19 December 2023

Koppamurra Rare Earths Project, South Australia-Victoria

New infill drilling assays reveal high grades and significant magnet rare earth content

Latest results provide further strong evidence that Koppamurra has the scale, grade and the right mineralisation to be a key supplier to the electric motor market

Highlights

- **Assays from infill drilling at Koppamurra reveal high-grade mineralisation with Magnet Rare Earth Oxide (MREO) content above the Mineral Resource Estimate average of 24.5% (ASX 19/9/23)**
- **The latest results include:**
  - KM5059, 3m @ 6,101 ppm TREO from 12m, with 33.3% combined Neodymium/Praseodymium (Nd/Pr) and 2.3% Dysprosium (Dy) – Section 1
    - Including 1m @ 12,615 ppm from 13m, with 37.9% Nd/Pr and 1.9% Dy
  - KM5058, 6m @ 1,355 ppm TREO from 2m, with 27.9% combined Nd/Pr and 3.1% Dy – Section 1
  - KM5062, 2m @ 2,549 ppm TREO from 1m, with 21.6% combined Nd/Pr and 1.8% Dy – Section 1
  - KM4927, 3m @ 1,631 ppm TREO from 3m with 32.7% combined Nd/Pr and 2.0% Dy
    - Including 1m @ 3,535 ppm TREO from 4m, with 40.6% combined Nd/Pr and 1.9% Dy
  - KM4970, 2m @ 2,322 ppm TREO from 6m, with 20.8% combined Nd/Pr and 4.0% Dy
  - KM4972, 8m @ 1,483 ppm TREO from 8m, with 24.0% combined Nd/Pr and 2.8% Dy
  - KM4983, 3m @ 1,880 ppm TREO from 5m, with 25.0% combined Nd/Pr and 2.3% Dy
  - KM5017, 2m @ 1,810 ppm TREO from 1m, with 28.6% combined Nd/Pr and 2.6% Dy
  - KM5038, 3m @ 1,683 ppm TREO from 5m, with 26.4% combined Nd/Pr and 2.1% Dy
- **Assays returned predominantly from area of infill drilling within the Inferred Resource of the existing Mineral Resource Estimate**
- **More assays from infill drilling expected in early 2024 along with those from drilling the northern 10km strike extension of the known mineralisation**

Australian Rare Earths Limited (ASX: AR3) is pleased to announce strong drilling results which further underpin the Company's strategy to grow and upgrade the Resource at its Koppamurra rare earths project in South Australia.

The drilling program, which commenced in October 2023, has seen ~8750m completed for ~700 holes and has targeted both strike extensions of the known mineralisation in an area that has not previously been drill tested and resource definition upgrades in the southern resource area.

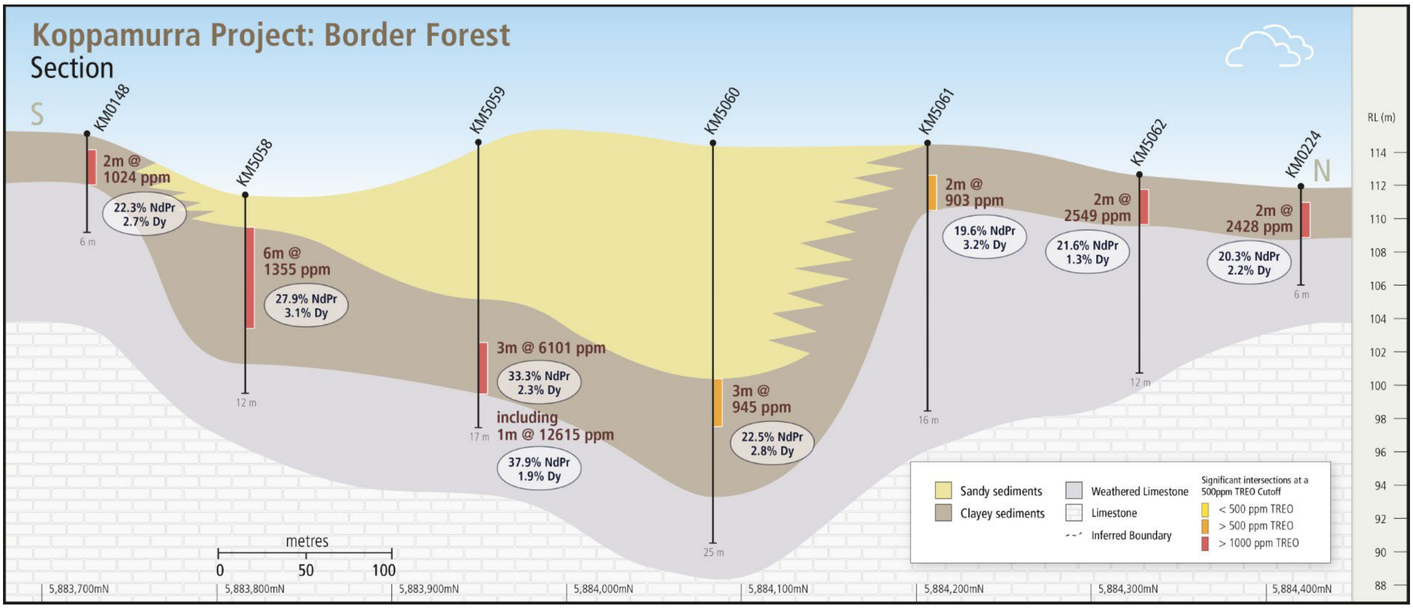
The latest assays stem mainly from infill drilling aimed at upgrading a further proportion of the Inferred Resource to the Indicated category. Approximately 1,000 assay results have been received, representing 152 of the holes drilled to date with 126 of those holes displaying significant intersections at a 500ppm TREO cut-off grade. The results indicate several high TREO grade intercepts and importantly identify mineralisation with higher Magnet Rare Earth Oxide (MREO) content above the Mineral Resource Estimate average of 24.5%.

Further assay results are expected to arrive during the first quarter of 2024.

AR3 Chief Executive, Travis Beinke, said: *"These results highlight the potential for a high-grade and high magnet rare earth subset of the broader Koppamurra resource.*

"Magnet rare earth content is one of the key economic drivers of rare earth projects so the opportunity to potentially incorporate higher value mineralisation into our development plans is now under review. These assay results, combined with similar historical intercepts, will be incorporated into our province development planning in parallel with our ongoing process flowsheet optimisation.

