assayed were P, Sc, Zr, Ce, Ho, Sm, Y, Dy, Tb, Nb, Gd, Tm, Pr, La, Ta, Yb, Er, Lu, Eu, Th, Nd, Hf and U. The umpire checks confirmed the accuracy of the analytical batches from 2020-2022.

A batch of 104 pulps from 2023 drill programs were sent to an alternate laboratory to be assay via Peroxide Fusion with ICP-OES and ICP-MS finish as umpire checks. The elements assayed Ba, Fe, Mg, Mn, Ce, Dy, Er, Eu, Gd, Ho, La, Lu, Nb, Nd, Pr, P, S, Si, Sc, Zr, Sm, Ta, Tb, Th, Tm, U, Y, Tb, Hf, C, and Sr.

The competent person is of the opinion that the quality of control procedures adopted by Navigator, Kimberley Rare Earths, RareX and both the laboratories are of sufficient quality for an Inferred and Indicated mineral resource estimate.

Specific Gravity

During the 2023 drill season RareX increased the SG measurements in the regolith profile by 325% using the Archimedes Method. A total of 1236 SGs have been taken on numerous rock types in the regolith and fresh rock. Each SG sample was geologically logged and SGs were then divided into the geological domains and averaged. Table 6 below summarises the SG values applied in the mineral resource estimate.

Table 4. SG values applied to geological domains

Ultramafic	Carbonatite	Regolith Cover	Regolith Pan	Regolith CW	Regolith SW	Regolith MW	Regolith WW
3.1	2.99	1.9	2.51	1.9	2.2	2.5	2.71

CW = Completely Weathered, SW = Strongly Weathered, MW = Moderately Weathered, WW = Weakly weathered

Cut off Grade

A cut off grade of 2.5% P_2O_5 was used in the Mineral Resource estimate. Due to the size of the Mineral Resource and the potential for a very long mine life, a 2.5% cut is considered appropriate. Other deposits of comparable size and grade in the world have use similar cuts.

The apatite at Cummins Range lends itself to form high quality rock phosphate. Being an igneous phosphate deposit the resource contains very low levels of potentially toxic elements allowing upgrading. The coarseness of the apatite and simple mineralogy should also assist concentration.

Metallurgy

Beneficiation testwork to date has been focused on both rare earth and phosphate concentration and samples from different dykes and zones were tested.

The majority of 2021 and 2022 testwork was targeted at achieving a TREO grade between 10% and 20%, with acceptable recovery. This was achieved and exceeded; and the results were used to support the 2022 scoping study[11]. The September 2022 scoping study outlines a 15% TREO monazite concentrate from metallurgical testing. Since September 2022, metallurgical programs in Australia and overseas have been focused on refining the process and results are expected in coming months.

Phosphate optimised beneficiation as a strong alternative to rare earth focused beneficiation is also being explored. Phosphate flotation tests on weathered and fresh rock material from the Phos Dyke have produced concentrate grades of >39% P_2O_5 with >80% recovery[12]. The phosphate flotation of the Phos Dyke materials showed reasonable TREO recoveries of >60%. A bulk flotation was also completed on the Phos Dyke regolith composite and showed similar results with slightly improved grades and recoveries[13].

Phosphate flotation testwork on the overall regolith zone started in late 2022 and is currently in progress. Testwork to date mainly included collector screening, gangue mineral depression, desliming and magnetic separation and were conducted on regolith composite representing ROM typical grades. The composites were created with material from both Rare and Phos dykes. To date of reporting, limited testing on the overall regolith material has been reported upon and is subject to ongoing testing.

Bioavailability tests of phosphate samples are up to 5 folds the industry high bioavailability standard indicating the potential to produce direct shipping ore and phosphate mineral concentrate[14]. DSO samples were also analysed for deleterious elements such as cadmium (Cd), fluorine (F), chlorine (Cl) and lead (Pb) which were all well below industry limits.

Preliminary refining testwork are also carried out on flotation concentrates and mainly included apatite leach and rare earth extractions. Testwork carried out on the Rare Dyke material showed good amenability to conventional methods which demonstrated good rare earth extraction and impurity removal.

Apatite leaching testwork on combined apatite and monazite concentrates showed high apatite dissolution and low gangue elements dissolutions hence very pure leach liquor that is believed suitable for processing into purified phosphoric acid (PAP) for LFP applications. The results also showed high TREE (total rare earth element) recovery of 90% to the residue, suggesting that very little monazite was solubilised allowing the majority of the RE to be maintained in the leach residue[15].

Further mineralogy analysis on the leach residue confirmed mineralogy to the initial head sample, suggesting the RE minerals remain intact during the dilute acid leach step. The acid leaching also improved the monazite liberation according to the mineralogy results. This result is well aligned to RareX expectations and further supports the proposed product processing strategy[16] at the offtaker's facility. The similar mineralogy and the improved RE mineral liberations provide further confidence to RareX that a >30% RE concentrate can be produced from the leach residue suitable for typical RE refineries[17].

[11] ASX release 12 September 2022: Positive Scoping Study for Cummins Range Shows Potential for Sustainable, Long-Life Rare Earths Project.
[12] ASX release 04 October 2022: Metallurgical Testwork Delivers Premium Phosphate Concentrate from Cummins Range.
[13] ASX release 29 August 2023: Cummins Range Project Metallurgical and Geotechnical Update.
[14] ASX release 23 March 2023: Phosphate Testwork Confirms Potential to Produce Direct-Application Fertilisers from DSO and Concentrate at Cummins Range.
[15] ASX release 11 July 2023: Phosphoric Acid Leach Test Supports RareX Stage-3 Operations.
[16] ASX release 12 October 2023: Cummins Range Product Strategy Update.
[17] ASX release 28 November 2023: Rare Earths Beneficiation Favourable Mineralogy Confirmed.

Estimation methodology

Drill samples were composited to 1 m intervals and a geostatistical analysis of the phosphate (**P_2O_5**) and rare earth oxides (**REO**) was carried out by geological domain. A block model with primary cell dimensions 12.5 m (N) by 12.5 m (E) by 5 m (Z) was created and composited sample grades were interpolated into the blocks using either ordinary kriging or inverse distance weighting, with the geological domains controlling the grade interpolation. A minimum of 8 and maximum of 16 samples were used to interpolate sample grades, with three grade estimation passes used to ensure all blocks were interpolated.

Bulk density values were assigned to the lithological, weathering and geochemical domains, based on 1,236 density measurements using the Archimedes water displacement method, from billets of diamond core. The following density values were assigned:

- Weathering zones: Completely weathered (1.93 t/m^3), Pan (2.51 t/m^3), Strongly Weathered (2.2 t/m^3), Moderately Weathered (2.5 t/m^3) and Weakly Weathered (2.71 t/m^3)
- Geochem domains: Phoscrete (2.33 t/m^3), Apatite (2.23 t/m^3), Apatite Low Grade (1.96 t/m^3), Ferricrete and Silcrete (2.22 t/m^3), Magnesium depletion (Karstic) domain (1.97 t/m^3)
- Primary zone lithologies: Carbonatite (2.98 t/m^3), Pyroxenite (3.13 t/m^3)

The block model was validated by using swath plots, comparison of mean grades from the block model and drill samples, to confirm that the sample grades were interpolated as intended, and the density values correctly assigned.

Mineral Resource Classification

The Mineral Resource has been classified as a combination of Indicated and Inferred, with geological and sampling evidence sufficient to assume geological and grade continuity within the volumes classified as Indicated. The classification levels are based upon an assessment of geological understanding of the deposit, geological and grade continuity, drillhole spacing, quality control results, search and interpolation parameters, and an analysis of available density information. The Indicated volumes cover the volumes with 50 m (easting) x 50 m (northing) drill spacing.

Greater than 85% of the reported Mineral Resource sits within the Inferred category, and the majority of these tonnes are located in the pyroxenite and carbonatite zones located in the primary (fresh) rock zone. A sufficient number of diamond and RC drill holes were drilled deep (up to 600 m vertical depth) into the primary zone, with drill spacing of approximately 100 m x 100 m. The Competent Person considers that geological evidence is sufficient to imply but not verify geological and grade continuity based on this drill spacing. The Inferred Mineral Resource volumes have not been extrapolated beyond the limits of the drill holes.

Reasonable Prospects for Eventual Economic Extraction

The Cummins Range MRE is expected to have reasonable prospects for eventual economic extraction (**RPEEE**) on the following basis:

- the resource is situated in a favourable mining jurisdiction, with no known impediments to land access or tenure status;
- the volume, orientation and grade of the resource is amenable to mining extraction via open pit or underground mining methods;
- preliminary metallurgical test work shows extraction and concentration of rare earths and phosphate can be achieved with traditional processing techniques; and
- an enhanced Scoping Study was completed in August 2023 (ASX release: 22 August 2023), which outlines an open cut mine and flotation beneficiation facility at site producing a phosphate mineral

concentrate and a rare earth-phosphate mineral concentrate, which can be hauled along mainly sealed roads to Wyndham Port. The Scoping Study further demonstrated potential for economic extraction.

