

Thick Zone of Primary Rare Earth-Niobium Mineralisation Intersected at Cummins Range Project

Diamond drilling targeting high-grade extensions highlights the potential for substantial growth in the scale of the Cummins Range Project, WA

HIGHLIGHTS

- Recently commenced diamond drilling intersects significant primary mineralisation below the recently updated Mineral Resource (18.8Mt at 1.15% TREO + 0.14% Nb₂O₃¹)
- Multiple diamond holes intersect a fault breccia zone hosting significant REE-Niobium mineralisation over significant widths, including:
 - CDX0004 – 67m wide zone from 44.0m down-hole
 - CDX0007 – 77m wide zone from 62.6m down-hole, including:
 - A 20m primary sulphide zone from 119.8m down-hole
 - CDX0008 now underway targeting down-dip extensions of this zone
- This is the first time primary mineralisation has been encountered at Cummins Range, and is considered to be a potential game-changer for the Project
- 3,000m diamond drilling continuing to further evaluate the scale and potential of this primary zone
- Assays from the initial reverse circulation program due shortly

RareX Limited (ASX: REE; **RareX** or **the Company**) is pleased to advise that it has intersected significant primary mineralisation at its 100%-owned Cummins Range Rare Earths Project in the Kimberley Region of Western Australia, significantly expanding the potential scope and scale of the Project.

RareX commenced a major new drilling program at Cummins Range on 21 June 2021, initially comprising 3,000m of reverse circulation (**RC**) drilling to test for extensions of the known mineralisation both along strike and down-dip.

A second phase comprising 3,000m of diamond drilling commenced on 29 July 2021 with DDH1 Drilling undertaking a series of deeper holes to evaluate the primary potential of the deposit for the first time ever.

The previous geological interpretation was that the Cummins Range mineralisation had been upgraded through weathering processes, with the deeper primary portions of the mineralisation expected to be at back ground levels.

¹ Refer ASX/Media announcement of 19 July 2021 "RareX delivers major resource upgrade at Cummins Range Rare Earths Project, WA"

Multiple diamond drill holes along the main fault at Cummins Range were designed for both exploration and study test work purposes. Visual inspection of the drill core has exceeded RareX’s expectations, with the initial holes intersecting wide mineralised breccia/fault zones and, more importantly, a significant zone of fresh mineralisation at the bottom of CDX0007. **This represents the first time significant primary REE-Nb mineralisation has been intersected at Cummins Range.**

RareX Managing Director, Jeremy Robinson, said *“The significance of intersecting primary REE-Nb mineralisation at Cummins Range cannot be overstated. Prior to RareX’s involvement, the mineralisation had been interpreted to be a result of weathering processes only. However, it is now evident that this is only part of the story and high grade REE-Nb mineralisation can be expected below the oxide.”*

“This is a very important and exciting development which amounts to a potential game-changer for the Project. If we can continue to expand the primary zone at depth, it has the potential to result in a substantial uplift in grade as well as tonnes – providing a clear pathway for further rapid growth in the current Mineral Resource.”

“We are continuing to evaluate this potentially high-grade primary zone with further diamond drilling and look forward to sharing the assay results with our shareholders.”

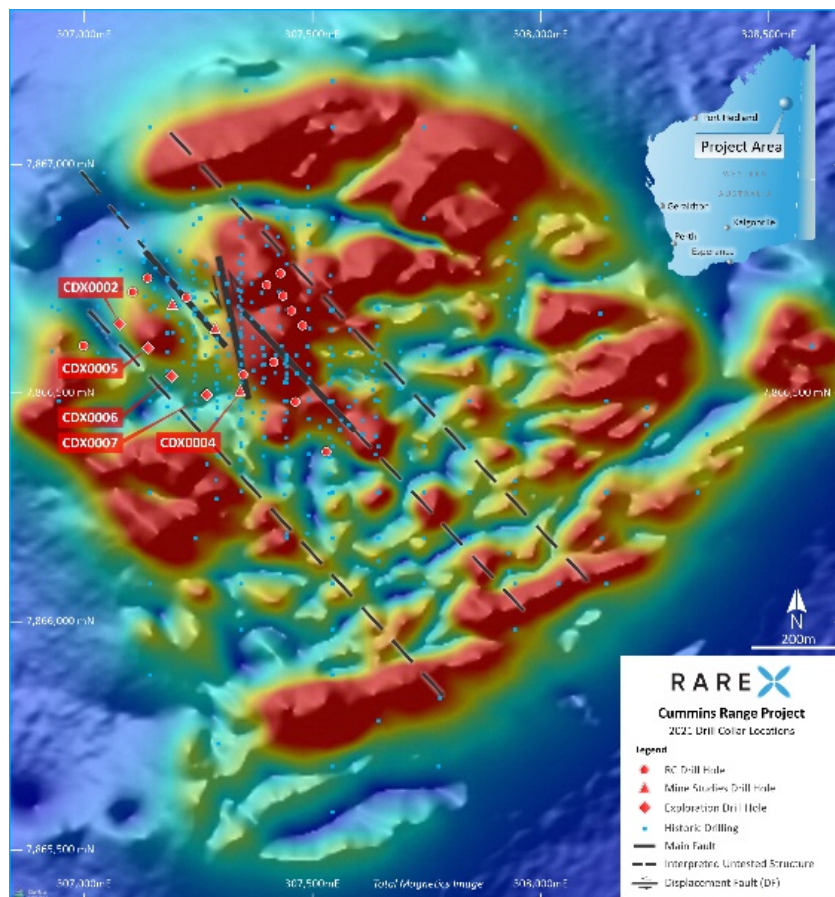


Figure 1: Total magnetics image showing location of mineralised structures and 2021 diamond drilling locations.

