AUSTRALIAN RARE EARTHS

ASX ANNOUNCEMENT
25 November 2021

Initial Assays Confirm the Regional Prospectivity of Koppamurra Project

Highlights

- **Initial assays from the current Koppamurra drilling programme confirm grades ranging from 600ppm to 1000ppm Total Rare Earth Oxide (TREO), consistent with the maiden resource average grade of 725ppm released in April 2021**
- **Regional exploration confirms clay hosted rare earth mineralisation extends at least 40km north of the existing Red Tail and Yellow Tail mineral resource area, demonstrating the significant prospectivity potential across the 4000km^2 of tenure held by AR3**
- **The current 8,000m air-core drilling program is now ~70% complete with over 2,500 samples selected for submission for assay from 458 drill holes**
- **The remainder of the current program is focussed on additional drilling at EL6509 (Red Tail and Yellow Tail) to extend the resource with update planned for Q1 2022**
- **AR3 has been granted two additional tenements in South Australia, EL6690 (Keith) and EL6691 (Bordertown)**

Australian Rare Earths Limited (ASX: **AR3**) received a selection of expedited assay results from EL6613 (Francis), submitted to confirm the regional extent of rare earth mineralised clay.

Samples from all 10 drillholes generated significant intersections and returned grades and clay thicknesses consistent with those reported on the Red Tail and Yellow Tail maiden resource on EL6509 (Comaum).

Table 1 – Significant Intersections from Initial Assays from Drilling on EL6613 (Francis)

Koppamurra Current Drilling Programme – November 2021												
Drill Hole	Depth	Depth	Thickness	TREO	Magnet Rare Earths							
					Praseodymium		Neodymium		Terbium		Dysprosium	
	From	To			Pr_6O_{11}		Nd_2O_3		Tb_4O_7		Dy_2O_3	
	metres	metres	metres	ppm	ppm	% TREO	ppm	%	ppm	% TREO	ppm	% TREO
KM0425	7	8	1	944	41.8	4.43	174	18.4	5.55	0.588	28.8	3.05
KM0434	3	8	5	615	25.2	4.24	99.8	16.6	2.76	0.44	14.6	2.31
KM0441	4	6	2	778	39.5	4.92	152	19.1	3.8	0.495	19.7	2.59
KM0456	11	12	1	892	35.5	3.98	142	16	4.52	0.507	25.6	2.87
KM0467	7	9	2	1008	35.9	3.54	152	15	6.43	0.647	36.9	3.73
KM0512	9	10	1	853	35.5	4.17	145	17	4.07	0.477	21.8	2.56
KM0513	14	16	2	699	28.5	4.19	111	16.2	2.68	0.366	14.6	1.95
KM0514	14	17	3	602	29	4.66	114	18.3	3.06	0.502	16.5	2.75
KM0515	10	12	2	766	28.7	3.74	113	14.8	3.41	0.46	18.4	2.49
KM0516	4	5	1	830	33.7	4.06	134	16.2	3.95	0.476	22	2.66

Notes: 1 - Totals may not sum due to rounding. 2: Cut-off grade of 350 ppm TREO 3: Calculated by downhole sample length weighted averages

Table 2 – Maiden Inferred Resource at Red Tail and Yellow Tail on EL6509 (Comaum)

Koppamurra Mineral Resource Estimate - April 2021										
			Magnet Rare Earths							
			Praseodymium		Neodymium		Terbium		Dysprosium	
Prospect	**Tonnes**	**TREO**	Pr_6O_{11}		Nd_2O_3		Tb_4O_7		Dy_2O_3	
	Mt	ppm	ppm	% TREO	ppm	% TREO	ppm	% TREO	ppm	% TREO
Inferred										
Yellow Tail	10.0	903	39.8	4.4%	156.9	17.4%	4.3	0.5%	23.9	2.6%
Red Tail	29.5	668	29.5	4.4%	114.1	17.1%	3.2	0.5%	17.7	2.6%
Red Tail	0.4	520	23.5	4.5%	89.1	17.1%	2.4	0.5%	13.3	2.6%
Total	**39.9**	**725**	**32.0**	**4.4%**	**124.6**	**17.2%**	**3.5**	**0.5%**	**19.2**	**2.6%**