Potential To Grow Resource

The Cummins Range pipe is a phosphorous rare earths rich system with most drilled metres containing phosphate and rare earths mineralisation. The pipe extends over an area of 2km x 2km and the MRE is positioned in the western portion of the tenement and covers 40% of the pipe. The remainder of the pipe has sparse drilling with most holes containing phosphate and rare earths.

In 2023, an aerial magnetics and ground gravity survey was completed over the Cummins Range tenements. Valuable definition across numerous anomalies was captured and will aid in the 2024 exploration program. A summary of the geophysics was released on the ASX in November (ASX release: 13th November 2023). RareX believes there are several suitable environments for further metal accumulation in RareX tenements and look forward to locating additional near mine tonnes. Magnetics and gravity images are shown in Figures 6 and 7.

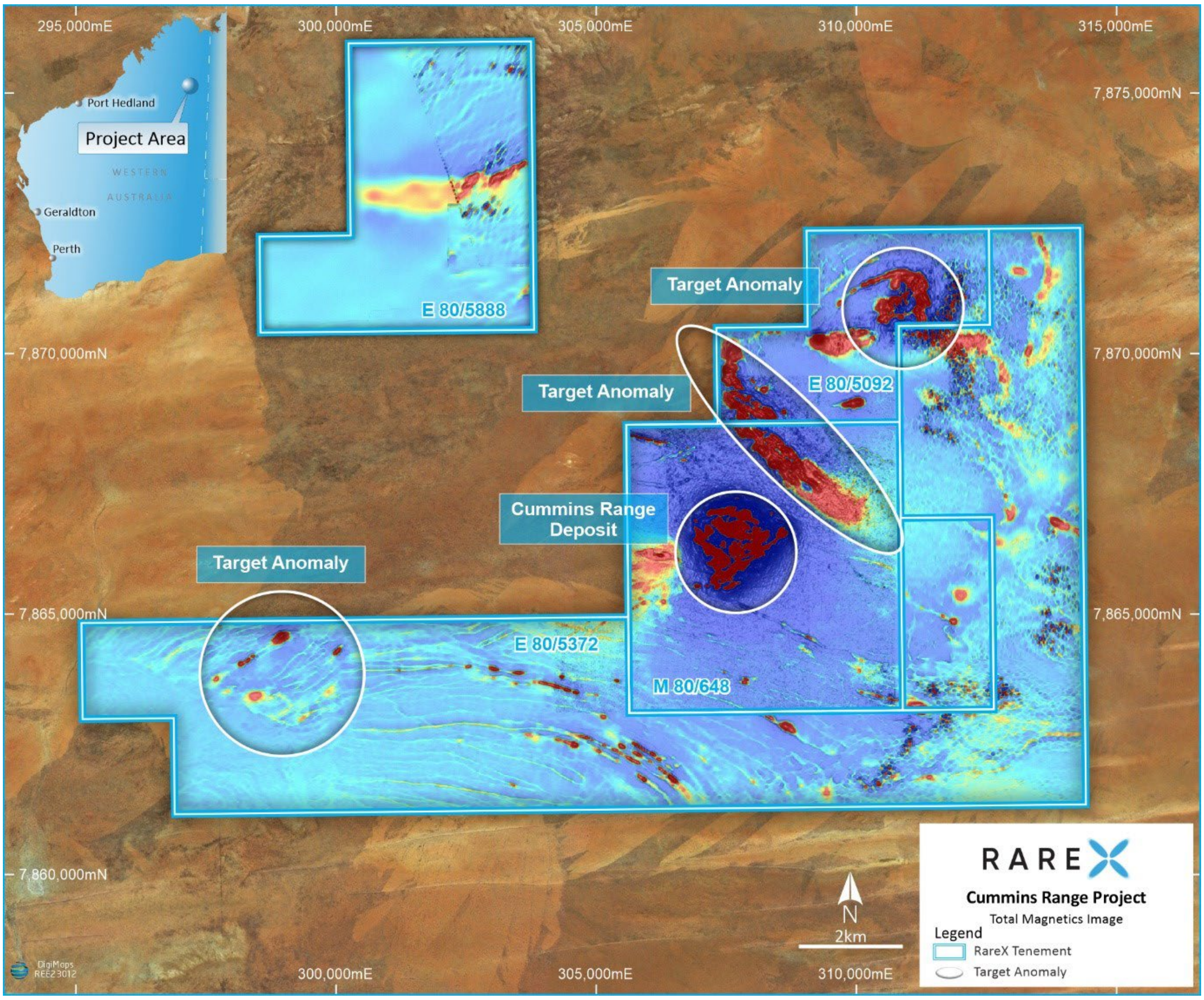

Figure 6. Total magnetics image on RareX tenements.

