

# MAIDEN EXPLORATION TARGET FOR CUMMINS RANGE PRIMARY ZONE HIGHLIGHTS SIGNIFICANT GROWTH POTENTIAL

*Exploration Target encompassing the primary zone demonstrates the potential for Cummins Range to become a top-3 Australian rare earths deposit*

## Highlights

- Follows highly successful recent diamond drilling program targeting the primary zone
- Exploration Target is in addition to the current Indicated and Inferred Mineral Resource<sup>1</sup> of 18.8Mt at 1.15% TREO<sup>2</sup> + 0.14% Nb<sub>2</sub>O<sub>5</sub>
- This zone will be targeted by a major new drilling program commencing early April

RareX Limited (ASX: REE; "RareX" or "the Company") is pleased to announce its maiden Exploration Target for the primary zone within its flagship 100%-owned Cummins Range Rare Earths Project, located in the Kimberley Region of Western Australia.

The Exploration Target, which is in addition to and located below the current Indicated and Inferred Mineral Resource within the Main Rare Earths Zone, comprises **23Mt at 1.6% TREO to 41Mt at 2.4% TREO**, as set out below:

Exploration Target – February 2022*			
Lower		Upper	
Tonnes	Grade (TREO)	Tonnes	Grade (TREO)
23Mt	1.6%	41Mt	2.4%

\*Additional to Current Indicated and Inferred Resource

*The potential quantity and grade of the Exploration Target is conceptual in nature, and there has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource.*

The Exploration Target has been developed following the extensive diamond drilling program completed in 2021 which has successfully proven that high-grade rare earths mineralisation extends into the primary, below the weathered zone.

<sup>1</sup> Indicated 11.1Mt at 1.32% TREO + 0.17% Nb<sub>2</sub>O<sub>5</sub>; Inferred 7.7Mt at 0.88% TREO + 0.11% Nb<sub>2</sub>O<sub>5</sub>

<sup>2</sup> TREO = Lanthanide Oxides + Yttrium Oxide + Scandium Oxide



All drill holes below the current Resource into primary units have intersected multiple mineralised zones. Drill intercepts such as 13.8m at 2.7% TREO from hole CDX0016 (ASX: 12 February 2022) have extended high grade mineralisation to 250m below surface.

Mineralisation is open along strike with high grade drill intercepts on the edge of the resource up to 26m at 2.3% TREO from hole CDX0013 (ASX: 18 January 2022). The rare earths content from the 2021 drilling has also been higher than the current Resource grade with an average grade of 2%.

Following the compilation of all diamond drilling in 2021, RareX has used the following the parameters in calculating the Exploration Target:

- Strike length: 600-900m;
- Average depth: 400m;
- Cumulative width: 22.5m to 27.0m; and
- Specific Gravity: 3.

The average grade of the primary mineralisation below the current Resource is 2% TREO and therefore a range of 1.6% and 2.4% is provided around that for uncertainty. RareX notes that the grade is above the 1.15% in its current JORC Resource at the 0.5% cut-off, but is in line with the 1.98% TREO reported grade for the 1.0% cut-off.

A majority of the >1% TREO tonnes in the current Resource is sitting within the Main Fault position immediately above the 2021 drilling. The 2021 drilling has extended the high-grade mineralisation from the Main Fault down dip and has encountered multiple stacked mineralised zones with an average accumulated width of greater than 20m.

RareX Managing Director, Jeremy Robinson, said: *"The announcement of this Exploration Target is a really significant milestone for the Cummins Range Project, coming on the back of a very successful year drilling in 2021. This Exploration Target provides investors with clear insights as to the broader potential of the deposit at depth, over and above our current, already substantial Mineral Resource."*

*"If we are successful in converting a significant portion of this Exploration Target into Mineral Resources, we have a clear pathway to deliver substantial growth in the Cummins Range Project. We believe, based on the information available to us, that the deposit has the potential to be a top-3 Australian rare earths project in terms of contained rare earths. We are very much looking forward to unlocking that potential this year."*

RareX are excited to test the exploration target and grow the resource in 2022. A 15,000m diamond drilling program is planned to be completed by the start of the wet season in November. Drilling is scheduled to commence in 6 weeks.