Note 1 - Independent Geologist's Report, 28 April 2021, included in AR3 Prospectus dated 7 May, 2021

Note 2 - Totals may not sum due to rounding

Note 3 - MRE reported at a cut-off grade of 325 ppm TREO-Ce

EL6613 (Francis) is located ~40km north of the reported Red Tail and Yellow Tail Mineral Resource located at EL6509 (Comaum).

The geological setting for shallow accumulation of rare earth clays over limestone remains highly prospective and supports on-going regional exploration on AR3's ~4000km^2 of granted tenure.

Commenting on the successful progression of the current program, AR3 Managing Director, Mr Don Hyma said:

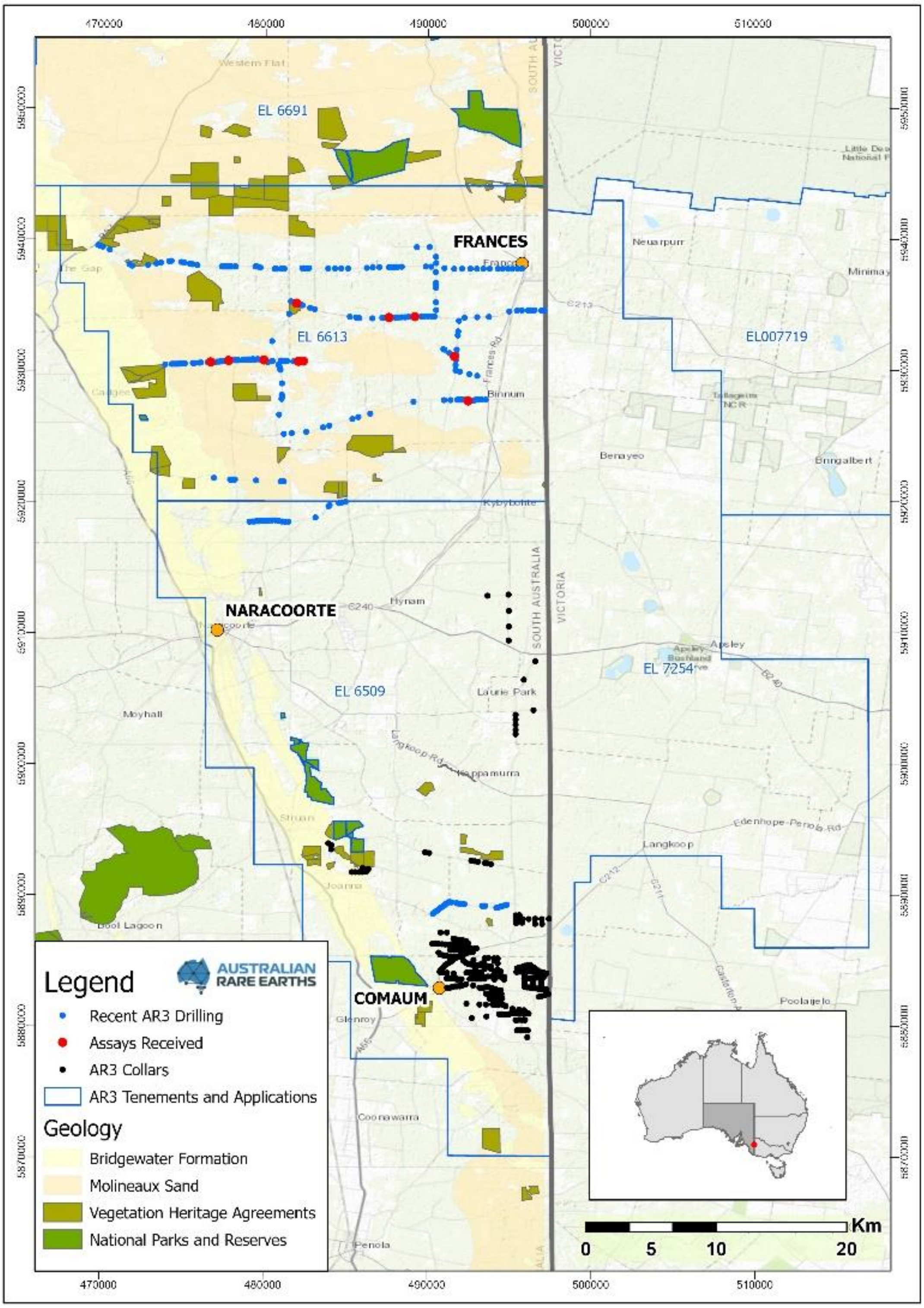
"These initial results are an important validation of the regional extent of this style of mineralisation, and a positive indication of the potential size of resources that could be defined within our large holding of exploration tenure."