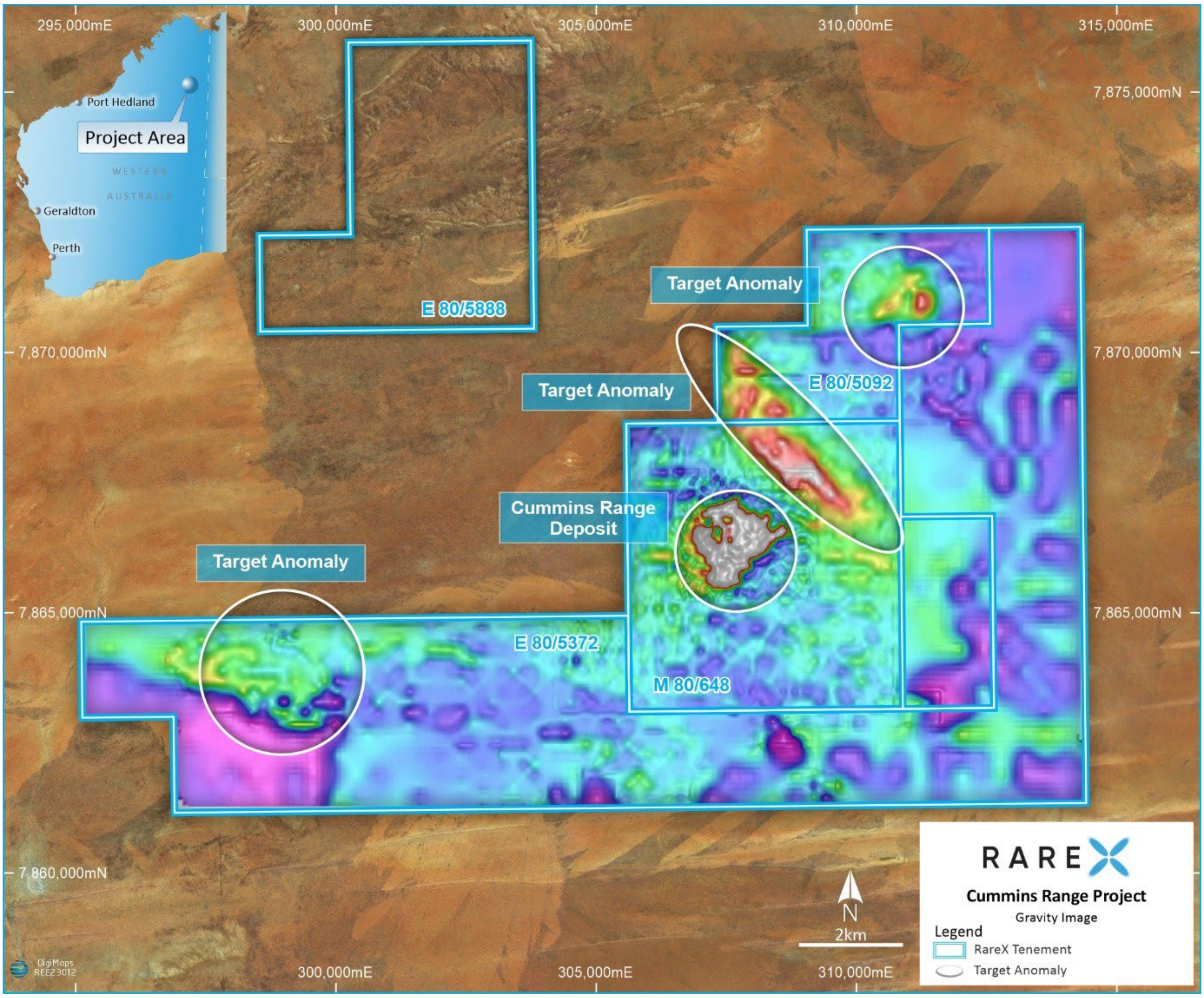

Figure 7. Ground gravity image on RareX tenements

Table 5. 2023 drill collar details

Hole ID	East MGA	North MGA	RLUTM	End Depth	Azimuth	Dip	Type
CDX0047	307409	7866798	392	109.9	50	60	Diamond
CDX0048	307444	7866518	393	75.1	85	60	Diamond
CDX0049	307133	7866678	392	120	50	60	Diamond
CDX0051	307236	7866633	392	61.6	50	60	Diamond
CDX0052	307547	7866680	391	106.1	50	60	Diamond
CRX0105	307648	7866791	392	72	50	60	RC
CRX0106	307659	7866747	392	102	50	60	RC
CRX0107	307693	7866731	392	72	50	60	RC
CRX0108	307720	7866700	392	90	50	60	RC
CRX0109	307675	7866817	392	54	50	60	RC
CRX0110	307655	7866640	391	72	50	60	RC
CRX0111	307677	7866611	391	78	50	60	RC
CRX0112	307687	7866672	391	72	50	60	RC
CRX0113	307750	7866728	392	114	50	60	RC
CRX0114	307723	7866758	392	96	50	60	RC
CRX0115	307700	7866789	392	72	50	60	RC
CRX0116	307782	7866750	392	84	50	60	RC
CRX0117	307779	7866695	392	120	50	60	RC
CRX0118	307755	7866780	392	84	50	60	RC
CRX0119	307538	7866857	392	78	50	60	RC
CRX0120	307511	7866883	392	84	50	60	RC
CRX0121	307442	7866868	392	60	50	60	RC
CRX0122	307407	7866844	392	84	50	60	RC
CRX0123	307376	7866845	392	84	50	60	RC
CRX0124	307389	7866830	392	66	50	60	RC
CRX0125	307458	7866843	392	72	50	60	RC
CRX0126	307300	7866782	392	66	50	60	RC
CRX0127	307463	7866790	392	90	50	60	RC
CRX0128	307508	7866775	392	114	50	60	RC
CRX0129	307455	7866733	392	60	50	60	RC
CRX0130	307457	7866734	392	102	50	60	RC
CRX0131	307350	7866751	392	168	50	60	RC
CRX0132	307515	7866734	392	102	50	60	RC
CRX0133	307485	7866708	391	108	50	60	RC
CRX0134	307542	7866701	391	96	50	60	RC
CRX0135	307511	7866677	391	72	50	60	RC
CRX0136	307542	7866646	391	102	50	60	RC
CRX0137	307591	7866595	391	60	50	60	RC

Hole ID	East MGA	North MGA	RLUTM	End Depth	Azimuth	Dip	Type
CRX0138	307802	7866663	392	120	50	60	RC
CRX0139	307808	7866718	391	96	50	60	RC
CRX0140	307827	7866632	391	96	50	60	RC
CRX0141	307866	7866718	391	78	50	60	RC
CRX0142	307837	7866689	391	84	50	60	RC
CRX0143	307846	7866748	391	108	50	60	RC
CRX0144	307856	7866603	391	90	50	60	RC
CRX0145	307860	7866658	391	84	50	60	RC
CRX0146	307776	7866638	391	108	50	60	RC
CRX0147	307620	7866821	392	78	50	60	RC
CRX0148	307568	7866884	392	66	50	60	RC
CRX0149	307517	7866703	392	120	50	60	RC

Table 6. Significant TREO intercept table for 2023 Drilling (0.5% Cutoff)

Dyke	Hole ID	From (m)	To (m)	Interval (m)	TREO %	NdPr %	P_2O_5 %	Nb_2O_5 %
Phos Dyke	CDX0047	83.5	87.41	3.91	4.15	20	28	0.31
Rare Dyke	CDX0048	0	0.7	0.7	12.74	15	23	0.09
Rare Dyke	CDX0048	30.79	48.95	18.16	1.43	20	25	0.37
Rare Dyke	Incl.	40.6	48.1	7.5	2.16	19	26	0.37
Rare Dyke	CDX0049	9.64	9.94	0.3	3.56	15	2	0.02
Rare Dyke	CDX0049	18.63	19.98	1.35	1.54	19	5	0.05
Rare Dyke	CDX0049	31.7	33.2	1.5	1.55	17	4	0.04
Rare Dyke	CDX0049	43.4	44.2	0.8	0.63	22	6	0.08
Rare Dyke	CDX0049	49	52.7	3.7	3.19	17	7	0.07
Rare Dyke	CDX0049	63.3	64	0.7	0.58	21	8	0.08
Rare Dyke	CDX0049	65.1	66	0.9	1.3	18	10	0.07
Rare Dyke	CDX0049	73.5	74.35	0.85	1.56	17	2	0.06
Rare Dyke	CDX0049	78.3	106.3	28	4.56	19	8	0.3
Rare Dyke	Incl.	85.4	86.6	1.2	31.31	17	20	0.15
Rare Dyke	CDX0051	36.9	52.7	15.8	2.47	21	19	0.26
Rare Dyke	Incl.	39.1	47.8	8.7	3.35	20	23	0.29
Rare Dyke	CDX0051	48.75	49.15	0.4	1.38	24	25	0.6
Rare Dyke	CDX0051	51.4	52.7	1.3	1.07	24	28	0.25
Phos Dyke	CDX0052	1.5	23.6	22.1	0.68	24	20	0.07
Phos Dyke	CDX0052	28.3	28.6	0.3	0.71	24	3	0.03
Phos Dyke	CDX0052	35.1	35.9	0.8	0.53	27	21	0.08
Phos Dyke	CDX0052	41.2	41.85	0.65	1.25	21	16	0.11
Phos Dyke	CDX0052	50.2	54.3	4.1	1.04	20	1	0.01
Phos Dyke	CDX0052	71.87	73.1	1.23	2.33	18	9	0.07

Dyke	Hole ID	From (m)	To (m)	Interval (m)	TREO %	NdPr %	P_2O_5 %	Nb_2O_5 %
Phos Dyke	CRX0107	34	36	2	3.55	23	5	0.32
Phos Dyke	CRX0108	2	4	2	0.55	21	6	0.07
Phos Dyke	CRX0108	7	9	2	1.2	19	7	0.07
Phos Dyke	CRX0108	48	50	2	2.18	18	3	0.06
Phos Dyke	CRX0108	80	82	2	4.09	17	1	0.01
Phos Dyke	CRX0110	12	17	5	0.86	22	15	0.05
Phos Dyke	CRX0110	25	26	1	0.54	20	7	0.03
Phos Dyke	CRX0110	51	52	1	0.52	29	8	0.24
Phos Dyke	CRX0111	28	29	1	0.66	25	10	0.07
Phos Dyke	CRX0111	35	36	1	0.5	29	21	0.04
Phos Dyke	CRX0112	30	33	3	0.51	29	4	0.12
Phos Dyke	CRX0112	36	39	3	0.53	29	8	0.18
Phos Dyke	CRX0112	51	52	1	1.15	22	10	0.14
Phos Dyke	CRX0112	59	60	1	0.64	22	11	0.03
Phos Dyke	CRX0113	0	4	4	0.74	20	5	0.03
Phos Dyke	CRX0113	72	75	3	0.52	26	8	0.21
Phos Dyke	CRX0113	80	82	2	0.74	20	4	0.06
Phos Dyke	CRX0114	20	21	1	0.84	20	5	0.09
Phos Dyke	CRX0114	53	54	1	0.8	19	6	0.02
Phos Dyke	CRX0114	59	60	1	1.11	18	3	0.08
Phos Dyke	CRX0115	18	19	1	0.51	28	11	0.05
Phos Dyke	CRX0116	50	51	1	0.56	22	6	0.06
Phos Dyke	CRX0117	4	6	2	1.33	29	28	0.01
Phos Dyke	CRX0120	52	55	3	0.68	21	6	0.03
Phos Dyke	CRX0121	8	40	32	1.07	24	18	0.12
Phos Dyke	CRX0122	7	71	64	0.78	25	16	0.13
Phos Dyke	Incl.	34	39	5	1.71	23	11	0.36
Phos Dyke	CRX0123	28	29	1	8.29	18	21	0.19
Phos Dyke	CRX0123	49	50	1	2.24	23	34	0.07
Phos Dyke	CRX0124	5	57	52	0.77	24	19	0.07
Phos Dyke	Incl.	49	57	8	1.97	20	24	0.17
Phos Dyke	CRX0125	5	38	33	0.94	26	22	0.06
Phos Dyke	Incl.	11	30	19	1.15	26	26	0.06
Phos Dyke	CRX0126	17	32	15	1.08	21	13	0.32
Phos Dyke	Incl.	25	30	5	2.2	21	16	0.59
Phos Dyke	CRX0126	37	38	1	1.45	20	15	0.5
Phos Dyke	CRX0126	45	46	1	0.52	20	4	0.09
Phos Dyke	CRX0126	51	52	1	0.71	22	8	0.1
Phos Dyke	CRX0126	60	63	3	1.23	19	7	0.06