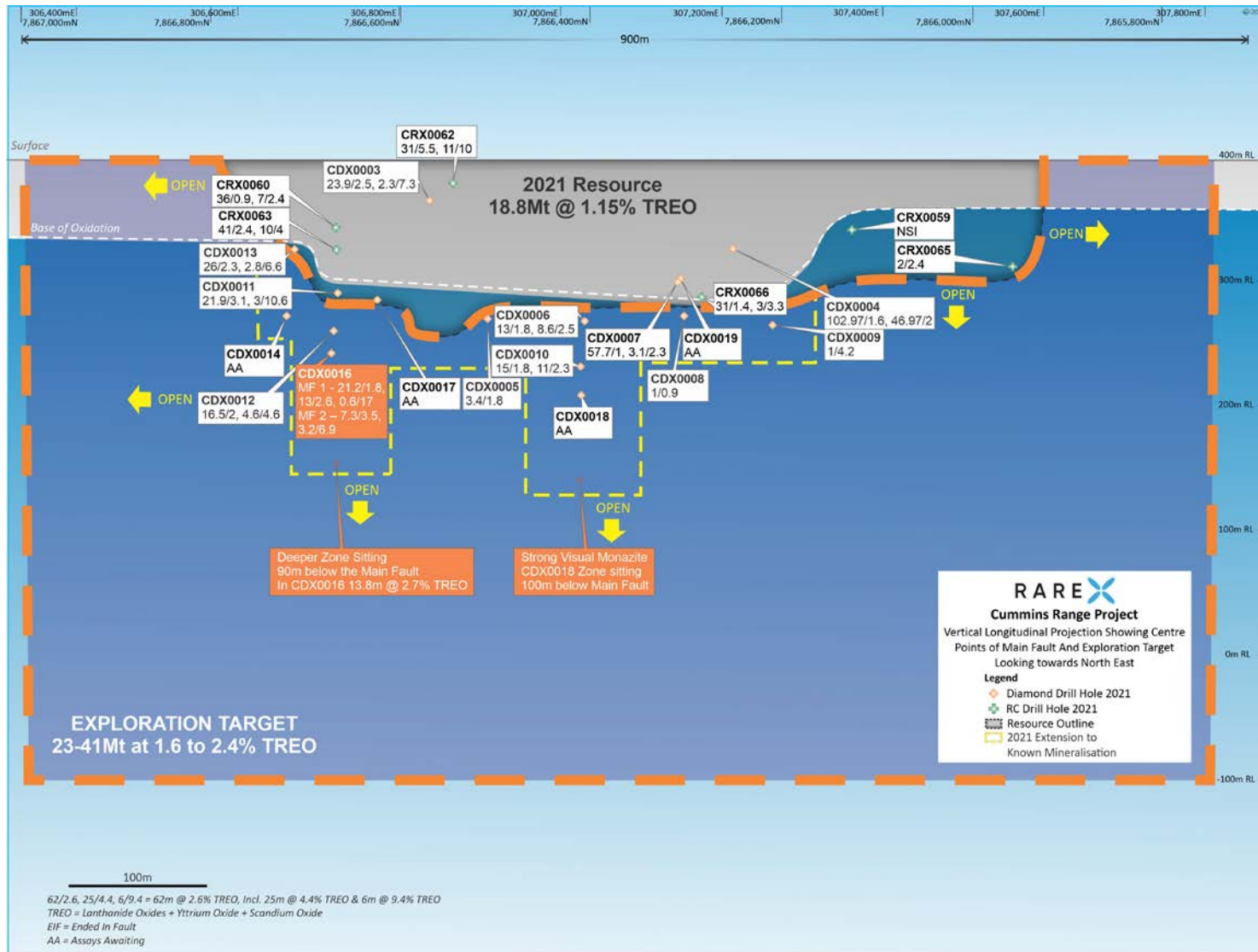


Figure 1: VLP showing centre points of Main Fault and Exploration Target looking towards north east



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

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#### **Competent Person's Statements**

The information in this announcement that relates to the Exploration Target is based on and fairly represents information compiled by Mr Guy Moulang, an experienced geologist engaged by RareX Limited. Mr Moulang is a Member of the Australian Institute of Geoscientists and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity to which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Moulang consents to the inclusion in this announcement of the matters based on this information in the form and context in which it appears.