The current drilling program commenced on 6 October 2021 and is on schedule for completion in December.

To-date, 458 holes have generated 5,768m of drill core with more than 2,500 samples currently selected for submission for assay.

The overall programme is notionally 8,000m in total with the remainder of the program focussed on in-fill drilling at the Red Tail and Yellow Tail to extend the size of the resource and classification under the JORC 2012 reporting code. An updated resource model and results are expected to be released in Q1 2022.

Figure 1 – Recent AR3 Drilling on EL 6613 (Francis) in relation to Red Tail and Yellow Tail Mineral Resource located at EL6509 (Comaum).



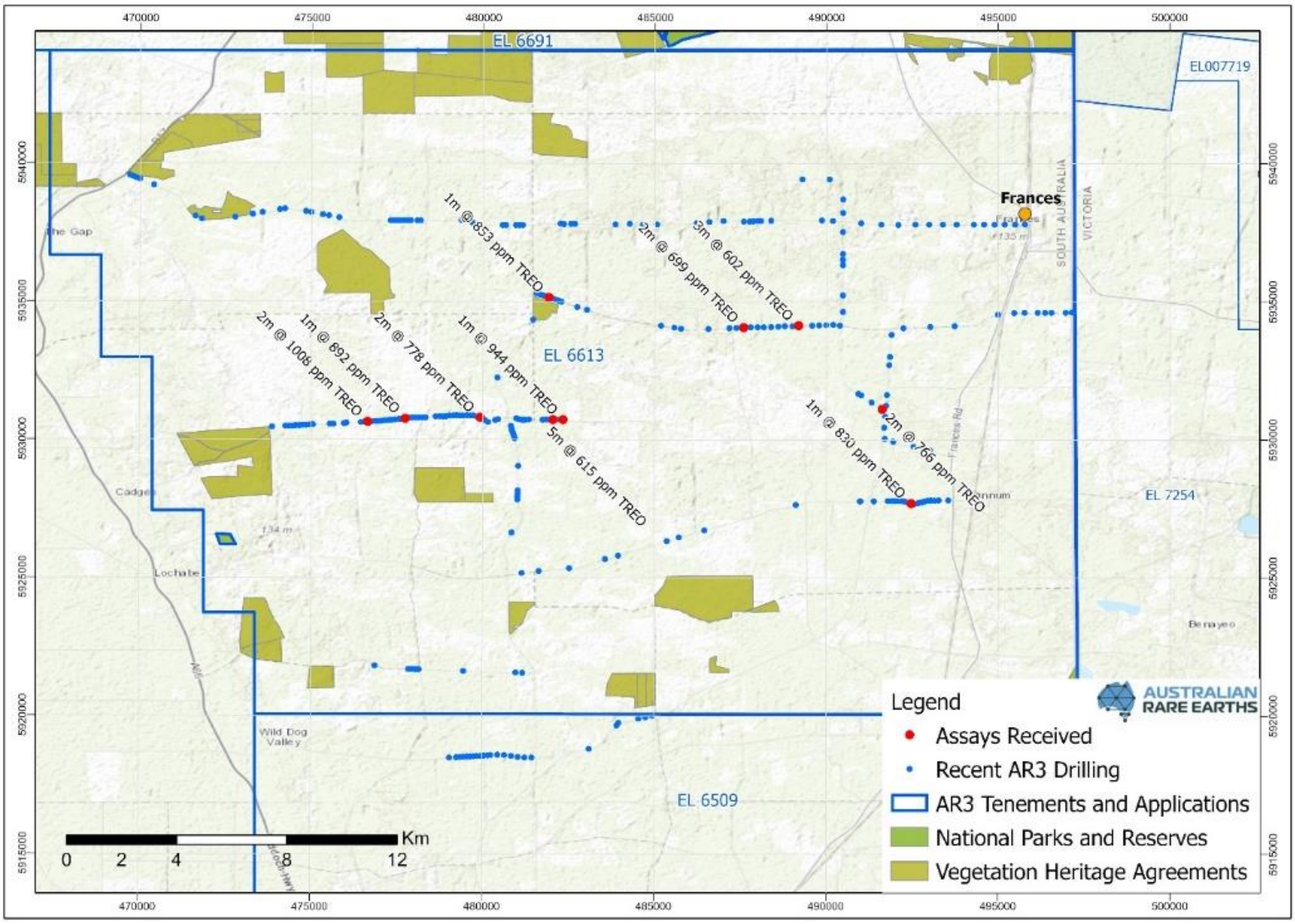
Australian Rare Earths Limited
ABN 73 632 645 302

