AUSTRALIAN RARE EARTHS

ASX ANNOUNCEMENT
19 January 2022

Recent Drilling Confirms Significant Regional Prospectivity of Koppamurra

Highlights

- **Results from 174 drillholes representing a significant portion of the regional prospectivity drilling conducted on EL6613 (Francis), confirm shallow rare earth mineralised clayey sediments across a wide region of the Koppamurra Project area.**
  - **At a 350ppm Total Rare Earth Oxide (TREO) cut-off grade, 124 or 71% of the drill holes generated significant intersections, averaging 663ppm TREO**
  - **At a 500ppm TREO cut-off grade, 109 or 63% of the drill holes generated significant intersections, averaging 800ppm TREO**
- **Importantly, the average of the combined Neodymium/Praseodymium contents of the TREO (21.5%), and the average Dysprosium content of the TREO (2.5%) for these intersections is consistent with the magnet rare earth contents of the Red Tail and Yellow Tail resources ~40km's to the south**
- **Like the Red Tail and Yellow Tail deposits, rare earth mineralisation identified in the assays from this recent drilling occurs in shallow settings within the wider region.**
- **Extension drilling to the north and south of Red Tail and Yellow Tail continues to indicate a prospective setting for the accumulation of rare earth mineralisation and a 10,000m drilling program is planned for commencement in February 2022 to define additional resources there.**

Australian Rare Earths Limited (ASX: **AR3**) ('**AR3**' or the **Company**) is pleased to announce the following update on exploration activities on its 100% owned, flagship Koppamurra Project, located in South Australia and Victoria.

The recent exploration program across targeted areas at Koppamurra has been completed, drilling 899 drillholes for 9,921m. Assay results from over 1,100 samples representing 174 of 298 drillholes of the regional prospectivity program at EL6613 (Francis), ~58% have now been received from the laboratory and interpreted. The remaining 601 drillholes for 5,574m completed by 31 December 2021 was focussed on EL6509 (Red Tail and Yellow Tail) to expand the mineral resource at that location.

The regional exploration results across a wide area of EL 6613 (Francis) confirmed significant intersections averaging 660ppm to 800ppm Total Rare Earth Oxide (TREO), consistent with the Maiden Resource Estimate (MRE) average grade of 725ppm released in April 2021. Importantly, these results are from drill holes approximately 40km north of the reported Red Tail and Yellow Tail Mineral Resource located at EL6509 (Comaum), demonstrating the significant regional prospectivity of Koppamurra. Figure 1 shows a plan view of the tenements and the drill hole locations. Results identified in EL 6509 (Comaum) were part of previous exploration work undertaken by AR3.