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.

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. 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 Company confirms that there have been no material changes since the information was first reported in accordance with Listing Rule 5.7.

## Appendix 1: JORC Code 2012 Edition – Table 1

Cummins Range Section 1 Sampling Techniques and Data		
Criteria	JORC Code Explanation	
<b>Sampling techniques</b>	<p><i>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</i></p> <p><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></p> <p><i>Aspects of the determination of mineralisation that are Material to the Public Report. In cases where ‘industry standard’ work has been done this would be relatively simple (eg ‘reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay’). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</i></p>	<p>The exploration target has been generated using drilling results from the 2021 diamond drilling program. A large portion of the upper 100m of the proposed Exploration Target area has been tested with 2021 drilling.</p> <p>Below are the sampling techniques used in the 2021 drilling program.</p> <ul style="list-style-type: none"> <li>• The Cummins Range Rare Earth deposit has been drill tested with RC drilling and diamond drilling.</li> <li>• The RC drill rig used a 5 ½ inch diameter hammer. Each 1m bulk sample was collected in a plastic bag.</li> <li>• Diamond drill sizes used are PQ, HQ and NQ2</li> <li>• Each metre was analysed with a portable XRF, and recovery and geology logs were completed.</li> <li>• Sample interval selection was based on geological controls and mineralisation</li> <li>• Each 1m RC bulk sample was split with a riffle splitter to the appropriate size. Samples varied in length from 1m to 4m.</li> <li>• Each core sample was cut in half with a brick saw. The half core sample was sent to the laboratory with intervals ranging from 0.3m to 1.3m.</li> <li>• Samples were assayed for 42 elements using either a peroxide fusion with a ICP-OES and ICP-MS finish, or a four acid digest with a ICP-OES and ICP-MS finish</li> </ul>
<b>Drilling Techniques</b>	<p><i>Drill type (eg core, reverse circulation, open- hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</i></p>	<ul style="list-style-type: none"> <li>• RC and diamond drilling techniques were used. 11 of the diamond drill holes were started with an RC precollar ranging from 40-90m depth. Holes were then continued with HQ3 or NQ2 diamond core</li> <li>• 5 diamond drill holes were drilled core from surface.</li> </ul>
<b>Drill Sample Recovery</b>	<p><i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></p> <p><i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></p> <p><i>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i></p>	<ul style="list-style-type: none"> <li>• Recoveries for all drill holes were recorded for each metre and all drill holes recorded greater than 95% recovery.</li> </ul>
<b>Logging</b>	<p><i>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i></p>	<ul style="list-style-type: none"> <li>• All metres drilled had a geology log completed. Geology logs were aided using geochemical analysis from a portable XRF.</li> </ul>