Dyke	Hole ID	From (m)	To (m)	Interval (m)	TREO %	NdPr %	P_2O_5 %	Nb_2O_5 %
Phos Dyke	CRX0127	3	25	22	1.38	21	12	0.12
Phos Dyke	Incl.	10	16	6	2.52	19	20	0.12
Phos Dyke	CRX0128	17	24	7	0.77	26	25	0.07
Phos Dyke	CRX0128	31	48	17	0.62	26	21	0.06
Phos Dyke	CRX0128	60	65	5	1.35	20	14	0.15
Phos Dyke	CRX0128	73	74	1	0.5	28	14	0.03
Phos Dyke	CRX0128	77	79	2	0.53	25	16	0.15
Phos Dyke	CRX0128	84	86	2	0.51	25	12	0.07
Phos Dyke	CRX0129	45	60	15	0.89	25	29	0.11
Phos Dyke	CRX0130	67	68	1	0.71	25	16	0.06
Phos Dyke	CRX0130	99	102	3	0.67	19	5	0.04
Phos Dyke	CRX0131	2	16	14	0.97	21	13	0.14
Phos Dyke	CRX0131	61	63	2	1.42	18	4	0.06
Phos Dyke	CRX0131	110	111	1	0.82	20	9	0.03
Phos Dyke	CRX0131	160	162	2	0.93	18	5	0.13
Phos Dyke	CRX0132	3	5	2	0.67	24	26	0.07
Phos Dyke	CRX0132	46	47	1	1.9	19	13	0.08
Phos Dyke	CRX0132	51	53	2	1.31	19	17	0.04
Phos Dyke	CRX0132	60	61	1	0.54	28	20	0.02
Phos Dyke	CRX0132	78	102	24	0.97	23	21	0.07
Phos Dyke	Incl.	94	99	5	1.73	20	23	0.08
Phos Dyke	CRX0133	20	36	16	0.82	24	26	0.06
Phos Dyke	CRX0133	57	58	1	0.63	5	2	0.64
Phos Dyke	CRX0133	88	89	1	0.5	21	7	0.06
Phos Dyke	CRX0133	95	105	10	0.81	23	16	0.05
Phos Dyke	CRX0134	41	45	4	0.59	25	22	0.06
Phos Dyke	CRX0134	60	64	4	0.57	23	15	0.06
Phos Dyke	Incl.	63	64	1	0.64	24	12	0.05
Phos Dyke	CRX0134	66	67	1	0.54	23	12	0.08
Rare Dyke	CRX0135	3	22	19	0.87	23	26	0.09
Phos Dyke	Incl.	7	15	8	1.26	24	30	0.11
Phos Dyke	CRX0135	28	39	11	0.61	23	17	0.07
Phos Dyke	CRX0136	14	16	2	0.77	23	15	0.1
Phos Dyke	CRX0136	19	20	1	0.52	23	10	0.07
Phos Dyke	CRX0136	23	24	1	0.57	21	7	0.1
Phos Dyke	CRX0136	35	43	8	0.67	24	19	0.07
Phos Dyke	CRX0136	48	56	8	0.54	24	5	0.1
Phos Dyke	CRX0136	86	88	2	0.75	23	15	0.07
Phos Dyke	CRX0137	0	2	2	0.63	22	7	0.05

Dyke	Hole ID	From (m)	To (m)	Interval (m)	TREO %	NdPr %	P_2O_5 %	Nb_2O_5 %
Phos Dyke	CRX0137	9	28	19	1	24	18	0.08
Phos Dyke	CRX0137	35	37	2	0.51	22	12	0.07
Phos Dyke	CRX0137	41	43	2	0.83	22	8	0.11
Phos Dyke	CRX0137	51	52	1	0.67	19	3	0.02
Phos Dyke	CRX0138	2	4	2	0.64	19	2	0.01
Phos Dyke	CRX0138	20	21	1	0.67	19	3	0.04
Phos Dyke	CRX0138	50	51	1	0.61	6	3	0.56
Phos Dyke	CRX0139	7	8	1	0.52	19	4	0.06
Phos Dyke	CRX0139	62	73	11	0.59	19	6	0.05
Phos Dyke	CRX0140	16	17	1	0.81	17	2	0.06
Phos Dyke	CRX0140	72	76	4	3.17	17	4	0.1
Phos Dyke	CRX0145	61	62	1	1.35	18	5	0.09
Phos Dyke	CRX0146	76	77	1	0.64	19	4	0.03
Phos Dyke	CRX0146	80	81	1	0.88	18	3	0.07
Phos Dyke	CRX0146	89	90	1	8.18	17	6	0.01
Phos Dyke	CRX0147	22	24	2	0.97	20	16	0.1
Phos Dyke	CRX0148	47	49	2	1.03	19	3	0.74
Phos Dyke	CRX0148	53	54	1	0.69	18	3	0.22
Phos Dyke	CRX0149	1	12	11	0.7	23	21	0.07
Phos Dyke	Incl.	7	12	5	1.11	23	24	0.08
Phos Dyke	CRX0149	69	89	20	0.97	24	23	0.07
Phos Dyke	Incl.	80	89	9	1.28	23	28	0.08

TREO=Lanthanide Oxides + Yttrium oxide

Table 7. Significant P_2O_5 intercept table for 2023 Drilling (2.5% Cutoff)

Dyke	HoleID	From	To	Interval (m)	P_2O_5%	TREO	NdPr %	Nb_2O_5 %
Phos Dyke	CDX0047	0.7	109.9	109.2	15.6	0.75	25	0.09
Phos Dyke	Incl.	49	109.9	60.9	19.0	1.04	24	0.12
Phos Dyke	Incl.	58.9	75.35	16.45	24.9	1.18	25	0.19
Rare Dyke	CDX0048	0	74.2	74.2	17.0	0.71	20	0.18
Rare Dyke	Incl.	0	48.95	48.95	22.5	0.93	19	0.23
Rare Dyke	Incl.	30.79	48.95	18.16	24.8	1.43	20	0.37
Rare Dyke	CDX0049	3.4	120	116.6	7.0	1.45	19	0.14
Rare Dyke	CDX0051	7.15	61.6	54.45	9.5	0.89	21	0.12
Rare Dyke	Incl.	36.9	52.7	15.8	18.9	2.47	21	0.26
Rare Dyke	Incl.	39.1	47.8	8.7	23.2	3.35	20	0.29
Phos Dyke	CDX0052	0	106.1	106.1	9.8	0.38	24	0.05
Phos Dyke	Incl.	1.5	23.6	22.1	20.1	0.68	24	0.07

Dyke	HoleID	From	To	Interval (m)	P_2O_5%	TREO	NdPr %	Nb_2O_5 %
Phos Dyke	Incl.	17.2	23	5.8	26.7	0.80	25	0.06
Phos Dyke	CRX0105	3	72	69	7.7	0.27	27	0.06
Phos Dyke	CRX0106	3	102	99	9.9	0.32	27	0.06
Phos Dyke	Incl.	28	30	2	14.6	0.55	23	0.09
Phos Dyke	CRX0107	3	72	69	5.9	0.32	24	0.07
Phos Dyke	CRX0108	2	90	88	6.6	0.40	23	0.06
Phos Dyke	CRX0109	3	34	31	6.9	0.23	28	0.05
Phos Dyke	CRX0110	4	72	68	7.8	0.30	26	0.06
Phos Dyke	CRX0111	4	78	74	9.1	0.29	28	0.06
Phos Dyke	CRX0112	2	72	70	7.3	0.31	27	0.08
Phos Dyke	CRX0113	0	106	106	8.6	0.30	27	0.06
Phos Dyke	CRX0114	4	90	86	8.3	0.32	26	0.07
Phos Dyke	CRX0115	6	56	50	6.5	0.23	27	0.05
Phos Dyke	CRX0116	3	71	68	8.1	0.26	27	0.06
Phos Dyke	CRX0117	2	120	118	6.6	0.23	28	0.05
Phos Dyke	CRX0118	3	84	81	6.8	0.24	27	0.05
Phos Dyke	CRX0119	4	40	36	9.9	0.32	29	0.06
Phos Dyke	CRX0120	6	22	16	8.7	0.29	27	0.05
Phos Dyke	CRX0120	42	84	42	4.7	0.22	25	0.05
Phos Dyke	CRX0121	6	53	47	14.4	0.80	25	0.10
Phos Dyke	Incl.	14	30	16	23.2	0.95	26	0.11
Phos Dyke	CRX0122	5	81	76	14.5	0.70	25	0.12
Phos Dyke	Incl.	13	33	20	18.7	0.62	28	0.05
Phos Dyke	Incl.	58	68	10	21.6	0.97	26	0.09
Phos Dyke	CRX0123	6	84	78	10.7	0.44	24	0.08
Phos Dyke	Incl.	26	50	24	18.8	0.86	23	0.07
Phos Dyke	CRX0124	5	66	61	17.6	0.72	24	0.08
Phos Dyke	Incl.	36	56	20	23.0	1.09	22	0.09
Phos Dyke	CRX0125	3	72	69	16.3	0.65	26	0.06
Phos Dyke	Incl.	11	30	19	26.4	1.15	26	0.06
Phos Dyke	CRX0126	4	66	62	8.3	0.53	22	0.15
Phos Dyke	Incl.	19	32	13	13.9	1.14	22	0.35
Phos Dyke	CRX0127	3	90	87	10.4	0.68	23	0.08
Phos Dyke	Incl.	10	16	6	19.7	2.52	19	0.12
Phos Dyke	CRX0128	1	114	113	12.4	0.44	26	0.06
Phos Dyke	Incl.	17	38	21	21.1	0.61	26	0.06
Phos Dyke	Incl.	20	24	4	29.4	0.89	26	0.08
Phos Dyke	Incl.	31	37	6	27.4	0.73	25	0.06
Phos Dyke	CRX0129	7	60	53	13.5	0.45	26	0.06