Level 10, 111 Gawler Place
Adelaide, SA 5000

Phone: 1300 646 100
Email: hello@ar3.com.au
Website: www.ar3.com.au

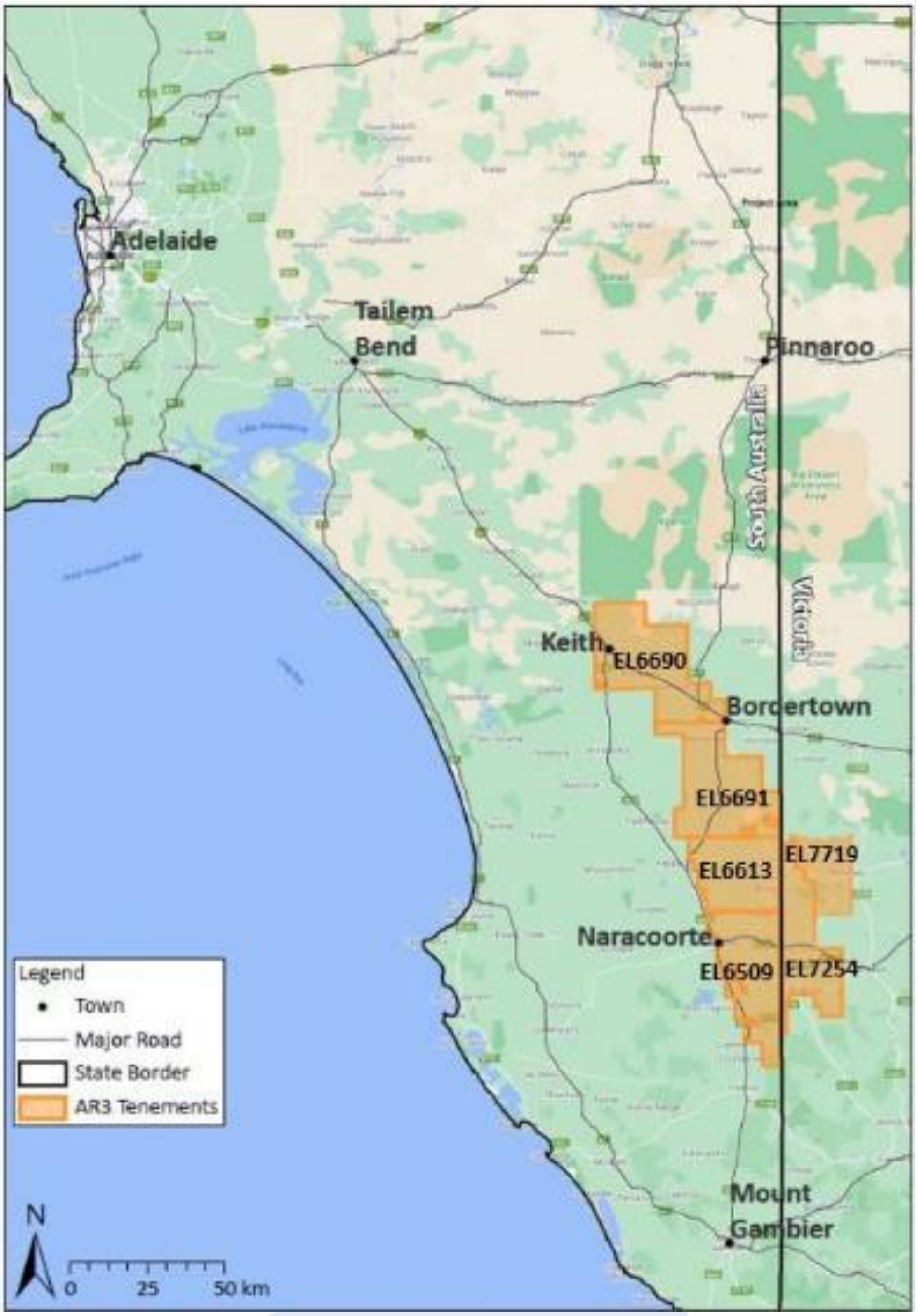
ASX Code: **AR3**

Figure 2 – Recent AR3 Drilling with Significant Intersections at EL6613 (Frances)



AR3 is also pleased to announce two additional tenements have been granted as Exploration Licenses EL6690 (Keith) and EL6691 (Bordertown) which supplement existing licenses EL6509 (Hynam/Comaum) and EL6613 (Frances).

Figure 3 – Recently Granted Tenements at Keith and Bordertown



Australian Rare Earths Limited
ABN 73 632 645 302

Level 10, 111 Gawler Place
Adelaide, SA 5000

Phone: 1300 646 100
Email: hello@ar3.com.au
Website: www.ar3.com.au

ASX Code: **AR3**

The Board of Australian Rare Earths Limited authorised this announcement for release to the ASX.

For further Information please contact:

Mr Donald Hyma
Managing Director
Tel: 1300 646 100
E: hello@ar3.com.au

Mr Damien Connor
Company Secretary/Chief Financial Officer
Tel: 1300 646 100
E: hello@ar3.com.au

For Media and Broker queries contact:

Michael Weir / Cameron Gilenko
Citadel-MAGNUS
Tel: 0402 347 032 / 0466 984 953
E: mweir@citadelmagnus.com / cgilenko@citadelmagnus.com

Competent Person 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 Rickie Pobjoy who is the Executive 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.

The Company confirms that it is not aware of any new information or data that materially affects the information included in the relevant market announcement (Prospectus dated 7 May 2021) and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement (Prospectus dated 7 May 2021) continue to apply and have not materially changed. The company confirms that the form and context in which the Competent Person’s findings are presented have not been materially modified from the original market announcement (Prospectus dated 7 May 2021).

About Australian Rare Earths Limited

Australian Rare Earths (AR3) is committed to the timely exploration and development of its 100% owned, Koppamurra Project, located in South Australia and Victoria. Koppamurra is a prospective ionic clay hosted rare earth deposit; uniquely endowed in the magnet rare earth elements, Neodymium (Nd), Praseodymium (Pr), Dysprosium (Dy) and Terbium (Tb). These elements are key ingredients in the manufacture of high strength permanent magnets which in turn are essential components in manufacturing energy efficient electric motors.