"We look forward to receiving further assay results from the infill drilling program and from the drilling of the untested 10km-long northern strike extension of the Koppamurra Resource".



Section 1- *Border Forest (see figure 1 for section location)*

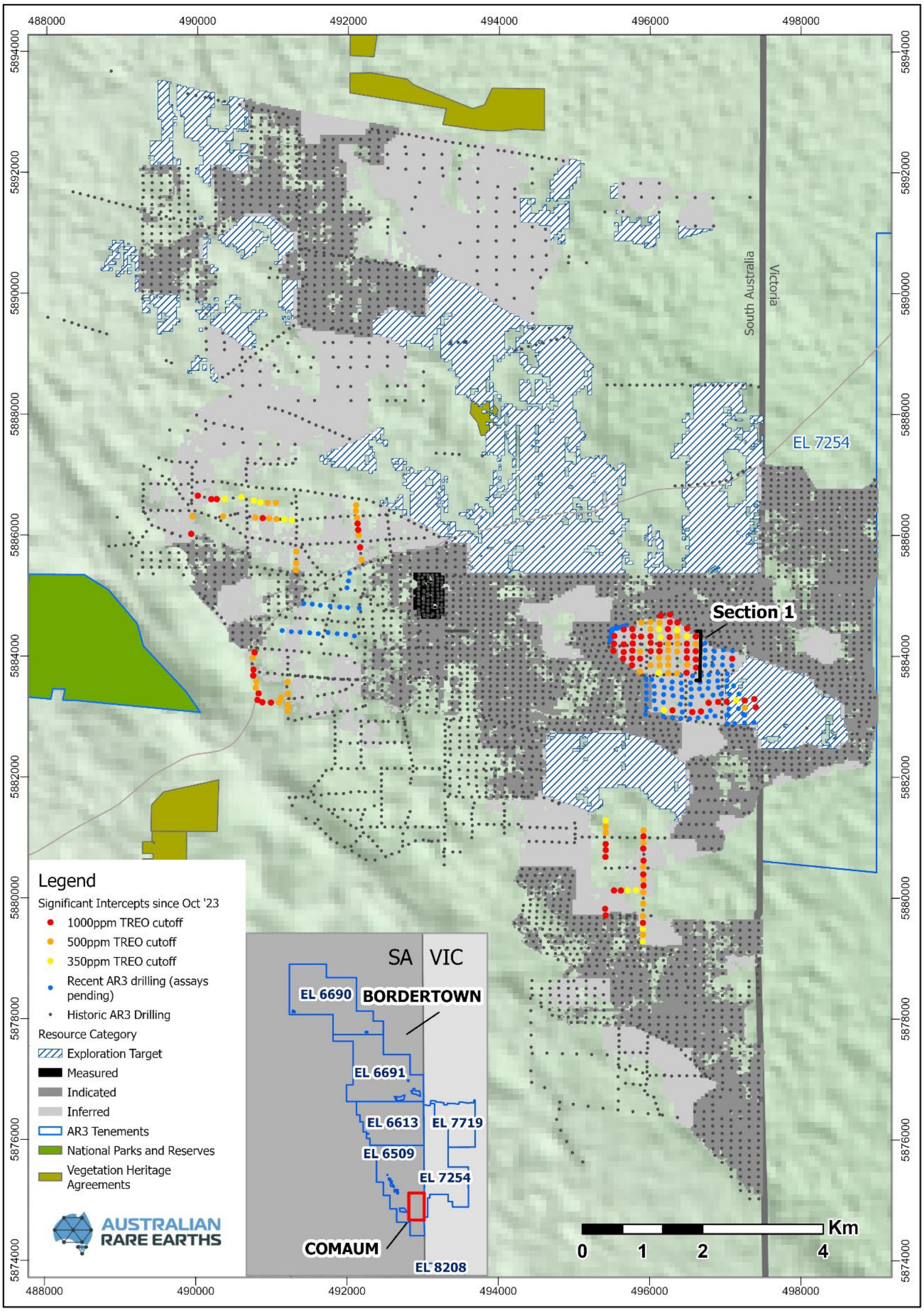


***Figure 1**- Section location plan with recent drilling and significant intercepts highlighted and AR3 historic drilling*

The announcement has been authorised for release the by the Board of AR3 Limited.

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Competent Person's Statement

The information in this report that relates to Exploration results is based on information compiled by Australian Rare Earths Limited and reviewed by Mr Rick Pobjoy who is the Technical Director of the Company and a member of the Australian Institute of Mining and Metallurgy (AusIMM). Mr Pobjoy has sufficient experience that is relevant to the style of mineralisation, the type of deposit under consideration and to the activities 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 Pobjoy consents to the inclusion in this report of the matters based on this information in the form and context in which it appears.

About Australian Rare Earths Limited

Australian Rare Earths is committed to the timely exploration and development of its 100% owned, flagship Koppamurra Project, located in the Koppamurra rare earths Province in southeastern South Australia and western Victoria. Koppamurra is a prospective ionic clay hosted rare earth deposit, uniquely rich in all the elements required in the manufacture of rare earth permanent magnets which are essential components in electric vehicles, wind turbines and domestic appliances. In addition AR3 is actively reviewing other potential prospective areas which may also host ionic clay hosted rare earth deposits throughout Australia.

The Company is focused on executing a growth strategy that will ensure AR3 is positioned to become an independent and sustainable source of rare earths, playing a pivotal role in the global transition to a green economy.

JORC Table 1

Section 1 Sampling Techniques and Data		
Criteria	**Explanation**	**Comment**
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.,*	*RC Aircore drilling methods were used obtain samples from the October-December 2021, February-April 2022, September-December 2022 February- June 2023, and October-December 2023 drilling programs.* *The following information covers the sampling process:* • *All air core samples were collected from the rotary splitter mounted at the bottom of the cyclone using a pre-numbered calico bag and plastic UV sample bag. The samples were geologically logged at 1 m intervals using the marked calico sample which averaged ~1.5 kg in mass.* • *A handheld Olympus Vanta XFR Analyser was used to assess the geochemistry of the air core samples in the field. The XRF analysis provided a full suite of mineral elements for characterising the lithological units.* • *XRF readings were downloaded from the XRF Analyser at the end of each day and uploaded to the Australian Rare Earths Azure Data Studio database.* • *Field duplicates were taken at a rate of ~1:34 and inserted blindly into the sample batches.* • *At the laboratory, the samples were oven dried at 105 degrees for a minimum of 24 hours and secondary crushed to 3 mm fraction and then pulverised to 90% passing 75 µm. Excess residue was maintained for storage while the rest of the sample placed in 8x4 packets and sent to the central weighing laboratory. The samples were submitted for analysis using XRF-ICP-MS method.* • *A laboratory repeat was taken at ~ 1 in 21 samples;* • *Commercially obtained standards were*