Australian Rare Earths Limited
ABN 73 632 645 302

Level 10, 111 Gawler Place
Adelaide, SA 5000
Phone: 1300 646 100

ASX Code: AR3

Website: www.ar3.com.au

Email: hello@ar3.com.au

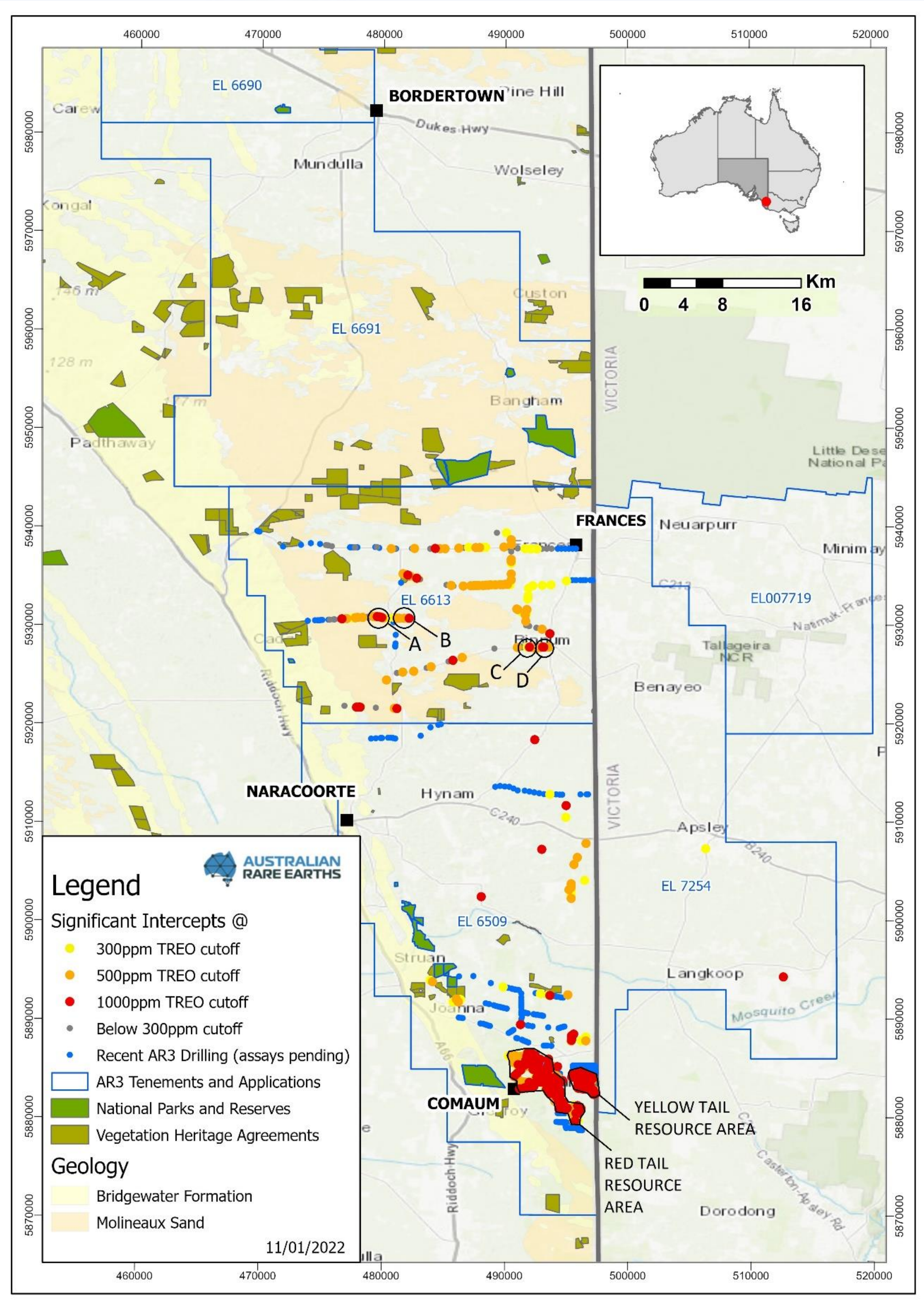

Figure 1 – Recent AR3 drillhole locations on EL 6613 (Francis) and EL6509 (Comaum)

The program successfully achieved two key objectives.

Firstly, the regional exploration drilling demonstrated the prospectivity of the Koppamurra region by confirming clay hosted rare earth mineralisation at least 40km north of the existing mineral resource area.

Secondly, the additional drilling has identified extended prospectivity to the Red Tail and Yellow Tail Inferred Resources[1]. Therefore, a further 10,000m drilling program will commence in February 2022 to generate additional data to further expand the MRE at Red Tail and Yellow Tail. This new program will push back the previously targeted completion date of an updated resource estimate. The Company is confident that inclusion of the additional exploration work will ultimately provide greater potential value to shareholders.

Koppamurra Drilling Program Highlights – January 2022												
Drill Hole	**Depth From**	**Depth To**	**Thickness**	**TREO**	**Magnet Rare Earths**							
					Praseodymium		**Neodymium**		**Terbium**		**Dysprosium**	
					Pr_6O_{11}		**Nd_2O_3**		**Tb_4O_7**		**Dy_2O_3**	
	(m)	(m)	(m)	(ppm)	(ppm)	% TREO	(ppm)	% TREO	(ppm)	% TREO	(ppm)	% TREO
KM0299	9	10	1	1312	59	4.5	240	18.3	6	0.4	30	2.3
KM0302	10	11	1	1837	80	4.4	331	18.0	8	0.4	40	2.2
KM0357	20	21	1	1234	45	3.6	223	18.1	7	0.6	38	3.1
KM0380	8	9	1	1677	78	4.7	296	17.7	6	0.4	31	1.8
KM0387	7	8	1	1600	76	4.8	292	18.2	7	0.4	34	2.1
KM0387	9	10	1	1003	48	4.8	188	18.7	4	0.4	20	2.0
KM0389	8	10	2	1179	58	4.9	220	18.6	5	0.4	24	2.1
KM0390	6	9	3	1133	54	4.8	199	17.5	4	0.4	22	2.0
KM0391	7	9	2	1639	95	5.4	360	20.6	7	0.4	32	2.2
KM0396	8	9	1	1277	55	4.3	243	19.0	8	0.6	44	3.4
KM0410	5	6	1	1014	43	4.3	166	16.3	5	0.5	27	2.6
KM0411	3	4	1	1020	46	4.5	182	17.8	4	0.4	23	2.3
KM0412	4	5	1	1287	55	4.3	212	16.5	5	0.4	28	2.2
KM0423	19	25	6	1410	70	4.9	265	18.5	5	0.4	28	2.1
KM0426	7	8	1	1510	87	5.8	311	20.6	8	0.5	35	2.3
KM0438	12	14	2	1200	51	4.1	195	16.0	6	0.5	32	2.8
KM0441	4	5	1	1111	59	5.3	225	20.3	5	0.5	27	2.5
KM0442	6	9	3	1595	75	4.6	284	17.6	7	0.5	38	2.4
KM0443	4	6	2	1320	67	4.8	255	18.6	8	0.6	41	3.0
KM0444	8	10	2	1304	62	4.4	233	17.0	6	0.5	31	2.8
KM0465	7	9	2	1311	51	3.8	199	15.0	6	0.5	35	2.9
KM0467	7	9	2	1008	36	3.5	152	15.0	6	0.6	37	3.7