The Company is developing a strategy with the goal of becoming a recognised participant in a transparent rare earth permanent magnet supply chain that principal end-users, such as manufacturers of electric vehicles, wind turbines and household appliances, are seeking. In doing so, the Company aims to contribute to societies’ transition to a carbon free global economy, not only through reduced consumption of fossil fuel but also through more efficient use of available power which rare earth permanent magnets have a unique role to play.

Drill Hole Collars

Hole ID	East (m)	North (m)	RL (m ASL)	Drill Method	Down Hole Width (mm)	Total Depth EOH (m)	Azimuth	Dip Direction
KM0425	482326	5930740	96.4	Aircore	76	9	0	-90
KM0434	482034	5930720	94.3	Aircore	76	9	0	-90
KM0441	479910	5930810	87.5	Aircore	76	9	0	-90
KM0456	477736	5930760	85.5	Aircore	76	14	0	-90
KM0467	476658	5930640	87.1	Aircore	76	12	0	-90
KM0512	481922	5935160	104.10	Aircore	76	12	0	-90
KM0513	487600	5934060	107.7	Aircore	76	18	0	-90
KM0514	489185	5934130	104.8	Aircore	76	18	0	-90
KM0515	491626	5931110	101.1	Aircore	76	14	0	-90
KM0516	492466	5927700	98.2	Aircore	76	7	0	-90

Note: Co-ordinates are Geocentric Datum of Australia (GDA94, Zone 54)

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*	*RC Aircore drilling methods were used obtain samples from the October / November 2021 drilling programmes.* *The following information covers the sampling process:* • *All air core samples were collected from the rotary splitter rotary splitter mounted at the bottom of the cyclone using a pre-numbered calico bag. The samples were geologically logged at 1 m interval. The aircore sample averaged ~1.5 kg in mass. The samples were then placed in marked calico bags maintaining their appropriate depths* • *A handheld Olympus Delta XFR Analyser was used to assess the geochemistry of the core in field samples. 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 saved onto an Excel spreadsheet.* • *Field duplicates were taken at a rate of ~ 1:15 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 30 samples.* • *Commercially obtained standards were inserted by the laboratory at a rate of ~ 1 in 15 into the sample.*

Criteria	Explanation	Comment
	has inherent sampling problems. Unusual commodities or mineralisation types (e.g., submarine nodules) may warrant disclosure of detailed information.	
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).*	• *McLeod Drilling used a Toyota Land air core rig and support vehicle for the aircore 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 5 m and 27 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 programme.* • *No significant loses of samples were observed due to the shallow drilling depths (≤30 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 bag 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*

Criteria	Explanation	Comment
		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 or written into a notebook and later transferred to Excel. The data was uploaded to the Azure Data Studio database and subjected to numerous validation queries.* • *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.*	• *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, duplicates were collected by hand from the plastic UV bags which captured the other 80% of the material recovered from any interval.* • *The material in the plastic UV bags was mixed up and every attempt to take as representative sample of the material as 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*

Criteria	Explanation	Comment
	Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling. *Whether sample sizes are appropriate to the grain size of the material being sampled.*	*Naracoorte base at the end of each day. The polyweave bags where 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 only if it contained the clay component. Samples without the clay component were discarded at the drill site by pouring the samples back into the drilled hole.* • *Field duplicates of all the samples were completed at a frequency of 1 per 15 samples. Standard reference Material (SRM) samples were inserted into the sample batches at a frequency rate of 1 per 15 samples by the laboratory and a repeat sample was taken at a rate of 1 per 30 samples.* • *A geologist oversaw the sampling and logging process while the Technical Director selected samples for analysis based on the logging descriptions. 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 derivation, etc.* *Nature of quality control procedures adopted (e.g., standards, blanks, duplicates, external laboratory checks) and whether acceptable levels*	• *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 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 fused with Lithium Borate to ensure all elements are brought into solution. The digests are then analysed for the following elements (detection Limits shown): Ag (0.1) Al*