	submarine nodules) may warrant disclosure of detailed information.	inserted by the laboratory at a rate of ~ 1 in 9 into the sample sequence.
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 was completed using a Mcleod or Wallis air ore drill rig (Landcruiser 6x6 or similar) for the drilling.* • *Aircore drilling is a form of reverse circulation drilling where the sample is collected at the face and returned inside the inner tube. The drill cuttings are removed by injection of compressed air into the hole via the annular area between the inner tube and the drill rod.* • *Aircore drill rods used were 3 m long.* • *NQ diameter (76 mm) drill bits and rods were used.* • *All aircore drill holes were vertical with depths varying between 2 m and 36 m.*
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.*	• *Drill sample recovery for aircore is monitored by recording sample condition descriptions where 'Poor' to 'Very Poor' were used to identify any samples recovered which were potentially not representative of the interval drilled.* • *A comment was included where water injection was required to recover the sample from a particular interval. The use of water injection can potentially bias a sample and very little water injection was required during this drilling program.* • *No significant loses of samples were observed due to the shallow drilling depths (<36 m).* • *The rotary splitter was set to an approximate 20% split, which produced approximately 1.5 kg sample for each meter interval.* • *The 1.5 kg sample was collected in a pre-numbered calico bags and the remaining 80% (5 kg to 8 kg) was collected in plastic UV bags labelled with the hole number and sample interval.* • *At the end of each drill rod, the drill string is cleaned by blowing down with air to remove any clay and silt potentially built up in the sample pipes and cyclone.*

		• No relationship exists between sample 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 aircore samples collected in calico bags were logged for lithology, colour, cement type, hardness, percentage rock estimate, sorting, and any relevant comments such as moisture, sample condition, or vegetation.* • *Geological logging data for all drill holes was qualitatively logged onto Microsoft Excel spreadsheet using a Panasonic Toughbook with validation rules built into the spreadsheet including specific drop-down menus for each variable. The data was uploaded to the Australian Rare Earths Azure Data Studio database.* • *Every drill hole was logged in full and logging was undertaken with reference to a drilling template with codes prescribed and guidance to ensure consistent and systematic data collection*
Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all cores taken.* *If non-core, whether riffled, tube sampled, rotary split, etc and 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*	• *1 m aircore sample interval were homogenised within the cyclone and the rotary splitter was set to an approximate 20% split producing around 1.5 kg sample for each metre interval.* • *The 1.5 kg sample was collected in a pre-numbered calico bag and the 80% (5 kg to 8 kg) portion was collected in plastic UV bags labelled with hole identity and interval.* • *Duplicates were generally taken within the clay lithologies above the basement as this is the likely zone of REE enrichment. These duplicate samples were normally collected by using a second calico bag and placing it under the rotary splitter collecting a 20% split but due to the difficulties of placing a second calico bag under the rotary splitter during sample collection, some duplicates were collected by hand from the plastic UV bags which captured the other 80% of the material recovered from any particular interval.* • *The material in the plastic UV bags was mixed up and every attempt to take as representative sample of the material as*

	sampling. *Whether sample sizes are appropriate to the grain size of the material being sampled.*	*possible by hand was made and then placed in a pre-numbered calico bag.* • *The 1.5 kg sample collected in the calico bag was logged by the geologist onsite. The logged samples were placed in polyweave bags and sent to Naracoorte base at the end of each day. The polyweave bags were then placed on pallets and dispatched to Bureau Veritas laboratory in Adelaide in Bulka Bags.* • *The remaining 80% split from the aircore interval was stored for future reference.* • *Field duplicates of all the samples were completed at a frequency of ~1 in 34 samples. Field standards were inserted into the sample sequence at a frequency of ~1:57. Standard reference Material (SRM) samples were inserted into the sample batches at a frequency rate of 1 per 10 samples by the laboratory and a repeat sample was taken at a rate of 1 per 21 samples.* • *A rig geologist oversaw the sampling and logging process while a second geologist selected samples for analysis based on the logging descriptions and Pxrf analysis. Clay rich sample and those adjacent to the limestone basement contact were selected for assay. REEs are known to be contained within the clay component of the sediment package based on analysis of XRF data and previous exploration work.*
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 their*	• *The detailed geological logging of samples provides lithology (clay component) and proximity to the limestone basement which is sufficient for the purpose of determining the mineralised zone.* • *The 1.5 kg aircore samples were assayed by Bureau Veritas laboratory in Wingfield, Adelaide, South Australia, which is considered the Primary laboratory.* • *The samples were initially oven dried at 105 degrees Celsius for 24 hours. Samples were secondary crushed to 3 mm fraction and the weight recorded. The sample was then pulverised to 90% passing 75 µm. Excess residue was maintained for storage while*

	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.*	*the rest of the sample placed in 8x4 packets and sent to the central weighing laboratory.* • *All weighed samples were then analysed using the Multiple Elements Fusion/Mixed Acid Digest analytical method;* • *ICP Scan (Mixed Acid Digest – Lithium Borate Fusion) Samples are digested using a mixed acid digest and also fused with Lithium Borate to ensure all elements are brought into solution. The digests are then analysed for the following elements (detection Limits shown): Al (100) As (1) Ba (1) Be (0.5) Ca(100) Ce (0.1) Co (1) Cr (10) Dy (0.05) Er (0.05) Eu(0.05) Fe(100) Gd (0.2) Ho (0.02) K (100) La (0.5) Lu (0.02) Mg (100) Mn (2) Na (100) Nd (0.05) Ni (2) Pr (0.2) S (50) Sc (1) Si (100) Sm(0.05) Sr (0.5) Th (0.1) Ti (50) Tm (0.2) U (0.1) V (5) Y (0.1) Yb (0.05) Zr (1)* • *Field duplicates were collected and submitted at a frequency of ~1 per 34 samples.* • *Bureau Veritas completed its own internal QA/QC checks that included a Laboratory repeat every 21st sample and a standard reference sample every 9th sample prior to the results being released.* • *Analysis of QA/QC samples show the laboratory data to be of acceptable accuracy and precision;* • Australian Rare Earths submitted field standards at a frequency of ~1:57 samples. • Australian Rare Earths requested BV insert blank washes at a frequency of 1:40 samples. These blank washes were inserted in the sample sequence behind samples which were thought to be mineralized to ensure that no contamination from higher grade samples was occurring. Frequency of blank samples totaled 1 in 24 samples. *The adopted QA/QC protocols are acceptable for this stage of test work. The sample preparation and assay techniques used are industry standard and provide a total analysis.*
Verification	*The verification of*	• *All results are checked by the company's*