Table 1: A selection of results from EL 6613 (Francis)

[1] Resources reported at a cut-off grade of 325 ppm TREO-Ce and included in the AR3 Prospectus dated 7 May 2021

AUSTRALIAN RARE EARTHS

Four cross sections have been produced. These cross sections demonstrate the shallow nature of the mineralisation and demonstrate that REEs are accumulating in the clayey sediments sitting atop the Gambier Limestone. Figure 1 shows the locations of the 4 cross sections, labelled A, B, C and D. The cross-section locations are described as follows:

Cross Section A – Range Road (Figure 2)

Cross Section B – Malone Road (Figure 3)

Cross Section C – Boddingtons Road, East (Figure 4)

Cross Section D – Boddingtons Road East, Binnum (Figure 5)

The consistent shallow nature of the deposit is beneficial to the Project in several ways. Shallow deposits allow for the type of rapid exploration drilling that the Company has successfully performed, leading to swift understanding of the deposit, and the delineation of additional JORC compliant mineral resources. Eventually this will also allow for a shallow production profile with less ground disturbance and will be supportive of progressive remediation during mining.

The cross sections shown for this Francis region indicate significant widths of shallow Rare Earth Element (REE) mineralisation and the potential for significant along strike extension which could be quickly and easily delineated with follow up drilling.