Criteria	Explanation	Comment
	of accuracy (i.e., lack of bias) and precision have been established.	*(100) As (1) Ba (1) Be (0.5) Bi (0.1) Ca(100) Cd (0.5) Ce (0.1) Co (1) Cr (10) Cs (0.1) Cu (1) Dy(0.05) Er(0.05) Eu(0.05) Fe(100) Ga (0.2) Gd (0.2) Hf (0.2) Ho(0.02) In (0.05) K (100) La (0.5) Li (0.5) Lu (0.02) Mg (100) Mn (2) Mo (0.5) Na (100) Nb (0.5) Nd (0.05) Ni (2) P (100) Pb (1) Pr (0.2) Rb (0.2) Re (0.1) S (50) Sb (0.1) Sc (1) Se (5) Si (100) Sm(0.05) Sn (1) Sr (0.5) Ta (0.1) Tb (0.02) Te (0.2) Th (0.1) Ti (50) Tl (0.1) Tm (0.2) U (0.1) V (5) W (0.5) Y (0.1) Zn (2) Zr (1) Yb (0.05).* • *Field duplicates were collected and submitted at a frequency of 1 per 15 samples.* • *Bureau Veritas completed its own internal QA/QC checks that included a Laboratory repeat every 30th sample and a standard reference sample every 15th sample prior to the results being released.* • *Analysis of QA/QC samples show the laboratory data to be of acceptable accuracy and precision.* • *No standards or blanks were submitted by Australian Rare Earths.* *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 of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.* *The use of twinned holes.* *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.*	• *All results are checked by the company's 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 directly to the database.* • *Assay data was received in digital format from the laboratory and was uploaded directly to the database* • *Field and laboratory duplicate data pairs of each batch are plotted to identify potential quality control issues.*

Criteria	Explanation	Comment
	Discuss any adjustment to assay data.	• *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 were exported from the Australian Rare Earths Limited database 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 Y_2O_3 is included in the TREO, HREO and CREO calculation. TREO = $La_2O_3 + CeO_2 + Pr_6O_{11} + Nd_2O_3 + Sm_2O_3 + Eu_2O_3 + Gd_2O_3 + Tb_4O_7 + Dy_2O_3 + Ho_2O_3 + Er_2O_3 + Tm_2O_3 + Yb_2O_3 + Lu_2O_3 + Y_2O_3$ CREO = $Nd_2O_3 + Eu_2O_3 + Tb_4O_7 + Dy_2O_3 + Y_2O_3$ LREO = $La_2O_3 + CeO_2 + Pr_6O_{11} + Nd_2O_3$ HREO = $Sm_2O_3 + Eu_2O_3 + Gd_2O_3 + Tb_4O_7 + Dy_2O_3 + Ho_2O_3 + Er_2O_3 + Tm_2O_3 + Yb_2O_3 + Lu_2O_3 + Y_2O_3$ NdPr = $Nd_2O_3 + Pr_6O_{11}$ TREO-Ce = TREO - CeO_2 • % NdPr = NdPr/ TREO