Dyke	HoleID	From	To	Interval (m)	P_2O_5%	TREO	NdPr %	Nb_2O_5 %
Phos Dyke	Incl.	45	59	14	30.0	0.90	25	0.12
Phos Dyke	CRX0130	0	102	102	10.9	0.40	26	0.05
Phos Dyke	Incl.	43	58	15	31.7	1.01	26	0.11
Phos Dyke	CRX0131	2	168	166	8.1	0.33	25	0.06
Phos Dyke	CRX0132	0	102	102	11.1	0.47	24	0.04
Phos Dyke	Incl.	80	99	19	22.4	1.08	23	0.06
Phos Dyke	CRX0133	8	108	100	10.5	0.41	24	0.05
Phos Dyke	Incl.	18	35	17	26.2	0.78	24	0.06
Phos Dyke	CRX0134	0	96	96	8.1	0.29	25	0.04
Phos Dyke	Incl.	60	90	30	11.1	0.39	25	0.04
Phos Dyke	CRX0135	1	72	71	12.4	0.43	23	0.05
Phos Dyke	Incl.	1	40	39	19.7	0.67	23	0.07
Phos Dyke	Incl.	4	22	18	26.9	0.89	24	0.09
Phos Dyke	CRX0136	12	102	90	7.8	0.39	24	0.06
Phos Dyke	Incl.	35	42	7	20.2	0.70	24	0.07
Phos Dyke	CRX0137	0	60	60	10.6	0.53	23	0.05
Phos Dyke	Incl.	9	32	23	18.1	0.88	23	0.07
Phos Dyke	CRX0138	4	120	116	6.2	0.25	22	0.06
Phos Dyke	Incl.	75	114	39	8.2	0.26	24	0.05
Phos Dyke	CRX0139	5	96	91	6.3	0.28	22	0.04
Phos Dyke	Incl.	51	86	35	13.5	0.68	21	0.11
Phos Dyke	CRX0140	4	96	92	5.2	0.35	20	0.04
Phos Dyke	CRX0141	6	72	66	6.2	0.22	23	0.05
Phos Dyke	CRX0142	11	84	73	6.2	0.20	27	0.05
Phos Dyke	CRX0143	6	108	102	5.3	0.17	27	0.04
Phos Dyke	CRX0144	12	90	78	5.4	0.20	27	0.05
Phos Dyke	CRX0145	3	84	81	5.6	0.19	25	0.04
Phos Dyke	CRX0146	5	108	103	5.3	0.28	23	0.05
Phos Dyke	CRX0147	3	78	75	5.9	0.18	26	0.03
Phos Dyke	Incl.	22	39	17	12.2	0.36	25	0.05
Phos Dyke	CRX0148	6	66	60	3.7	0.17	24	0.08
Phos Dyke	Incl.	28	66	38	4.8	0.22	24	0.12
Phos Dyke	CRX0149	0	120	120	11.6	0.43	25	0.05
Phos Dyke	Incl.	2	12	10	22.2	0.71	23	0.07
Phos Dyke	Incl.	67	120	53	16.3	0.60	25	0.06
Phos Dyke	Incl.	69	89	20	21.9	0.93	24	0.07
Phos Dyke	Incl.	80	88	8	29.0	1.15	24	0.07

TREO=Lanthanide Oxides + Yttrium oxide

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

Competent Person's Statements

The information in this report that relates to Mineral Resources is based on, and fairly reflects, information compiled by Mr David Williams and Mr. Guy Moulang. Mr. David Williams is a full-time employee of ERM and is a Member of the Australian Institute of Geoscientists (RPGeo). Mr. Guy Moulang is a full-time employee of RareX Limited and is a Member of the Australian Institute of Geoscientists. Mr David Williams and Mr Guy Moulang have sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as Competent Persons as defined in the 2012 Edition of the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code). Mr David Williams and Mr Guy Moulang consent to the disclosure of the information in this report in the form and context in which it appears. Mr Guy Moulang assumes responsibility for matters related to Sections 1 and 2 of JORC Table 1, while Mr David Williams assumes responsibility for matters related to Section 3 of JORC Table 1.

The information in this report that related to Exploration Results is based on, and fairly reflects, information reviewed and compiled by Mr Guy Moulang. Mr Guy Moulang is a full-time employee of RareX Limited and 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 which he is undertaking to qualify as Competent Person as defined in the 2012 Edition of the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code). Mr Guy Moulang consents to the disclosure of the information in this report in the form and context in which it appears.

About RareX Limited – ASX: REE

RareX Limited (ASX: REE), a Perth based project development and exploration Company, was founded on the fundamental belief of the electronics revolution and the electric vehicle mega-trend. Our focus is rare earths and associated battery and electronic metals.

Cummins Range, in the East Kimberley region of Western Australia, is our flagship project which aims to produce a sustainable, ethical, transparent and secure low carbon rare earth and phosphate supply chain solution for its products which satisfy the two global mega-trends of population growth and electrification.

RareX maintains exploration upside programs in the immediate vicinity of the Cummins Range Project and also more broadly to identify targets and progress projects complementary to the founding beliefs and expertise of the core team.

Rare earths and in particular, NdPr, are core enablers of decarbonisation and electrification of our society. NdPr supports high strength magnets which enables low carbon technologies, especially in the electric mobility sector, robotics solutions and renewable energy, particularly the wind energy sector.

Phosphate is the feedstock for the emerging dominant battery technology; lithium-ferro-phosphate (LFP). The global LFP battery market is projected to grow from $10 billion in 2021 to $50 billion by 2028 as more EVs adopt the safer and longer life technology and grid stabilization batteries expand to balance intermittent renewable generation.

RareX maintains material investments in Kincora Copper (ASX:KCC), Cosmos Exploration (ASX:C1X) and Canada Rare Earth Corporation (LL.V).

For further information on the Company and its projects visit www.rarex.com.au

Appendix A

JORC Code, 2012 Edition – Table 1

Section 1: Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary

Sampling techniques	• *Nature and quality of sampling (e.g. 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 (e.g. '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 (e.g. submarine nodules) may warrant disclosure of detailed information.*
		• Drilling history includes:
		• CRA Exploration (1978), Diamond drilling (DD) 2,400 m, plus 2,341 m aircore (AC) and 302 m Rotary air blast (RAB). DD data was retained for geological modelling but assays not used for MRE.
		• Navigator Resources (2007), 148 AC holes (4,510 m), 93 reverse circulation holes (RC) (9,293 m). Holes drilled 60° towards south, 40 m spacing.
		• Kimberley Rare Earths (2012), 77 RC holes (4,229 m).
		• RareX Limited (2020), 58 RC holes (6,146 m).
		• RareX (2021), 22 RC (1,440 m), 19 DD (3,830 m). Holes drilled towards 050° or 230°, orthogonal to the strike of the carbonatite pipe.
		• RareX (2022), 31 RC (3,943 m), 20 DD (10,473 m).
		• RareX (2023), 45 RC (3,978 m), 5 DD (472.7 m).
		• Navigator Drilling NRC001-NRC0093 (drilled in 2007); 4 m composite spear samples were taken and assayed. Assay intervals that returned results <1000 ppm Ce were then resampled. The 10% cone splits from the drill rig were then used for the 1m re-assays.
		• Kimberly Rare Earths (KRE) Drilling KRC094-KRC0170 (2012) – All drill meters were assayed on 1 m intervals using a 10% cone split from the drill rig.
		• For RareX drilling:
		  ○ CRX0001-CRX0070 – entire Bulk samples were split down into 1-4 m composites using a 50/50 or 75/25 riffle splitter.
		  ○ CRX0071-CRX0149 – 7% cone split from the drill rig was used for 1-4 m composites. Composite samples were combined using a 50/50 riffle splitter.