Three drill holes (CDX0001, CDX0003 and CDX0004) have been completed for mining studies, with CDX0004 intersecting a 67m fault breccia that had been previously interpreted from RC drilling as a well-mineralised saprolite zone that had rare earth elements upgraded via dispersion.

This fault breccia is located where a displacement fault is interpreted in the new geological model. Surrounding drill holes to CDX0004 are well mineralised, indicating that the fault breccia is the source of the REE mineralisation in this area. This presents strong exploration upside with an unrecognised wide mineralised structure to test at depth.



Figure 2: CDX0004 Example of oxidized polymictic breccia

Four of the planned exploration drill holes (CDX0002, CDX0005 CDX0006 and CDX0007) have been drilled with the CDX0002 being lost metres before the expected Main Fault target. CDX0005 intersected carbonatite in the target area with sparse patchy massive monazite over 5m.

Hole CDX0006 intersected a 10m mineralised fault breccia on a carbonatite contact. Drill hole CRX0007 was drilled 75m east of hole CDX0004 and intersected 77m of fault breccia. This zone is interpreted to be part of the displacement fault intersected in hole CDX0004. The width and extent of the fault breccia between these two holes indicates a significant brittle breccia system with extensive alteration. CDX0008 is now underway to test for depth extensions to the mineralised breccia.



Figure 3: CDX0007 123.5m massive orange monazite forming on lower contact of a primary sulphidic carbonatite breccia within a larger 75m fault breccia

The diamond drill holes have confirmed the geological model and surprised the RareX geology team with the larger-than-expected fault systems encountered. Diamond drill holes will now test the mineralised zones at depth. Drilling at different orientations is also planned to firm up the geological model.

RareX is also expecting assays for the initial phase of the RC drilling in the coming week

Note: RareX has a Niton XRF on site that has been calibrated to Cummins Range mineralisation. The XRF analyses for 43 elements including cerium, lanthanum, praseodymium, neodymium, yttrium, niobium and phosphorus. The XRF is used as a tool to indicate whether a zone is mineralised, however it is not an accurate indicator of grade. With the XRF results, rock type and visual confirmation of mineralization, the RareX geologist can assess whether an interval is mineralised.



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

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Competent Person's Statements

Information in this release that relates to Exploration Results is based on and fairly represents information and supporting documentation reviewed or compiled by Mr Guy Moulang, an experienced geologist engaged by RareX Limited. Mr Moulang is a Member of the Australian Institute of Geoscientist and has sufficient experience which is relevant to the styles of mineralisation and types of deposits under consideration and to the activities being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Moulang consents to the inclusion in this release of the matters based on his information in the form and context in which it appears.

The mineral resource estimate in this announcement were reported by the Company in accordance with listing rule 5.8 on 19 July 2021. The Company confirms it is not aware of any new information or data that materially affects the information included in the previous announcement and that all material assumptions and technical parameters underpinning the estimates in the previous announcement continue to apply and have not materially changed.

Appendix 2: JORC Table

JORC Code, 2012 Edition – Table 1		
Cummins Range Section 1 Sampling Techniques and Data		
Criteria	JORC Code Explanation	
Sampling techniques	<p><i>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</i></p> <p><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></p> <p><i>Aspects of the determination of mineralisation that are Material to the Public Report. In cases where ‘industry standard’ work has been done this would be relatively simple (eg ‘reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay’). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</i></p>	<ul style="list-style-type: none"> The Cummins Range Rare Earth deposit is being drilled tested with RC drilling and diamond drilling. No assay results have been released in this announcement. Preliminary analysis of all metres drilled is completed using a portable Niton XRF XL5. On diamond drilling core an analysis is done on every metre of the drill core, as close to the metre mark as possible to avoid any bias.
Drilling Techniques	<p><i>Drill type (eg core, reverse circulation, open- hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</i></p>	<ul style="list-style-type: none"> Reverse circulation (RC) drilling and diamond drilling.
Drill Sample Recovery	<p><i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></p> <p><i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></p> <p><i>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i></p>	<ul style="list-style-type: none"> NA
Logging	<p><i>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i></p> <p><i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></p> <p><i>The total length and percentage of the relevant intersections logged.</i></p>	<ul style="list-style-type: none"> All metres drilled had a geology log completed. Geology logs were aided using geochemical analysis from a portable XRF. The detail of logging is appropriated for Mineral Resource estimation.
Sub-sampling techniques	<p><i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></p> <p><i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></p> <p><i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></p>	<ul style="list-style-type: none"> NA