of sampling and assaying	*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.*	*Technical Director.* • *Field based geological logging for drill holes was entered directly into an Excel spreadsheet format with validation rules built into the spreadsheet including specific drop-down menus for each variable. This digital data was then uploaded to the Australian Rare Earths Azure Data Studio database.* • *Assay data was received in digital format from the laboratory and was uploaded Australian Rare Earths Azure Data Studio database.* • *Field and laboratory duplicate data pairs of each batch are plotted to identify potential quality control issues.* • *Standard Reference Material sample results are checked from each sample batch to ensure they are within tolerance (<3SD) and that there is no bias.* • *The field and laboratory data was exported and imported into Datamine by IHC Robbins which is appropriate for this stage in the program. Data validation criteria are included to check for overlapping sample intervals, end of hole match between 'Lithology', 'Sample', 'Survey' files and other common errors.* • *Assay data yielding elemental concentrations for rare earths (REE) within the sample are converted to their stoichiometric oxides (REO) in a calculation performed within the database using the conversion factors in the below table.* • *Rare earth oxide is the industry accepted form for reporting rare earths. The following calculations have been used for reporting throughout this report:* • *Note that Y2O3 is included in the TREO, HREO and CREO calculation.* ***TREO** = La2O3 + CeO2 + Pr6O11 + Nd2O3 + Sm2O3+ Eu2O3 + Gd2O3 + Tb4O7 + Dy2O3 + Ho2O3 + Er2O3 + Tm2O3 + Yb2O3 + Lu2O3+ Y2O3* ***CREO** = Nd2O3 + Eu2O3 + Tb4O7 + Dy2O3 + Y2O3*

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LREO *= La2O3 + CeO2 + Pr6O11 + Nd2O3*

HREO *= Sm2O3 + Eu2O3 + Gd2O3 + Tb4O7 + Dy2O3 + Ho2O3 + Er2O3 + Tm2O3 + Yb2O3+ Lu2O3 + Y2O3 NdPr = Nd2O3 + Pr6O11*

TREO-Ce *= TREO - CeO2*

NdPr *= Nd + Pr*

<table>
<tr><td>Element Oxide</td><td>Oxide Factor</td></tr>
<tr><td>CeO2</td><td>1.2284</td></tr>
<tr><td>Dy2O3</td><td>1.1477</td></tr>
<tr><td>Er2O3</td><td>1.1435</td></tr>
<tr><td>Eu2O3</td><td>1.1579</td></tr>
<tr><td>Gd2O3</td><td>1.1526</td></tr>
<tr><td>Ho2O3</td><td>1.1455</td></tr>
<tr><td>La2O3</td><td>1.1728</td></tr>
<tr><td>Lu2O3</td><td>1.1371</td></tr>
<tr><td>Nd2O3</td><td>1.1664</td></tr>
<tr><td>Pr6O11</td><td>1.2082</td></tr>
<tr><td>Sc2O3</td><td>1.5338</td></tr>
<tr><td>Sm2O3</td><td>1.1596</td></tr>
<tr><td>Tb4O7</td><td>1.1762</td></tr>
<tr><td>ThO2</td><td>1.1379</td></tr>
<tr><td>Tm2O3</td><td>1.1421</td></tr>
<tr><td>U3O8</td><td>1.1793</td></tr>
<tr><td>Y2O3</td><td>1.2699</td></tr>
<tr><td>Yb2O3</td><td>1.1387</td></tr>
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<td>Location of data points</td>
<td>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.
Specification of the grid system used.
Quality and adequacy of topographic control.</td>
<td>

- *Down hole surveys for shallow vertical aircore drill holes are not required.*
- *The drill hole collars were located using a GPS unit to identify the positions of the drill holes in the field. The handheld GPS has an accuracy of +/-5m in the horizontal.*
- *The datum used is GDA2020/MGA Zone 54.*
- *Topographic data over the southern area of the resource (including all Inferred/Indicated/Measured resource areas) is derived from a fixed wing LiDAR survey flown in May 2022 by Aerometrex using their RIEGL VQ-780ii sensor. The LiDAR survey data was captured at a minimum 25 points per meter and flown at*

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		a height of 591m to ensure ~10cm vertical accuracy. • *Topographic DTM surface over the northern area of the resource (Frances Exploration Target area) is derived from DGPS drill collar positions at this stage of exploration and the RL has been corrected using An Australian wide SRTM. The 1 second SRTM Level 2 Derived Smoothed Digital Elevation Model (DEM-S) is derived from the 2000 SRTM. The DEM-S has a ~30m grid which has been adaptively smoothed to improve the representation of the surface shape and is the preferred method for shape and vertical accuracy from STRM products. The smoothing process estimated typical improvements in the order of 2-3 m. This would make the DEM-S accuracy to be of approximately 5 m.* • *The accuracy of the locations is sufficient for this stage of exploration.*
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.*	• *The holes were largely drilled at between 100 m and 400 m spacings along accessible road verges.* • *Drill spacing within paddocks and forested areas was largely completed at 100 m to 120 m spacings, with a small portion of holes drilled at 60 m spacings.* • *The drilling of aircore holes was conducted to determine the regional prospectivity of the wider Koppamurra Project area and for the purposes of generating a mineral resource estimate.* • *No sample compositing has been applied.*
Orientation of data in relation to geological structure	*Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* *If the relationship between the drilling orientation and the orientation of key*	• *The Koppamurra mineralisation is interpreted to be hosted in flat lying clays that are horizontal. Undulation of the clay unit is influenced by the weathered limestone basement below.* • *All drill holes are vertical which is appropriate for horizontal bedding and regolith profile.* • *The Koppamurra drilling was oriented perpendicular to the strike of mineralisation defined by previous*

	mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	*exploration and current geological interpretation.* • *The strike of the mineralisation is north south, and the high grades follow a northwest-southeast trend.* • *All drill holes were vertical, and the orientation of the mineralisation is relatively horizontal.* • *The orientation of the drilling is considered appropriate for testing the lateral and vertical extent of mineralisation without any bias.*
Sample security	*The measures taken to ensure sample security.*	• *After logging, the samples in calico bags were tied and placed into polyweave bags, labelled with the drill hole and sample numbers contained within the polyweave and transported to the base of operations, Naracoorte, at the end of each day.* • *The samples were then placed on pallets ready for transport and remained in a secure compound until transport had been arranged. Pallets were labelled and then 'shrink-wrapped' by the transport contractor prior to departure from the Naracoorte base to the analytical laboratory.* • *Samples for analysis were logged against pallet identifiers and a chain of custody form created.* • *Transport to the analytical laboratory was undertaken by an agent for the TOLL Logistics Group, and consignment numbers were logged against the chain of custody forms.* • *The laboratory inspected the packages and did not report tampering of the samples and provided a sample reconciliation report for each sample dispatch.*
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	• *Internal reviews were undertaken by AR3's Exploration Manager and Technical Director during the drilling, sampling, and geological logging process and throughout the sample collection and dispatch process to ensure AR3's protocols were followed.* • *A review of the database was also*

		undertaken by Wallbridge Gilbert Aztec (WGA) – Consulting Engineers.

Section 2 Reporting of Exploration Results		
Criteria	**Explanation**	**Comment**
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.*	*Koppamurra Project comprises of a granted South Australian Exploration Licences (EL), EL6509, EL6613, EL6690, EL6691, EL6942, and EL6943 along with Victorian EL007254 and EL007719 covering a combined area of ~6,300 km2 which is in good standing.* *EL6509 is within 100m of a Glen Roy Conservation Park and the Naracoorte Caves National Park, the latter of which is excised from the tenement. The License area contains several small Extractive Mineral Leases (EML) held by others, Native Vegetation Heritage Agreement areas, as well as the Deadman's Swamp Wetlands which are wetlands of national importance.* *A Native Title Claim by the First Nations of the South East #1 has been registered but is yet to be determined. The claim area includes the areas covered by EL's 6509, 6613, 6690 and 6691.* *The exploration work was completed on the tenements (EL 6509 and EL6613) in South Australia and (EL007254 and EL007719) in Victoria which are 100% owned by the company Australian Rare Earths Ltd.* *The Exploration License EL6509 original date of grant was 15/09/2020 with an expiry date of 14/09/2028.* *The Exploration License EL6613 original date of grant was 06/07/2021 with an expiry date of 05/07/2027.* *The Exploration License EL6690 original date of grant was 02/11/2021 with an expiry date of 01/11/2027.*

		The Exploration License EL6691 original date of grant was 02/11/2021 with an expiry date of 01/11/2027. *The Exploration License EL6942 original date of grant was 17/10/2023 with an expiry date of 16/10/2029.* *The Exploration License EL6943 original date of grant was 17/10/2023 with an expiry date of 16/10/2029.* *The Exploration License EL007254 original date of grant was 29/04/2021 with an expiry date of 28/04/2024.* *The Exploration License EL007719 original date of grant was 29/08/2022 with an expiry date of 28/08/2027.* *Details regarding royalties are discussed in chapter 3.4 of Australian Rare Earths Prospectus dated 7 May 2021.*
Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	*Exploration activities by other exploration companies in the area have not previously targeted or identified REE mineralisation.* *Historical exploration activities in the vicinity of Koppamurra include investigations for coal, gold and base metals, uranium, and heavy mineral sands.* *Historical exploration by other parties is detailed in Chapter 7 of Australian Rare Earths Prospectus dated 7 May 2021.*
Geology	*Deposit type, geological setting and style of mineralisation.*	*The Koppamurra deposit is interpreted to contain analogies to ion adsorption ionic clay REE deposits. REE mineralisation at Koppamurra is hosted by clayey sediments interpreted to have been deposited onto a limestone base (Gambier Limestone) and accumulated in an interdunal, lagoonal or estuarine environment.* *A dedicated research program investigating the source of the REE at Koppamurra is ongoing, with no definitive source of the REE confirmed to date although preliminary results of this study have ruled out the alkali volcanics in south-eastern Australia which was originally*

		considered. *Mineralogical test work conducted on clay sample from the project area established that the dominant clay minerals are smectite and kaolin, and that the few REE-rich minerals detected during the SEM investigation are not considered inconsistent with the suggestion that a significant proportion of REE are distributed in the material as adsorbed elements on clay and iron oxide surfaces.* *There are several known types of regolith hosted REE deposits including, ion adsorption clay deposits, alluvial and placer deposits. Whilst Koppamurra shares similarities with both ion adsorption clay deposits and volcanic ash fall placer deposits, there are also several differences, highlighting the need for further work before a genetic model for REE mineralisation at Koppamurra can be confirmed.* *There is insufficient geological work undertaken to determine any geological disruptions, such as faults or dykes, that may cause variability in the mineralisation.*
Drill hole Information	*A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* - *easting and northing of the drill hole collar* - *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* - *dip and azimuth of the hole* - *down hole length and interception depth* - *hole length.* *If the exclusion of this information is justified on*	*The material information for drill holes relating to this report are contained within Appendices of this release.*

	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.	
Data aggregation methods	*In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	*No metal equivalents have been used.* *Significant intercepts are calculated using downhole sample length weighted averages and a lower cut-off grade of 325 ppm TREO-CeO2.* *A full list of drill holes with significant intercepts >325 ppm TREO-CeO2 can be found in the appendices of this release.*
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*	*All intercepts reported are down hole lengths.* *The mineralisation is interpreted to be flat lying. Morphology of the mineralised unit is influenced by the morphology of the undulating limestone basement below. Drilling is vertical perpendicular to mineralisation. Any internal variations to REE distribution within the horizontal layering was not defined, therefore the true width is considered not known.*

	effect (eg 'down hole length, true width not known').	
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.*	*Diagrams are included in the body of this release.*
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.*	*This release contains all drilling results that are consistent with the JORC guidelines. Where data may have been excluded, it is considered not material.*
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.*	*All known relevant exploration data has been reported in this release.*
Further work	*The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or*	*AR3 intend to continue to define the Koppamurra resource during 2023 and 2024. This will include (but not limited to)*

	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.*	*drilling, assay, ground based geophysical surveys and further metallurgical testwork.*