Criteria	JORC Code explanation	Commentary
		○ CDX0001-CDX0052 - Diamond drill sizes used are PQ, HQ and NQ2. PQ drill core was quarter cored and HQ, NQ2 were half cored. Samples ranged from 0.3 m to 1.3 m. ○ The same portion of drill core was always sampled relative to the orientation line or cut line. ○ All RareX, Kimberley Rare Earth and rare earth mineralised samples from Navigator were taken using the cone splitter on the drill rig or a riffle splitter. ○ Mineralisation in the regolith was established using a portable X-Ray Fluorescence analyser (pXRF). ○ Fresh rock mineralisation is coarse grained and easily identifiable.
Drilling techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. 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.).*	• Drilling techniques used are reverse circulation (RC) drilling, and diamond drilling using PQ, HQ, and NQ2 diameter core sizes. • AC and RAB holes were not used to support the Mineral Resource model.
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.*	• The 2007-2012 samples (Navigator Resources and Kimberley Rare Earths Ltd) were collected as both 4m composites for initial assaying and 1m samples for follow up assaying of anomalous zones. 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. • The 2020 infill drill program (RareX) involved drilling between historic drillholes to test continuity of grade. The program used a larger and more capable rig which resulted in good recoveries in most of the

Criteria	JORC Code explanation	Commentary
		drilling with an averaged of greater than 90% sample recovery. • The cyclone was cleaned after every 3 m drill run and where sticky clays were intersected, the driller would lift the hammer off the bottom and clean the cyclone after each metre. Wet samples were left open for water to evaporate. • All diamond drilling of PQ and HQ in the regolith was drilled with triple tube to increase recovery. • There is no relationship between RC or diamond drilling recovery and grade.
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.*	• All but three drill holes (NRC090-NRC093 for a total of 300 m) have had a geological log completed. • RareX geological logging was aided using geochemical analysis from a portable XRF. Geological logging includes weathering, regolith and protolith identification, mineral percentages, alteration, colour and texture. • RareX RC drilling has pXRF, magnetic susceptibility and recovery logs. • Diamond drill core drilled by RareX has geotechnical, structural, pXRF, recovery, photography and magnetic susceptibility logs. • All diamond drill samples have had geotechnical assessment by RareX staff. Rock strength, RQD, and rock hardness were measured and allocated numerical values that will be easily interrogated. • All of the above logs are quantitative with the exception of geological logs in the regolith which can be qualitative. • The detail of logging is considered by the Competent Person to be appropriate for Mineral Resource estimation.
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*	• Competent drill core was either halved (HQ, NQ2) or quartered (PQ) using an Almonte core saw. Incompetent drill core was divided using a bolster. • Navigator Drilling NRC001-NRC0093 – 4m composite spear samples were taken using a PVC

Criteria	JORC Code explanation	Commentary
	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.*	spear. Assay intervals that returned results <1000 ppm Ce were then resampled. The 10% cone splits from the drill rig were then used for the 1 m re-assays. • Kimberly Rare Earths (KRE) Drilling KRC094-KRC0170 - Drill core were assayed on 1 m intervals using a 10% cone split from the drill rig. • RareX Sampling: ○ CRX0001-CRX0070 – entire Bulk samples were split down into 1-4 m composites using a 50/50 or 75/25 riffle splitter. All samples were dry before splitting. ○ CRX0071-CRX0149 – 7% cone split from the drill rig was used for 1-4 m composites. Composite samples were combined using a riffle splitter. Wet samples were sampled as 1m samples to avoid use of a splitter. ○ All the above-mentioned techniques are industry standard practice or better. ○ Field duplicates were taken at an average of 1 in 30 for the RC drilling. ○ Sample sizes are regarded as being appropriate for this style of mineralization. ○ The Competent Person considers the sampling techniques were appropriate for the style of mineralization.
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*	• Navigator – 4 m composites were taken at the drill rig and sent to Intertek where a 4-acid digest, with ICP-OES and ICP-MS finish. Where 4 m composites returned cerium assays >1000 ppm, 1 m re-assays were conducted on each of the metres in the composites. The 1 m reassays were a peroxided fusion digest with ICP-OES and ICP-MS finish. This technique is considered as a total analysis for elements in consideration for this resource. 40 elements were assayed for. Laboratory QA/QC was completed with regular standards, blanks and repeats.

Criteria	JORC Code explanation	Commentary
	their derivation, etc. • *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	• Kimberley Rare Earths used Intertek for the 1m assays using peroxided fusion digest with ICP-OES and ICP-MS finish. This technique is considered as a total analysis for elements in consideration for this resource. 30 elements were assayed for. Laboratory QA/QC was completed with regular standards, blanks and repeats. • RareX have used 2 laboratories for assaying. Nagrom were used to assay holes CRX0001-CRX0104 and CDX0002-CDX0046 and CDX00050 - Analytical method used was peroxided fusion digest with ICP-OES and ICP-MS finish. This technique is considered as a total analysis for elements in consideration for this resource. 34 elements were assayed for. For drill holes CRX0001-CRX0070 and CDX0002-CDX0019 a four-acid digest with a ICP-OES and ICP-MS finish was used for 13 indicator elements. Nagrom applied their own QA/QC with regular standards, blanks and repeats. Bureau Veritas were used to assay hole CRX0105-CRX0149 and CDX0047-CDX0049, CDX0051 and CDX0052 - Analytical method used was peroxided fusion digest with ICP-AES and ICP-MS finish. This technique is considered as a total analysis for elements in consideration for this resource. 31 elements were assayed for. Bureau Veritas applied their own QA/QC with regular standards and repeats. RareX also applied regular standards, duplicates and blanks comprising 10% of the samples in RC assay batches and 6% in the diamond assay batches. • The quality of control procedures adopted by all three of the laboratories are in line with industry standards and acceptable levels of accuracy and precision have been established throughout the generations of assaying. • RareX's quality of control procedures are in line with industry standards and acceptable levels of accuracy and precision have been established from assay batches.

Criteria	JORC Code explanation	Commentary
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• Verification of assays by alternative company personnel has occurred and checks, including a site visit, have been completed by CSA Global. • 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_2O_3 1.1728, CeO_2 1.2284, Pr_6O_{11} 1.2082, Nd_2O_3 1.1664, Sm_2O_3 1.1596, Eu_2O_3 1.1579, Gd_2O_3 1.1526, Dy_2O_3 1.1477, Ho_2O_3 1.1455, Er_2O_3 1.1435, Tm_2O_3 1.1421, Yb_2O_3 1.1387, Lu_2O_3 1.1371, Sc_2O_3 1.5338, Y_2O_3 1.2699, Nb_2O_5 1.4305, P_2O_5 2.2916.
Location of data points	• *Accuracy and quality of surveys used to locate drillholes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• Drill hole collars have been surveyed with a DGPS and have and accuracy of 100 mm. • All coordinates are in MGA Zone 52H 2020 and have been converted from MGA94 and AMG84 grids. • Topographic control has been established from surveyed drill collars and are within 100 mm. The Cummins Range deposit is located on flat terrain.
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.*	• Drill hole spacing is considered appropriate to gain a robust understanding of the mineralisation. The RareX exploration team are seeing the same geological positions for mineralisation in each drilling campaign, suggesting RareX have a solid geological model. Drill spacing is considered appropriate to support an Inferred and Indicated Mineral Resource estimate. • 2 m to 4 m RC composites were completed in areas where higher grades were not expected.
Orientation of data in relation to	• *Whether the orientation of sampling achieves unbiased sampling of possible structures*	• Navigator (NRC0001-NRC0093), Kimberley Rare Earths (KRC0094-KRC0170) and RareX 2020 drill holes (CRX0001-CRX0048, CRX0050-CRX0058)

Criteria	JORC Code explanation	Commentary
geological structure	*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.*	were drilled at an acute angle to the dominant orientation of the fresh rock rare earths mineralisation. These drill holes are shallow holes and are mostly contained in the regolith profile where a combination of residual, or eluvial and chemical weathering have redistributed rare earths and phosphate in orientations that don't align with primary mineralisation. Recent geochemical modeling has established some hard and soft boundaries that will confine grade to certain shapes. • Holes drilled by RareX in 2021 to 2023 were drilled orthogonal to the strike of the carbonatite pipe, with drill hole azimuths of 050° or 230°. The exception, is hole CDX0048 that was drilled at 85 degrees azimuth.
Sample security	• *The measures taken to ensure sample security.*	• 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.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• The Competent Person (Mineral Resources) reviewed the sampling techniques during their 2022 site visit and recommended minor changes to the sub-sampling of RC samples, which were adopted by RareX. No other audits or reviews have occurred.

Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
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 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. A mining lease application M80/648 covers the Cummins Range deposit and is expected to be granted in 2024. Tenement E80/5092 expires in February 2024.

Criteria	JORC Code explanation	Commentary
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. Kimberley Rare Earths drilled additional holes in 2012.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• 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 background levels of 1000-2000 ppm TREO and high-grade zones up to 20% TREO. Disseminated apatite is through all rock types and is also contained in phoscorite. Above the carbonatite dykes is a well-developed regolith profile that extends to 100 m below the surface where a combination of residual, or eluvial and chemical weathering have redistributed and upgraded rare earths and phosphate. • QEMSCAN and MicroXRF results have showed that all the phosphate is contained in Apatite and Monazite. The Apatite contains low UTh, no cadmium and chlorine, and elevated levels of Fl that are well below acceptable limits. • QEMSCAN and MicoXRF have showed the REO in the Regolith are deporting mostly to monazite, with lesser amounts deporting to bastnaesite, crandallite, and REE intergrowths. • QEMSCAN and MicoXRF indicate the REO in the fresh rock are deporting to monazite, bastnaesite, parisite and REE intergrowths.
Drillhole information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the*	• Exploration Results for the 2023 drill program are reported in the body of the announcement and include a collar table with drill hole details (Table

Criteria	JORC Code explanation	Commentary
	following information for all Material drillholes: ○ *easting and northing of the drillhole collar* ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* ○ *dip and azimuth of the hole* ○ *downhole 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.*	5) and significant intercepts for TREO and P_2O_5 (Tables 6 and 7) • Details for drill holes drilled between 2019 and 2022 used in this Mineral Resource have been previously announced on the ASX between 2019 and 2023. Drilling results from the 2023 drilling which were used to update this resource are reported in the body of this announcement and include a collar table (Table 5) with drill hole details and significant intercepts for TREO and P_2O_5 (Tables 6 and 7). • All holes RC and diamond holes drilled by Navigator, KRE and RareX have been used to support the Mineral Resource.
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. 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.*	• Significant intercepts were calculated using weighted averaging and are tabulated in Tables 6 and 7 • A lower cut off grade of 0.5% TREO was used for the rare earths intercepts with a maximum of 4m dilution. The cut off grade and dilution are thought to be appropriate due to likely open cut mining methods that would be used on the outcropping ore body. • A lower cut off grade of 2.5% P2O5 was used for the phosphate intercepts with a maximum of 10m dilution. The cut off grade and dilution are thought to be appropriate due to likely open cut mining methods that would be used on the outcropping ore body. • No metal equivalent values have been used •
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the 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 (e.g.*	• Navigator (NRC0001-NRC0093), Kimberley Rare Earths (KRC0094-KRC0170) and RareX 2020 drill holes (CRX0001-CRX0048, CRX0050-CRX0058) were drilled at an acute angle to the dominant orientation of the fresh rock rare earths mineralisation. These drill holes are shallow holes and are mostly contained in the regolith profile where a combination of residual, or eluvial and

Criteria	JORC Code explanation	Commentary
	'downhole length, true width not known').	chemical weathering have redistributed rare earths and phosphate in orientations that don't align with primary mineralisation. Recent geochemical modelling has established some hard and soft boundaries that will confine grade to certain shapes. • RareX drill holes CRX0059-CRX0149 and CDX0001-CDX0052 have been drilled perpendicular to orientation of the carbonatite dykes and mineralisation
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.*	• Relevant tables and diagrams are presented in the body of this report.
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.*	• The reporting in this announcement is considered balanced. Graphs and tables with in the report are showing low and high grade intercepts, tonnages and grades.
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.*	• Bio- availability tests on the phosphate samples have returned up to 4 times the minimum acceptable limit for agricultural applications. The enhanced bioavailability of the apatite at Cummins Range means lower grade ore can become more economical to mine. • ERM have completed a geochemical study of the regolith and has resulted in classification of types of mineralisation. This study will be used for targeted metallurgical studies to optimise mining and processing methods. • The igneous rare earth mineralisation has significantly higher proportions of NdPr and heavy rare earths + scandium (HRE) in comparison to the later high-grade rare-earth mineralising event on the Rare Dyke. On average the combined NdPr and HREO + Scandium content is 40% of the TREO.

Criteria	JORC Code explanation	Commentary
		• Tenement wide aerial magnetics and ground gravity have located several smaller and larger anomalies proximal to the Cummins Range carbonatite pipe. The larger anomalies are interpreted to be pyroxenite bodies similar to the Cummin Range pipe and may host carbonatite dykes.
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth 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.*	• Detailed mining engineering study. • PFS level design of the beneficiation plant. • Hydrogeological baseline study. • Heritage baseline surveys for mining operations. • Testing exploration targets proximal to the Cummins Range carbonatite pipe.

Section 3 Estimation and Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, e.g. transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• The drill hole database is maintained by MX Deposit through Seequent. • Data used in the Mineral Resource was exported from the database to Microsoft Excel spreadsheets, containing relevant information for collar locations, downhole surveys, assay and sample logs of lithologies. • Assay tables were vetted for negative assay grades, with appropriate translations carried out (e.g. less than detection assays were converted to 0.5 x minimum assay grade). All data tables were loaded into Datamine which ran its own data validation steps, including checking for overlapping sample intervals, missing collars or surveys, etc. Any errors were relayed to RareX who promptly corrected the data. Drill collars were compared to the topographic DTM with no significant elevation differences (>2 m) noted.
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*	• The Competent Person, Mineral Resources, visited the Project between 25 and 26 October 2022. The following aspects of the Project development were

	indicate why this is the case.	reviewed, and considered to be acceptable for supporting the Mineral Resource estimate: ○ Inspection of geological outcrop, and discussions with RareX geological staff. ○ Validation of a selection of drill hole collar surveys. ○ Discussions regarding Project development and future Mineral Resource development activities. ○ Form a judgement regarding the Reasonable Prospects for Eventual Economic Extraction test.
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.*	• RareX completed all geological modelling using Leapfrog software. The Leapfrog models were provided to ERM as dxf files and imported into Datamine for Mineral Resource modelling. • The confidence in the geological interpretation is reflected in the Mineral Resource classification levels assigned to the Mineral Resource estimate. • Geological models were based upon drill hole samples, including geological logs of lithology and weathering, and sample assays. • No alternative interpretations have been considered. • The geological models guided the Mineral Resource estimation, with sample populations for the total rare earth oxides and phosphate mineralisation statistically reviewed, and geological domains combined, or kept separate, as considered appropriate. • The geological models provided by RareX extend along strike, across width and to a depth beyond the extents of the classified Mineral Resource. • The geological interpretation for the regolith zone has provided models for completely, strongly, moderately and weakly weathered zones, based upon geological logs and chemical assays of the samples. Two paleo-lakes ('pans') were modelled, infilled with sediment. A thin veneer cover of alluvial and/or elluvial sediments cover the deposit.

		• Within the strongly weathered domain are several geochemical domains based upon geological and geochemical analyses of samples. These domains include silcrete, Mg-depletion and high phosphate zones. • The primary zone comprises clino-pyroxenite and carbonatite domains. • Grade continuity is primarily controlled by the strike, dip and plunge of local geology, both within the regolith (multiple weathering domains with flat lying to shallow dipping geometries) and within the carbonatite and pyroxenite (moderate dips).
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 Mineral Resource extends along strike (320°) 850 m, across strike 800 m, and extends down dip to a maximum of 500 m below surface. • The regolith mineralisation extends along strike 850 m, across strike 1,100 m, and extends down dip to a maximum of 90 m below surface.
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, 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 (e.g. 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*	• Leapfrog software was used for all geological modelling, with models prepared by RareX and provided to ERM in dxf format. • Datamine Studio RM software was used for all block modelling, grade interpolation, resource classification and reporting. Snowden Supervisor and GeoAccess Professional were used for geostatistical analyses. • A block model with block sizes 12.5 m(X) x 12.5 m(Y) x 5 m(Z) was constructed, using the same flagging variables as used to flag the drillhole samples. The block size compares favourably with the 25 m x 25 m drill spacing in the majority of the Indicated classification domain. • A topographic DTM was used to deplete the block model at surface. • All drilling data obtained by Navigator, Kimberley Rare Earths and RareX was used to support the Mineral Resource estimate. Data obtained by CRA Exploration was not used due to quality control issues with the data.