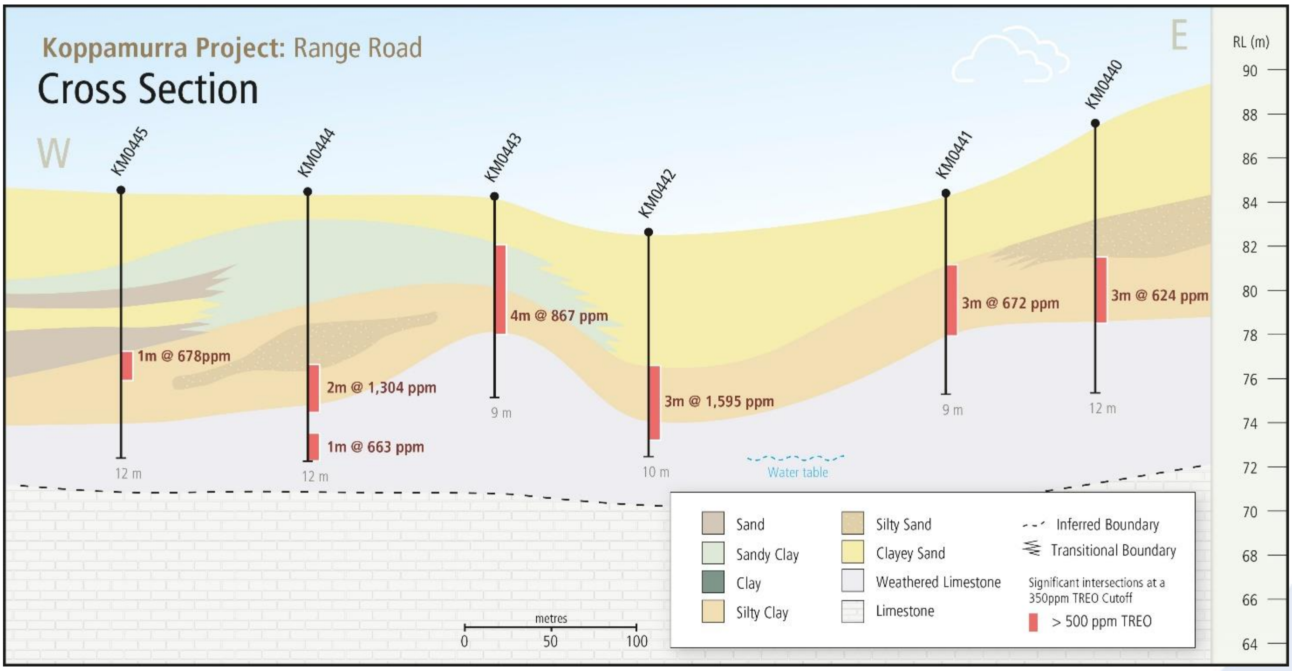

Figure 2 – Cross Section A – Range Road

AUSTRALIAN RARE EARTHS

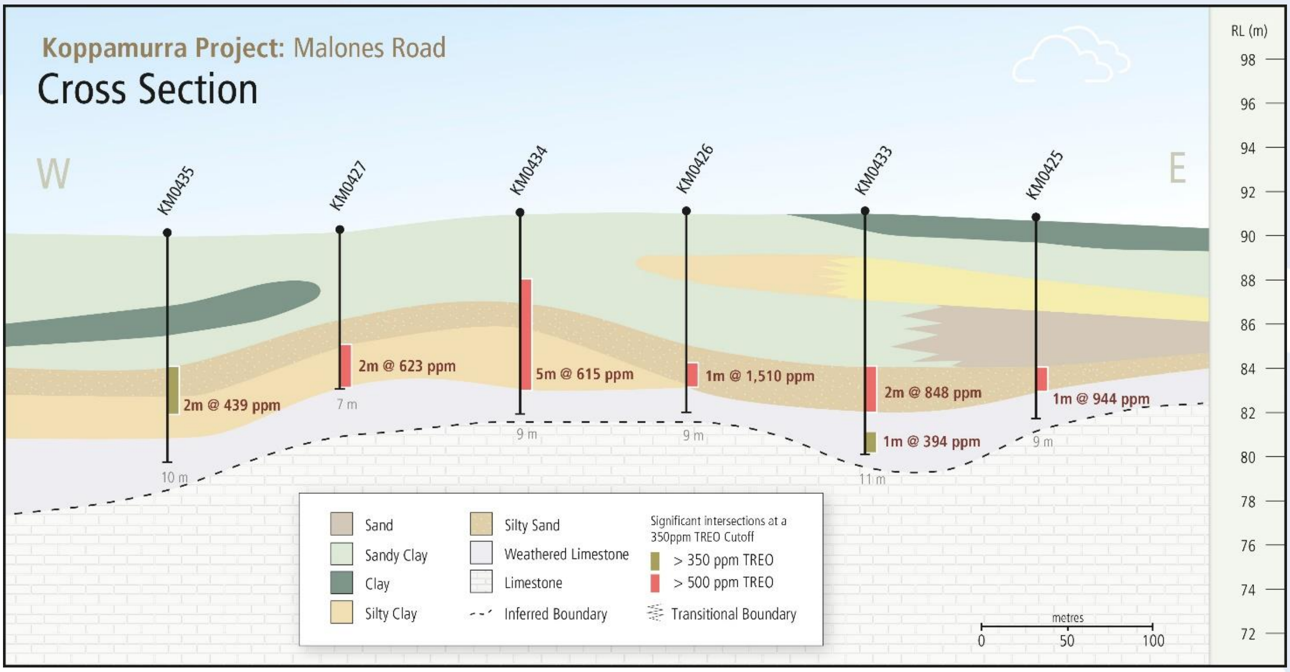

Figure 3 – Cross Section B – Malones Road

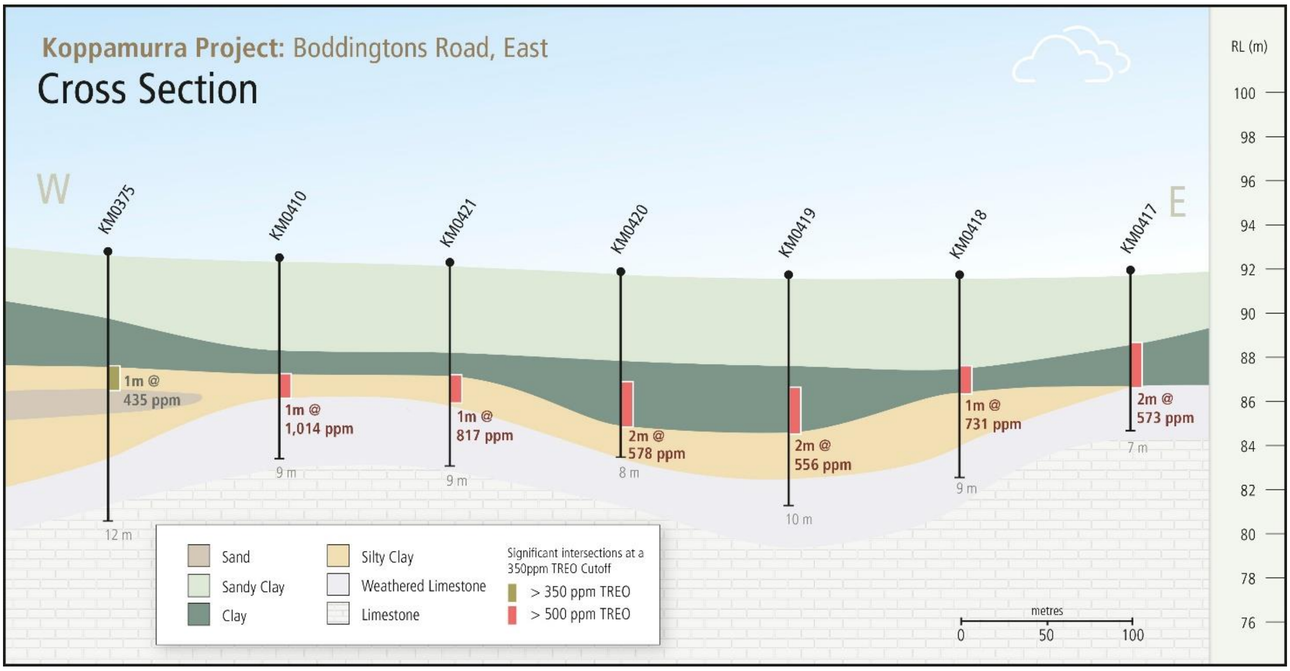

Figure 4 – Cross Section C – Boddingtons Road, East

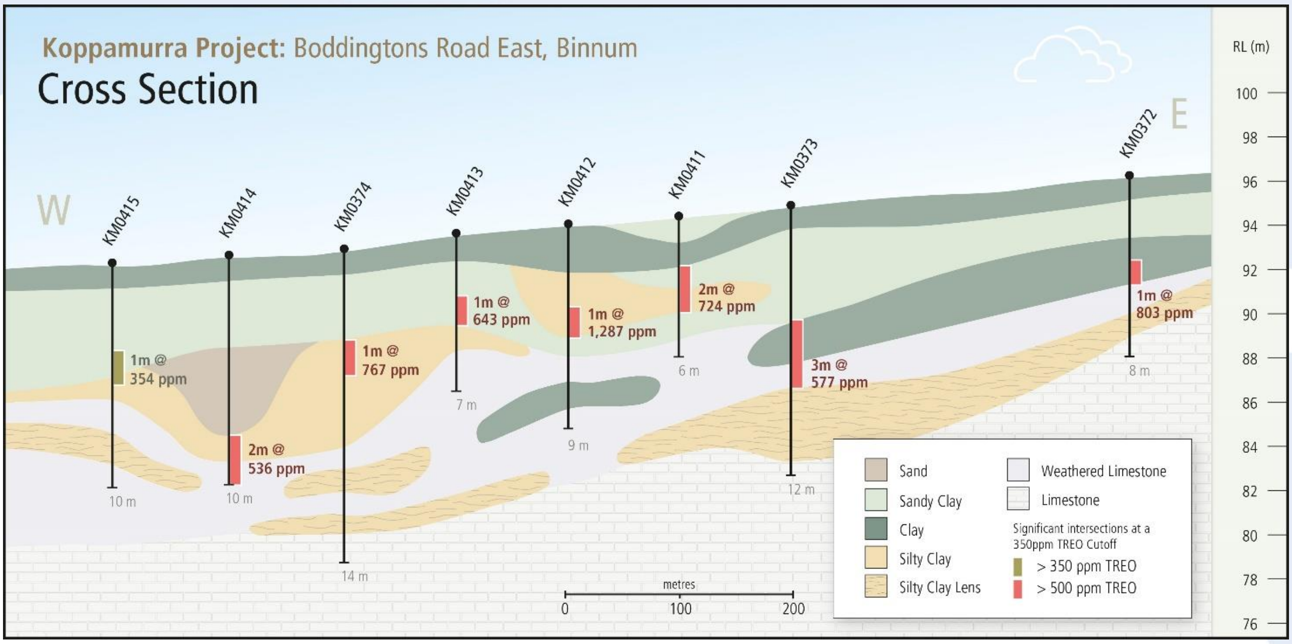

Figure 5 – Cross Section D – Boddingtons Road East, Binnum

The drilling program could not have occurred without the support of landowners and the broad community. AR3 recognises the importance of continued consistent and transparent communication with landowners.

Jacqui Owen, AR3's Manager of Community and Land based in the Company's local office in Naracoorte, said:

"Working with the landowners across the region has been fantastic. They are supportive of a new business in the region, and they understand the long-term vision of Australian Rare Earths to contribute to and become part of the community. The recent drilling program could not have been achieved in such an uninterrupted fashion without the tremendous support of the landowners who we are working with."

Rick Pobjoy, AR3's Technical Director said:

"The success of this drilling program has highlighted the resource potential to the north of Red Tail and Yellow Tail. The Company believes that these recent results indicate that a much larger resource area can be assessed as part of the upgrade to the existing MRE.