Appendix 1 - Drill Collar locations

Hole ID	East (m)	North (m)	RL (m ASL)	Drill Method	Down Hole Width (mm)	Total Depth EOH (m)	Azimuth	Dip Direction
KM4912	491207	5883094	81.5	Air-core	76	15	0	-90
KM4913	491209	5883195	85.8	Air-core	76	18	0	-90
KM4914	491206	5883382	87.3	Air-core	76	18	0	-90
KM4915	491192	5883491	87.1	Air-core	76	3	0	-90
KM4916	491204	5883576	90.9	Air-core	76	6	0	-90
KM4917	490767	5884064	86.4	Air-core	76	12	0	-90
KM4918	490744	5883974	85.4	Air-core	76	6	0	-90
KM4919	490737	5883873	84.4	Air-core	76	21	0	-90
KM4920	490751	5883779	82.1	Air-core	76	15	0	-90
KM4921	490749	5883676	80.5	Air-core	76	20	0	-90
KM4922	490788	5883581	80.2	Air-core	76	15	0	-90
KM4923	490784	5883479	80.4	Air-core	76	9	0	-90
KM4924	490822	5883383	79.0	Air-core	76	15	0	-90
KM4925	490805	5883273	77.9	Air-core	76	15	0	-90
KM4926	490869	5883235	79.0	Air-core	76	6	0	-90
KM4927	490985	5883231	79.6	Air-core	76	12	0	-90
KM4928	491090	5883230	83.5	Air-core	76	12	0	-90
KM4929	491117	5883314	88.1	Air-core	76	6	0	-90
KM4930	492181	5885595	92.3	Air-core	76	6	0	-90
KM4931	492170	5885704	92.1	Air-core	76	8	0	-90
KM4932	492162	5885802	92.6	Air-core	76	6	0	-90
KM4933	492134	5886093	92.7	Air-core	76	6	0	-90
KM4934	492126	5886197	89.9	Air-core	76	9	0	-90
KM4935	492121	5886289	89.7	Air-core	76	15	0	-90
KM4936	492105	5886402	86.6	Air-core	76	15	0	-90
KM4937	492109	5886500	86.1	Air-core	76	6	0	-90
KM4938	492143	5886006	93.2	Air-core	76	9	0	-90
KM4939	491254	5886527	82.3	Air-core	76	27	0	-90
KM4940	491044	5886536	82.4	Air-core	76	9	0	-90
KM4941	490935	5886537	81.5	Air-core	76	9	0	-90
KM4942	490840	5886546	80.2	Air-core	76	15	0	-90
KM4943	490752	5886572	79.2	Air-core	76	21	0	-90
KM4944	490590	5886628	81.9	Air-core	76	15	0	-90
KM4945	490479	5886617	84.8	Air-core	76	14	0	-90
KM4946	490365	5886597	81.5	Air-core	76	9	0	-90
KM4947	490261	5886596	76.6	Air-core	76	6	0	-90
KM4948	490189	5886597	75.0	Air-core	76	18	0	-90
KM4949	490098	5886629	75.8	Air-core	76	18	0	-90
KM4950	490010	5886652	75.5	Air-core	76	11	0	-90

KM4951	489928	5886579	75.8	Air-core	76	15	0	-90
KM4952	489941	5886311	76.3	Air-core	76	13	0	-90
KM4953	490346	5886309	81.1	Air-core	76	10	0	-90
KM4954	490445	5886331	83.1	Air-core	76	12	0	-90
KM4955	490542	5886358	82.1	Air-core	76	9	0	-90
KM4956	490775	5886293	79.9	Air-core	76	12	0	-90
KM4957	490871	5886284	81.0	Air-core	76	6	0	-90
KM4958	490957	5886281	87.1	Air-core	76	6	0	-90
KM4959	491052	5886271	85.2	Air-core	76	12	0	-90
KM4960	491157	5886260	87.0	Air-core	76	12	0	-90
KM4961	491258	5886247	80.5	Air-core	76	18	0	-90
KM4962	491315	5885728	85.0	Air-core	76	7	0	-90
KM4963	491316	5885600	84.4	Air-core	76	12	0	-90
KM4964	491314	5885537	82.8	Air-core	76	8	0	-90
KM4965	491314	5885426	82.9	Air-core	76	23	0	-90
KM4966	489927	5886020	76.8	Air-core	76	7	0	-90
KM4967	495527	5884338	105.7	Air-core	76	17	0	-90
KM4968	495523	5884210	107.4	Air-core	76	12	0	-90
KM4969	495519	5884090	107.7	Air-core	76	12	0	-90
KM4970	495648	5883964	108.2	Air-core	76	12	0	-90
KM4971	495653	5884071	107.4	Air-core	76	12	0	-90
KM4972	495652	5884200	105.8	Air-core	76	19	0	-90
KM4973	495657	5884325	103.1	Air-core	76	30	0	-90
KM4974	495654	5884445	107.3	Air-core	76	24	0	-90
KM4975	495769	5884453	110.3	Air-core	76	24	0	-90
KM4976	495778	5884330	106.9	Air-core	76	22	0	-90
KM4977	495770	5884213	107.5	Air-core	76	22	0	-90
KM4978	495769	5884095	104.8	Air-core	76	26	0	-90
KM4979	495764	5883969	108.4	Air-core	76	13	0	-90
KM4980	495762	5883853	111.1	Air-core	76	12	0	-90
KM4981	495867	5883747	110.5	Air-core	76	18	0	-90
KM4982	495879	5883850	110.3	Air-core	76	23	0	-90
KM4983	495868	5883961	106.0	Air-core	76	14	0	-90
KM4984	495870	5884081	105.0	Air-core	76	12	0	-90
KM4985	495874	5884204	110.7	Air-core	76	27	0	-90
KM4986	495881	5884328	111.5	Air-core	76	10	0	-90
KM4987	495884	5884446	111.4	Air-core	76	4	0	-90
KM4988	495883	5884560	106.8	Air-core	76	6	0	-90
KM4989	496008	5884569	107.8	Air-core	76	6	0	-90
KM4990	496005	5884453	110.0	Air-core	76	12	0	-90