	<p><i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></p> <p><i>The total length and percentage of the relevant intersections logged.</i></p>	<ul style="list-style-type: none"> <li>All core trays were photographed</li> <li>All core had mag sus measurements taken on every metre</li> <li>Geotechnical measurements were taken on all metres including hardness, RQD, Recovery and Rock Strength</li> <li>Specific Gravity measurements were taken regularly using Archimedes method</li> <li>The detail of logging is appropriated for Mineral Resource estimation.</li> </ul>
<p><b>Sub-sampling techniques and sample preparation</b></p>	<p><i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></p> <p><i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></p> <p><i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></p> <p><i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></p> <p><i>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</i></p> <p><i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></p>	<ul style="list-style-type: none"> <li>RC splits from the drill rig were not used. The entire 1m bulk sample was split with a riffle splitter to the appropriate size. Samples varied in length from 1m to 4m.</li> <li>This RC sampling technique is better than industry standards and is appropriate for this style of mineralisation and for resource estimation.</li> <li>Diamond core was cut in half with a brick saw and half the core was sent to the laboratory. This is an appropriate method for this style of mineralization and for resource estimation.</li> <li>Blanks and standards were inserted every 15 samples and duplicates taken every 20 samples when sampling RC.</li> </ul>
<p><b>Quality of assay data and laboratory tests</b></p>	<p><i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total</i></p> <p><i>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i></p> <p><i>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</i></p>	<p>The reported assays were analysed by Nagrom. The following techniques were used:</p> <ul style="list-style-type: none"> <li>28 elements were assayed for using peroxide fusion with a ICP-OES and ICP-MS finish</li> <li>14 elements were assayed for using four acid digest with a ICP-OES and ICP-MS finish</li> <li>In addition to internal checks by Nagrom, RareX incorporates a QA/QC sample protocol utilizing prepared standards, blanks and duplicates for 8% of all assayed samples.</li> </ul>
<p><b>Verification of sampling and assaying</b></p>	<p><i>The verification of significant intersections by either independent or alternative company personnel.</i></p> <p><i>The use of twinned holes.</i></p> <p><i>The verification of significant intersections by either independent or alternative company personnel.</i></p> <p><i>Discuss any adjustment to assay data.</i></p>	<ul style="list-style-type: none"> <li>Significant intercepts were calculated by RareX geological staff.</li> <li>The intercepts have not been verified by independent persons</li> <li>There are numerous drill holes with in the Cummins Range resource of comparable tenure</li> <li>All assay results are reported to RareX in parts per million (ppm). RareX geological staff then convert the parts per million to ppm oxides using the below element to stoichiometric oxide conversion factors. La<sub>2</sub>O<sub>3</sub> 1.1728, CeO<sub>2</sub> 1.2284, Pr<sub>6</sub>O<sub>11</sub> 1.2082, Nd<sub>2</sub>O<sub>3</sub> 1.1664, Sm<sub>2</sub>O<sub>3</sub> 1.1596, Eu<sub>2</sub>O<sub>3</sub> 1.1579, Gd<sub>2</sub>O<sub>3</sub> 1.1526, Dy<sub>2</sub>O<sub>3</sub> 1.1477, Ho<sub>2</sub>O<sub>3</sub> 1.1455, Er<sub>2</sub>O<sub>3</sub> 1.1435, Tm<sub>2</sub>O<sub>3</sub> 1.1421, Yb<sub>2</sub>O<sub>3</sub> 1.1387, Lu<sub>2</sub>O<sub>3</sub> 1.1371, Sc<sub>2</sub>O<sub>3</sub> 1.5338, Y<sub>2</sub>O<sub>3</sub> 1.2699, Nb<sub>2</sub>O<sub>5</sub> 1.4305, P<sub>2</sub>O<sub>5</sub> 2.2916</li> </ul>
<p><b>Location of data points</b></p>	<p><i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i></p> <p><i>Specification of the grid system used.</i></p> <p><i>Quality and adequacy of topographic control.</i></p>	<ul style="list-style-type: none"> <li>Drill hole collars were located by DGPS</li> <li>All coordinates are in MGA Zone 52H 1994</li> <li>Topographic control is maintained by the DGPS which has 100mm Accuracy. The Cummins Range deposit is located on flat terrain.</li> </ul>



		<ul style="list-style-type: none"> <li>Down hole surveys were taken every 30m, using a digital Reflex multi shot camera.</li> </ul>
<b>Data spacing and distribution</b>	<p><i>Data spacing for reporting of Exploration Results.</i></p> <p><i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i></p> <p><i>Whether sample compositing has been applied.</i></p>	<ul style="list-style-type: none"> <li>The purposed of the drill program is to test for primary mineralization below the high grade Main Fault mineralisation. Drill spacing of 40m on 80m drill lines is appropriate to establish geological and grade continuity.</li> <li>2m to 4m RC composites were completed in areas where higher grades were not expected</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<p><i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></p> <p><i>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</i></p>	<ul style="list-style-type: none"> <li>The angled drill holes were directed as best as possible across the known geology.</li> </ul>
<b>Sample security</b>	<i>The measures taken to ensure sample security</i>	<ul style="list-style-type: none"> <li>Drill samples are delivered to Halls Creek by RareX staff. Then the samples are transported from Halls Creek to Perth via a reputable transport company.</li> </ul>