	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 drillhole data, and use of reconciliation data if available.*	• Drillhole samples were flagged against the mineralisation wireframe solids, and appropriate Datamine variables were set to unique numeric values, for each wireframe solid. • Samples were composited to 1 m length and were used to interpolate all REO grades, plus P_2O_5, Sc_2O_3, Nb_2O_5, U_3O_8, ThO_2 into the block model using ordinary kriging interpolation techniques. Accessory oxides including CaO, Fe_2O_3, MgO and SiO_2 were also interpolated. • Statistical assessments of all the oxides were carried out on composited sample data which were flagged within the geological, weathering and geochemical domains. The geochemical domains were determined to act as hard boundaries for resource estimation. The pan domain is depleted by all REO and phosphate and is regarded to be a hard domain boundary. The weathering domains and primary zone lithological domains were treated as hard boundaries for grade interpolation. • An assessment of high-grade sample assays was carried out so that appropriate grade capping could applied. • Normal scores variograms were modelled for most oxides from data in the regolith and primary domains. Low nugget effects of ≤10% were modelled for P_2O_5 and the REO's, short ranges of up to 60 m and long ranges of > 100 m were modelled. Primary directions for P_2O_5 within the regolith are shallowly plunging towards the west, and WNW for TREO. Within the primary zones, moderate plunges were modelled for TREO and P_2O_5 towards the west. • Top cut and composited sample grades were interpolated into the block model using ordinary kriging. The Datamine fields LITHZON and WEATH were used to control grade interpolation with hard estimation boundaries between the individual regolith and primary lithologies, except where previously noted. • A search ellipse of 110 m (X) by 110 m (Y) by 110 m (Z) was used to select samples for grade

		interpolation for P_2O_5 within the Phoscrete zone, and 60 m x 60 m x 60 m within the Apatite zone, which host the highest grade P_2O_5 population in the Mineral Resource. A search ellipse of 170 m (X) by 170 m (Y) by 170 m (Z) was used to select samples for grade interpolation for the REOs within the Phoscrete zone. Search ellipse radii were determined from variogram ranges, and appropriate radii were determined for the other domains. A spherical search was adopted as a solution to eliminating some validation issues which were noted after using anisotropic search ellipses. The geometry of the Leapfrog geochemical models required an isotropic sample search to be used. • Blocks within the regolith zone were interpolated using inverse distance weighting method, with a power of 1 used. Samples selected within the search ellipse are inversely weighted according to their distance from the block centroid, and a power of 1 was used to allow for more smoothing than a higher power would provide. • Blocks within the Primary weathering zone were interpolated using ordinary kriging. • A minimum of 8 and maximum of 16 samples were used per block estimate. Search ellipse radii were increased when needed to ensure all blocks were interpolated. A maximum of 4 samples per drill hole were allowed to be selected for each block interpolation. Parent cells were interpolated and their grades were assigned to the sub-cells. • Oxides interpolated into the model are: ○ Heavy rare Earth Oxides (HREO): La_2O_3, CeO_2, Pr_6O_{11}, Nd_2O_3, Sm_2O_3, Eu_2O_3, Gd_2O_3; and Light Rare Earth Oxides (LREO): Tb_4O_7, Dy_2O_3, Ho_2O_3, Er_2O_3, Tm_2O_3, Yb_2O_3, Lu_2O_3; + Y_2O_3. ○ Sc_2O_3, P_2O_5, Nb_2O_5, ZrO_2, Al_2O_3, CaO, Fe_2O_3, MgO, SrO, ThO_2, U_3O_8, SiO_2. • Selective mining units were not adopted into the model. • Strong correlations were noted between the rare earth oxides, due to being hosted in the same

		mineral (Monazite). The REO's have very similar variogram models, and assumptions were made regarding common search ellipse radii and other interpolation parameters. • The block model was validated visually, by swath plots of selected REO's and P_2O_5, and comparing the mean block and sample grades per domain.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnages are reported on a dry basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• To delineate the phosphate and rare earths resource a 2.5% P_2O_5 cut-off grade was used. All lower grade phosphate mineralisation is accompanied by rare earths minerals. Phosphate and rare earths minerals are easily upgraded at Cummins Range using conventional beneficiation methods. Similar cut-off grades have also been used for the reporting of other Phosphate Mineral Resources.
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.*	• An Enhanced Scoping Study was completed in 2023 (ASX release, 22nd August, 2023). This Scoping Study was completed on the April 2023 Mineral Resource of 519 Mt @ 0.32% TREO and 4.6% P_2O_5. The key project financial metrics were positive, and the preferred development path was to establish an open cut mine with a 3 stage approach. This staged approach starts with Stage 1 phosphate DSO, Stage 2 beneficiation of regolith ore to produce a rare earths phosphate concentrate and Stage 3 beneficiation of fresh rock mineralisation to create a rare earths phosphate concentrate. Flotation beneficiation will be used to upgrade the ore to mineral concentrate which is trucked along mainly sealed roads to Wyndham Port. Stage 2 and 3 mineral concentrate will be shipped to a third party phosphoric acid facility where a clean phosphate liquor and a rare earths rich residue is formed.

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.*	• Phosphate flotation test on weathered and fresh rock material has produced concentrate grades of >39% $P_2O_5$with >80% recovery. • A clean phosphate liquor and monazite dominated rare earths residue can be formed from a weak phosphoric acid leach of a phosphate-rare earths concentrate. • Test work is currently assessing the suitability of the clean phosphate liquor for LFP batteries. • Rare earth beneficiation of the leach residue will be tested at Baotou Mengrong Fine Materials (BTMR). • BTMR have demonstrated a 20x upgrade of TREO from 1% head-grade composite from combined Rare and Phos Dykes. • Bioavailability tests of phosphate samples are up to 4 x the industry standard bioavailability indicating the potential to produce direct shipping ore and phosphate mineral concentrate.
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.*	• The Cummins Range Project is located on the northern edge of the Great Sandy Desert on flat terrain with no major drainages for kilometres in all directions. • Baseline studies have commenced with the instalment of 14 water monitoring bores in 2022. • Assessment for stygofauna has been completed with no fauna found. • Flora and fauna studies over the mining lease applications are complete. • Underground water in the project area is fresh and will be used for processing. Potential water sources will be assessed in 2024. • RareX have been working under a radiation management plan and background levels have been established using environmental dosimeters. Radiation is continually monitored through all exploration programs.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency*	• Bulk densities were determined using the water displacement method, with diamond core billets used based on 1,236 density measurements.

	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.*	• The following means were calculated from the main modelled data: • Weathering zones: Completely weathered (1.93 t/m³), Pan (2.51 t/m³), Strongly Weathered (2.2 t/m³), Moderately Weathered (2.5 t/m³) and Weakly Weathered (2.71 t/m³). • Geochem domains: Phoscrete (2.33 t/m³), Apatite (2.23 t/m³), Apatite Low Grade (1.96 t/m³), Ferricrete and Silcrete (2.22 t/m³), Magnesium depletion (Karstic) domain (1.97 t/m³). • Primary zone lithologies: Carbonatite (2.98 t/m³), Pyroxenite (3.13 t/m³). • The bulk density mean values were assigned to the corresponding lithological domain codes in the block model.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (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.*	• The Mineral Resource is classified as a combination of Indicated and Inferred, with the Mineral Resource reported in accordance with the JORC Code, with geological and sampling evidence sufficient to assume geological and grade continuity within the volumes classified as Indicated. The classification levels are based upon an assessment of geological understanding of the deposit, geological and grade continuity, drillhole spacing, quality control results, search and interpolation parameters, and an analysis of available density information. The Indicated volumes cover the volumes with 50 m x 50 m drill spacing, and Inferred covers volumes with up to 100 m by 100 m drill spacing. • Mineral Resource classification was applied to the block model using a cookie cutter approach, with polygons digitised around drill samples from the regolith domains and using 'slope of regression' outputs (using values of >0.7 for Indicated) from the P_2O_5 kriging to guide the limits of the polygon. Drill spacing was the primary guide for determining the classification boundaries. • Solid wireframe models were built capturing Indicated and Inferred volumes for the Primary zones, which were added to the block model and

		flagged with the appropriate resource classification. • The results appropriately reflect the Competent Person's view of the deposit.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• No audits or reviews of the current MRE have been undertaken apart from internal reviews carried out by ERM.
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.*	• Only OK and IDS methods were used to interpolate the grade variables, and no other estimated methods were used in parallel. • Relevant tonnages and grade above nominated cut-off grades for P_2O_5 are provided in the introduction and body of this report. Tonnages were calculated by filtering all blocks above the cut-off grade and sub-setting the resultant data into bins by mineralisation domain. The volumes of all the collated blocks were multiplied by the dry density value to derive the tonnages. • The Mineral Resource is a local estimate, whereby the drillhole data was geologically domained, resulting in fewer drillhole samples to interpolate the block model than the complete drillhole dataset, which would comprise a global estimate.