KM4991	496006	5884331	112.0	Air-core	76	12	0	-90
KM4992	496009	5884224	110.7	Air-core	76	15	0	-90
KM4993	496010	5884085	111.7	Air-core	76	9	0	-90
KM4994	496008	5883974	107.7	Air-core	76	9	0	-90
KM4995	496007	5883852	108.2	Air-core	76	6	0	-90
KM4996	495417	5881286	99.7	Air-core	76	11	0	-90
KM4997	495415	5881181	96.9	Air-core	76	11	0	-90
KM4998	495418	5881080	100.6	Air-core	76	7	0	-90
KM4999	495416	5880894	104.0	Air-core	76	5	0	-90
KM5000	495416	5880797	104.9	Air-core	76	6	0	-90
KM5001	495413	5880684	103.6	Air-core	76	7	0	-90
KM5002	495915	5880393	103.4	Air-core	76	9	0	-90
KM5003	495919	5880301	104.3	Air-core	76	9	0	-90
KM5004	495918	5880206	107.3	Air-core	76	6	0	-90
KM5005	495914	5880100	109.5	Air-core	76	13	0	-90
KM5006	495912	5880000	107.5	Air-core	76	9	0	-90
KM5007	495913	5879908	108.3	Air-core	76	7	0	-90
KM5008	495910	5879803	108.7	Air-core	76	7	0	-90
KM5009	495911	5879705	109.0	Air-core	76	6	0	-90
KM5010	495908	5879590	105.1	Air-core	76	16	0	-90
KM5011	495911	5879490	106.1	Air-core	76	3	0	-90
KM5012	495909	5879396	107.9	Air-core	76	12	0	-90
KM5013	495907	5879283	107.4	Air-core	76	6	0	-90
KM5014	495415	5879713	105.1	Air-core	76	6	0	-90
KM5015	495410	5879822	105.0	Air-core	76	9	0	-90
KM5016	495525	5880129	106.1	Air-core	76	10	0	-90
KM5017	495619	5880128	108.7	Air-core	76	4	0	-90
KM5018	495710	5880128	111.4	Air-core	76	3	0	-90
KM5019	495817	5880130	111.2	Air-core	76	11	0	-90
KM5020	495913	5880516	103.5	Air-core	76	9	0	-90
KM5021	495918	5880623	107.0	Air-core	76	6	0	-90
KM5022	495920	5880724	110.6	Air-core	76	5	0	-90
KM5023	495914	5880822	107.8	Air-core	76	9	0	-90
KM5024	495917	5880921	106.7	Air-core	76	6	0	-90
KM5025	495918	5881026	109.2	Air-core	76	10	0	-90
KM5026	495919	5881124	109.8	Air-core	76	8	0	-90
KM5027	496117	5883731	110.6	Air-core	76	4	0	-90
KM5028	496127	5883855	110.3	Air-core	76	3	0	-90
KM5029	496119	5883970	108.2	Air-core	76	14	0	-90
KM5030	496127	5884086	105.5	Air-core	76	11	0	-90

KM5031	496126	5884087	105.6	Air-core	76	11	0	-90
KM5032	496129	5884199	109.4	Air-core	76	14	0	-90
KM5033	496141	5884319	111.9	Air-core	76	5	0	-90
KM5034	496119	5884450	108.5	Air-core	76	15	0	-90
KM5035	496129	5884556	108.4	Air-core	76	3	0	-90
KM5036	496143	5884672	111.8	Air-core	76	21	0	-90
KM5037	496263	5884692	114.8	Air-core	76	9	0	-90
KM5038	496265	5884567	113.5	Air-core	76	10	0	-90
KM5039	496239	5884450	110.3	Air-core	76	12	0	-90
KM5040	496261	5884320	112.7	Air-core	76	16	0	-90
KM5041	496239	5884210	112.2	Air-core	76	10	0	-90
KM5042	496241	5883726	109.5	Air-core	76	12	0	-90
KM5043	496362	5883721	110.4	Air-core	76	21	0	-90
KM5044	496363	5883840	110.0	Air-core	76	14	0	-90
KM5045	496361	5883969	109.7	Air-core	76	18	0	-90
KM5046	496361	5884081	112.6	Air-core	76	6	0	-90
KM5047	496366	5884213	112.1	Air-core	76	8	0	-90
KM5048	496362	5884332	111.5	Air-core	76	5	0	-90
KM5049	496359	5884437	111.1	Air-core	76	32	0	-90
KM5050	496363	5884559	114.5	Air-core	76	10	0	-90
KM5051	496492	5884459	112.0	Air-core	76	11	0	-90
KM5052	496488	5884335	110.9	Air-core	76	17	0	-90
KM5053	496487	5884209	112.2	Air-core	76	8	0	-90
KM5054	496489	5884090	115.0	Air-core	76	21	0	-90
KM5055	496488	5883974	114.3	Air-core	76	9	0	-90
KM5056	496493	5883863	111.2	Air-core	76	15	0	-90
KM5057	496485	5883732	113.0	Air-core	76	21	0	-90
KM5058	496610	5883817	111.5	Air-core	76	12	0	-90
KM5059	496608	5883950	114.5	Air-core	76	17	0	-90
KM5060	496605	5884084	114.5	Air-core	76	24	0	-90
KM5061	496605	5884207	114.6	Air-core	76	16	0	-90
KM5062	496610	5884332	112.7	Air-core	76	12	0	-90
KM5063	496606	5884328	112.7	Air-core	76	12	0	-90