Cummins Range Section 2 Reporting of Exploration Results		
Criteria	JORC Code Explanation	
<b>Mineral tenement and land tenure status</b>	<p><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.</i></p> <p><i>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></p>	<ul style="list-style-type: none"> <li>The Cummins Range REO deposit is located on tenement E80/5092 and is 100% owned by Cummins Range Pty Ltd which is a wholly owned subsidiary of RareX Ltd. Cummins Range Pty Ltd has purchased the tenement from Element 25 with a potential capped royalty payment of \$1m should a positive PFS be completed within 36 months of purchase finalisation.</li> </ul>
<b>Exploration done by other parties</b>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	<ul style="list-style-type: none"> <li>CRA Exploration defined REO mineralisation at Cummins Range in 1978 using predominantly aircore drilling. Navigator Resources progressed this discovery with additional drilling after purchasing the tenement in 2006. Navigator announced a resource estimate in 2008. Kimberly Rare Earths drilled additional holes and upgraded the resource estimate in 2012.</li> </ul>

<b>Geology</b>	<i>Deposit type, geological setting and style of mineralisation.</i>	<ul style="list-style-type: none"> <li>The Cummins Range REO deposit occurs within the Cummins Range carbonatite complex which is a 2.0 km diameter near-vertical diatreme pipe that has been deeply weathered but essentially outcropping with only thin aeolian sand cover in places. The diatreme pipe consists of various mafic to ultramafic rocks with later carbonatite intrusions.</li> <li>The primary ultramafic and carbonatite rocks host low to high grade rare earth elements with back ground levels of 1000-2000ppm TREO. The 2021 drilling has identified multiple stacked subparallel mineralised zones up to 20m wide and with grades up to 17% TREO over individual assays. The mineralised zones are hydrothermal and are often located on fault zones or lithological contacts. High grade mineralisation is massive patches of monazite in carbonatite and has a NdPr content of between 15-25%. The mineralised zones are centered around the Main Fault which is striking at 320 deg and dipping shallowly to moderately to the south west. The 2021 drill program has extended mineralisation to 260m below surface and the mineralisation has 720m of known extent.</li> <li>The current resource sits primarily within the oxidised/weathered zone which reaches to 120m below the surface.</li> </ul>
<b>Drill hole information</b>	<p><i>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:</i></p> <ul style="list-style-type: none"> <li><i>easting and northing of the drill hole collar</i></li> <li><i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></li> <li><i>dip and azimuth of the hole</i></li> <li><i>down hole length and interception depth</i></li> <li><i>hole length.</i></li> </ul> <p><i>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</i></p>	<ul style="list-style-type: none"> <li>Exploration Results are not being reported.</li> </ul>
<b>Data aggregation methods</b>	<p><i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</i></p> <p><i>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade 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"> <li>Significant intercepts were calculated using weighted averaging</li> <li>A lower cut off of 0.5% TREO was used with a maximum of 3m dilution. This cut off grade and dilution is thought to be appropriate due to likely open cut mining methods that would be used on the outcropping ore body.</li> <li>No metal equivalent values have been used</li> </ul>



<b>Relationship between mineralisation widths and intercept lengths</b>	<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"> <li>• The angled drill holes were directed as best as possible across the known geology.</li> <li>• The mineralisation widths used in the Exploration Target were 90% of the down hole lengths.</li> </ul>
<b>Diagrams</b>	<p><i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i></p>	<ul style="list-style-type: none"> <li>• Relevant maps are included in the announcement.</li> </ul>
<b>Balanced reporting</b>	<p><i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</i></p>	<ul style="list-style-type: none"> <li>• Reporting is considered balanced</li> </ul>
<b>Other substantive exploration data</b>	<p><i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i></p>	<ul style="list-style-type: none"> <li>• No substantive exploration data not already mentioned in the announcement has been used in the preparation of the Exploration Target.</li> </ul>
<b>Further work</b>	<p><i>The nature and scale of planned further work (eg tests for lateral extensions or large scale step out drilling.</i></p> <p><i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></p>	<ul style="list-style-type: none"> <li>• Drilling will commence in March-April to test the Exploration Target.</li> <li>• Diagrams have been included in the body of the announcement.</li> </ul>