and sample preparation	<p>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</p> <p>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.</p> <p>Whether sample sizes are appropriate to the grain size of the material being sampled.</p>	
Quality of assay data and laboratory tests	<p>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total</p> <p>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</p> <p>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</p>	<ul style="list-style-type: none"> • No assays have been released in this announcement • Preliminary analysis of all metres drilled is completed using a portable Niton XRF XL5. The XRF has been calibrated using dozens of pulps from the 2020 drilling program. The XRF does not provide an accurate grade of REE, but it will detect any anomalous Ce, La, Nd, Pr, Y and Nb. • Standards and blanks are analysed prior to and after batch analysis.
Verification of sampling and assaying	<p>The verification of significant intersections by either independent or alternative company personnel.</p> <p>The use of twinned holes.</p> <p>The verification of significant intersections by either independent or alternative company personnel.</p> <p>Discuss any adjustment to assay data.</p>	<ul style="list-style-type: none"> • NA
Location of data points	<p>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</p> <p>Specification of the grid system used.</p> <p>Quality and adequacy of topographic control.</p>	<ul style="list-style-type: none"> • NA
Data spacing and distribution	<p>Data spacing for reporting of Exploration Results.</p> <p>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.</p> <p>Whether sample compositing has been applied.</p>	<ul style="list-style-type: none"> • NA
Orientation of data in relation to geological structure	<p>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</p> <p>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.</p>	<ul style="list-style-type: none"> • The angled drill holes were directed as best possible across the known geology.
Sample security	<p>The measures taken to ensure sample security</p>	<ul style="list-style-type: none"> • NA

Cummins Range Section 2 Reporting of Exploration Results

Criteria	JORC Code Explanation	
Mineral tenement and land tenure status	<i>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</i>	<ul style="list-style-type: none"> 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.
Exploration done by other parties	<i>Acknowledgment and appraisal of exploration by other parties.</i>	<ul style="list-style-type: none"> 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. Kimberly Rare Earths drilled additional holes and upgraded the resource estimate in 2012.
Geology	<i>Deposit type, geological setting and style of mineralisation.</i>	<ul style="list-style-type: none"> The Cummins Range REO deposit occurs within the Cummins Range carbonatite complex which is a 2.0 km diameter near-vertical diatreme pipe that has been deeply weathered but essentially outcropping with only thin aeolian sand cover in places. The diatreme pipe consists of various mafic to ultramafic rocks with later carbonatite intrusions. The primary ultramafic and carbonatite rocks host low to high grade rare earth elements with back ground levels of 1000-2000ppm TREO and high grade zones up to 8% TREO. The current resource sits primarily within the oxidised/weathered zone which reaches to 120m below the surface. Metallurgical studies by previous explorers show the rare earth elements are hosted by Monazite which is a common and favourable host for rare earth elements.
Drill hole information	<p><i>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:</i></p> <p><i>easting and northing of the drill hole collar</i></p> <p><i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></p> <p><i>dip and azimuth of the hole</i></p> <p><i>down hole length and interception depth</i></p> <p><i>hole length.</i></p> <p><i>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</i></p>	<ul style="list-style-type: none"> All diamond drill holes have been drilled at 50 degrees azimuth and 60 degrees dip. Drill hole locations are shown on the collar plan Figure 1. When assay have been received drill collar specifics will be announced along with the assay results

<p>Data aggregation methods</p>	<p><i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</i></p> <p><i>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</i></p> <p><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></p>	<ul style="list-style-type: none"> • NA
<p>Relationship between mineralisation widths and intercept lengths</p>	<p><i>These relationships are particularly important in the reporting of Exploration Results</i></p> <p><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></p> <p><i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</i></p>	<ul style="list-style-type: none"> • Assay results have not been received. When assays are available the RareX geological team will evaluate the geometry of the mineralisation.
<p>Diagrams</p>	<p><i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i></p>	<ul style="list-style-type: none"> • Drill collar locations are shown in Figure 1
<p>Balanced reporting</p>	<p><i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</i></p>	<ul style="list-style-type: none"> • Reporting is considered balanced
<p>Other substantive exploration data</p>	<p><i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i></p>	<ul style="list-style-type: none"> • This announcement describes the initial geological interpretations of the first diamond drill holes at Cummins Range since the early 1980s. RareX have recently completed a JORC compliant resource upgrade of 18.8Mt at 1.15% TREO + 0.14% Nb₂O₃. Metallurgical studies are currently being conducted. Mining study drill holes have been drilled in recent weeks, and water monitoring bores will be drilled next month.
<p>Further work</p>	<p><i>The nature and scale of planned further work (eg tests for lateral extensions or large scale step out drilling.</i></p> <p><i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></p>	<ul style="list-style-type: none"> • Diamond and RC drilling will continue into October. • Water monitoring bores will be drilled next month. • Metallurgical tests are being conducted