Appendix 2 - Significant intersections greater than 500ppm TREO cutoff

Hole ID	From (m)	To (m)	Width (m)	TREO (ppm)	$(Nd_2O_3+Pr_6O_{11})$/TREO (%)	Dy_2O_3/TREO (%)
KM4913	9	11	2	614.81	18.4	2.66
KM4913	6	8	2	761.72	25.58	2.58
KM4913	2	3	1	551.48	20.37	2.31
KM4914	11	12	1	527.75	21.88	2.81
KM4916	4	5	1	522.54	19	2.53
KM4917	3	5	2	823.75	24.44	2.44
KM4918	2	3	1	526.56	18.63	2.53
KM4920	8	9	1	1353.14	28.49	2.92
KM4921	16	17	1	1734.45	22.38	2.19
KM4922	9	11	2	745.56	22.12	2.89
KM4923	1	3	2	960.78	21.97	2.55
KM4924	5	7	2	1146.56	22.17	2.85
KM4925	9	12	3	689.5	21.22	2.2
KM4925	5	6	1	1475.41	24.04	3.23
KM4926	0	3	3	1175.14	19.38	2.49
KM4927	7	10	3	1011.61	20.86	2.22
KM4927	3	6	3	1630.65	32.68	2.04
KM4928	8	9	1	913.23	29.56	2.4
KM4929	0	1	1	507.68	18.97	2.55
KM4930	2	3	1	557.01	25.21	2.29
KM4932	3	4	1	1198.75	18.54	2.01
KM4933	3	4	1	1694.22	20.19	2.26
KM4934	4	7	3	1228.21	17.31	1.9
KM4935	8	10	2	632.44	20.84	2.12
KM4936	7	8	1	888.42	23.16	2.29
KM4937	1	3	2	861.76	17.99	2.23
KM4938	5	6	1	857.93	22.84	2.43
KM4940	2	3	1	508.65	17.02	2.44
KM4941	4	5	1	604.34	17.33	2.77
KM4947	2	3	1	1292.75	23.21	2.09
KM4948	10	11	1	621.1	19.29	2.7
KM4948	6	9	3	1076.84	21.25	2.34
KM4950	3	4	1	2108.2	21.32	2.18
KM4952	4	5	1	605.55	18.74	3.03
KM4953	4	7	3	582.79	23.24	2.72
KM4956	2	3	1	524.06	24.08	1.98
KM4957	1	3	2	841.11	22.53	2.73
KM4958	2	3	1	642.8	19.34	2.41
KM4959	8	9	1	756.59	19.92	2.5
KM4962	3	4	1	739.73	17.5	2.3
KM4964	4	5	1	831.48	22.44	2.35
KM4965	7	11	4	688.65	20.16	2.27
KM4966	3	5	2	1086.68	16.37	2.12
KM4967	7	9	2	1227.32	20	2.72
KM4968	9	11	2	907.86	18.77	2.1
KM4969	3	5	2	1237.72	21.25	3.34
KM4970	6	8	2	2321.83	20.75	4.04
KM4971	4	6	2	895.64	16.93	3.61
KM4972	8	16	8	1483.09	23.99	2.83
KM4974	13	14	1	1268.27	21.45	3.22
KM4975	8	10	2	1458.83	13.8	1.61
KM4976	18	19	1	1653.6	29.8	2.69
KM4977	14	17	3	1107.6	21.32	3.41
KM4978	20	24	4	1062.74	23.1	4.04
KM4979	6	9	3	2140.75	21.01	2.47
KM4980	8	10	2	2129.22	23.27	2.63
KM4981	5	7	2	857.95	21.2	2.6
KM4983	5	8	3	1880.09	24.98	2.28
KM4984	6	8	2	811.86	24.66	2.23
KM4986	5	8	3	1192.18	18.24	3.98
KM4988	2	4	2	903.23	25.05	2.39
KM4989	1	2	1	700.93	13.75	1.92
KM4990	1	2	1	759.5	26.06	1.93
KM4991	6	8	2	1405.22	25.06	1.87
KM4992	10	12	2	1366.08	32.41	2.02
KM4993	6	8	2	1109.73	17.27	3.68

KM4995	3	4	1	767.32	26.38	2.12
KM4997	6	7	1	516.21	22.37	2.65
KM4997	3	5	2	767.08	22.56	2.65
KM4998	1	2	1	653.39	32.29	1.88
KM4999	2	3	1	1613.35	24.42	2.3
KM5000	1	3	2	1358.61	22.52	3.03
KM5001	1	4	3	1139.39	15.78	1.64
KM5002	3	4	1	1085.77	20.06	3.58
KM5003	6	7	1	794.48	16.33	2.76
KM5004	4	6	2	1377.32	24.27	2.5
KM5005	8	9	1	742.17	17.94	2.51
KM5007	1	2	1	623.7	20.37	3.09
KM5009	2	3	1	803.27	24.07	2.4
KM5010	4	6	2	906.09	20.74	2.78
KM5012	8	9	1	540.8	15.51	2.01
KM5014	2	5	3	1583.23	27.67	2.7
KM5015	5	6	1	1903.83	24.09	2.71
KM5016	7	9	2	1054.92	16.31	1.7
KM5017	1	3	2	1810.64	28.62	2.62
KM5020	4	6	2	658.76	20.21	2.04
KM5021	0	2	2	1098.03	30.28	2.4
KM5023	3	6	3	1342.22	26.74	2.25
KM5024	3	4	1	942.22	17.12	2.47
KM5025	1	3	2	842.86	18.64	1.88
KM5026	2	3	1	934.1	19.36	2.43
KM5028	1	2	1	907.5	27.98	2.71
KM5029	4	5	1	610.88	23.77	2.24
KM5029	2	3	1	579.19	14.79	1.94
KM5030	6	9	3	848.89	25.7	2.8
KM5031	5	8	3	1293.14	20.8	3
KM5032	10	12	2	1070.33	18.35	2.51
KM5035	1	2	1	921.62	20.13	2.55
KM5036	6	8	2	620.1	17.93	2.29
KM5036	1	3	2	1202.47	27.43	3
KM5037	3	5	2	1301.44	25.93	2.43
KM5038	5	8	3	1683.4	26.38	2.06
KM5039	6	8	2	1019.59	18.73	2.71
KM5040	10	11	1	648.09	21.35	2.36
KM5040	5	8	3	1555.8	27.7	2.16
KM5041	2	3	1	888.17	20.04	2.92
KM5042	0	2	2	572.95	16.95	2.32
KM5043	12	14	2	903.37	24.04	2.4
KM5046	1	2	1	552.96	18.67	2.84
KM5047	2	3	1	751.33	15.11	2.75
KM5048	1	3	2	646.7	22.48	2.97
KM5050	7	9	2	1130.6	19.12	3.21
KM5051	6	8	2	981.5	18.23	3.31
KM5053	3	5	2	2034.67	22.76	1.9
KM5054	9	10	1	1065.7	20.07	2.52
KM5054	6	7	1	3091.46	24.33	2.2
KM5055	3	5	2	1482.42	19.79	3.12
KM5056	4	5	1	699.62	18.79	2.33
KM5057	10	12	2	635.69	18.66	2.32
KM5057	3	4	1	1016.8	18.74	2.77
KM5058	2	8	6	1354.84	27.91	3.14
KM5059	12	15	3	6101.16	33.27	2.29
KM5060	14	17	3	944.73	22.49	2.77
KM5061	2	4	2	902.86	19.58	3.18
KM5062	1	3	2	2548.93	21.57	1.83
KM5063	1	3	2	1687.63	20.57	2.21