<table>
<tr><th>Criteria</th><th>Explanation</th><th>Comment</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>Element Name</td><td>Element Oxide</td><td>Oxide Factor</td></tr>
<tr><td>Ce</td><td>CeO2</td><td>1.2284</td></tr>
<tr><td>Dy</td><td>Dy2O3</td><td>1.1477</td></tr>
<tr><td>Er</td><td>Er2O3</td><td>1.1435</td></tr>
<tr><td>Eu</td><td>Eu2O3</td><td>1.1579</td></tr>
<tr><td>Gd</td><td>Gd2O3</td><td>1.1526</td></tr>
<tr><td>Ho</td><td>Ho2O3</td><td>1.1455</td></tr>
<tr><td>La</td><td>La2O3</td><td>1.1728</td></tr>
<tr><td>Lu</td><td>Lu2O3</td><td>1.1371</td></tr>
<tr><td>Nd</td><td>Nd2O3</td><td>1.1664</td></tr>
<tr><td>Pr</td><td>Pr6O11</td><td>1.2082</td></tr>
<tr><td>Sc</td><td>Sc2O3</td><td>1.5338</td></tr>
<tr><td>Sm</td><td>Sm2O3</td><td>1.1596</td></tr>
<tr><td>Tb</td><td>Tb4O7</td><td>1.1762</td></tr>
<tr><td>Th</td><td>ThO2</td><td>1.1379</td></tr>
<tr><td>Tm</td><td>Tm2O3</td><td>1.1421</td></tr>
<tr><td>U</td><td>U3O8</td><td>1.1793</td></tr>
<tr><td>Y</td><td>Y2O3</td><td>1.2699</td></tr>
<tr><td>Yb</td><td>Yb2O3</td><td>1.1387</td></tr>
</table>
</td></tr>
<tr><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 drillholes 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 GDA94/MGA Zone 54.
• Topographic data is derived from handheld GPS readings with limited accuracy.

The accuracy of the locations is sufficient for this stage of exploration.</td></tr>
<tr><td>Data spacing and distribution</td><td>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</td><td>• The holes were largely drilled at between 100 m and 400 m spacings along accessible road verges and within paddocks of private land holdings.
• The drilling program of aircore holes was conducted to determine the regional prospectivity of the wider Koppamurra Project area.</td></tr>
</table>

Criteria	Explanation	Comment
	Ore Reserve estimation procedure(s) and classifications applied. *Whether sample compositing has been applied.*	*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 mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	*The Koppamurra mineralisation is interpreted to be hosted in flay lying clays that are horizontal.* *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 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*

Criteria	Explanation	Comment
		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.*
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	*Internal reviews were undertaken by Aussie Geologic Pty Ltd during the drilling, sampling and geological logging process and throughout the sample collection and dispatch process.* *A review of the database was also undertaken by Inception Group – 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 Exploration Licenses (EL), EL6509 and EL6613 covering a combined area of 1,443 km^2 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 Southeast #1 has been registered but is yet to be determined. The claim area includes the areas covered by EL's 6509 and 6613.* • *The exploration work was completed on the tenements (EL 6509 and EL6613) in South Australia 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 14/09/2022.* • *The Exploration License EL6613 original date of grant was 07/07/2021 with an expiry date of 06/07/2027.* • *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.*

AUSTRALIAN RARE EARTHS

Criteria	Explanation	Comment
		REE mineralisation at Koppamurra is hosted by a clay unit interpreted to have been deposited onto a limestone base (Gambier Limestone) and accumulated in an interdunal, lagoonal or estuarine environment and the source of the REE at Koppamurra is most likely basalt associated alkali volcanics of the Newer Volcanics Province in south-eastern Australia. Mineralogy of the clay is indicative of formation under mildly alkaline conditions in a marine or coastal environment from fine-grained sediments either river transported or windblown thereby supporting this interpretation. *Mineralogical test work conducted on clay sample from the project area established that the dominant clay minerals are smectite and kaolin, and 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 sample 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.*

Criteria	Explanation	Comment
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 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.*	*The material information for drill holes relating to this report are contained within Appendices of this report.* *Drillhole collars for holes described in this report which have not received assays have not been listed in the collar table appendix to the report, as they are not considered material, but are visible in the attached map identified as Recent AR3 Drilling.*
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*	*No metal equivalents have been used.* • *Significant intercepts are calculated using downhole sample length weighted averages and a lower cut-off grade of 350 ppm TREO.* • *A full list of drillholes with significant intercepts >350ppm TREO can be found in the body of this report.*

Criteria	Explanation	Comment
	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.*	