A new exploration program of 10,000m of drilling is planned to commence in February which will leverage the tremendous support of the landowners we are working with and is planned to allow for a significant addition to the MRE already defined at Red Tail and Yellow Tail."

Don Hyma, the Managing Director of AR3 said:

"The significant mineralisation observed north of the Red Tail and Yellow Tail resource indicates the potential scale of Koppamurra. With a growing demand for magnet rare earth elements and the upwards

trend in pricing, Australian Rare Earths will continue working to create a sustainable business that participates in this forward-looking industry."

The Board of AR3 authorised this announcement to be given to ASX.

For further Information please contact:

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

Mr Rick Pobjoy
Technical Director
Tel: 1300 646 100
E: hello@ar3.com.au

For Media and Broker queries contact:

Jonathan van Hazel
Citadel-MAGNUS
Tel: 0411 564 969
E: jvanhazel@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. 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.

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, flagship Koppamurra Project, located in South Australia and Victoria. Koppamurra is a prospective ionic clay hosted rare earth element (REE) deposit; uniquely rich in all the REEs required in the manufacture of rare earth permanent magnets which are essential components in energy efficient motors.

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

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
KM0299	481557	5935305	91.1	Aircore	76	12	0	-90
KM0300	481917	5935153	90.2	Aircore	76	15	0	-90
KM0301	482286	5934997	89.4	Aircore	76	21.5	0	-90
KM0302	482737	5934813	90.6	Aircore	76	12	0	-90
KM0303	483025	5934699	92.5	Aircore	76	12	0	-90
KM0304	485188	5934130	95.5	Aircore	76	16	0	-90
KM0305	485567	5934063	96.2	Aircore	76	15	0	-90
KM0306	485761	5934019	97.0	Aircore	76	18	0	-90
KM0307	486559	5934012	96.9	Aircore	76	19	0	-90
KM0308	487374	5934048	100.0	Aircore	76	18	0	-90
KM0309	488179	5934084	102.0	Aircore	76	19	0	-90
KM0310	489004	5934120	101.0	Aircore	76	18	0	-90
KM0311	489791	5934154	101.0	Aircore	76	16.5	0	-90
KM0312	490395	5934137	100.0	Aircore	76	15	0	-90
KM0313	492241	5934052	101.0	Aircore	76	19	0	-90
KM0314	493025	5934086	101.0	Aircore	76	13	0	-90
KM0315	493732	5934116	101.0	Aircore	76	15	0	-90
KM0316	494997	5934539	102.0	Aircore	76	21	0	-90
KM0317	490484	5934628	100.0	Aircore	76	15	0	-90
KM0318	490483	5935228	101.0	Aircore	76	15.5	0	-90
KM0319	490480	5937528	99.8	Aircore	76	16.5	0	-90
KM0320	490489	5938222	98.8	Aircore	76	19	0	-90
KM0321	490086	5939426	101.0	Aircore	76	21	0	-90
KM0322	489297	5939427	99.0	Aircore	76	15	0	-90
KM0323	490484	5938708	100.0	Aircore	76	17	0	-90
KM0324	490482	5936332	101.0	Aircore	76	16	0	-90
KM0325	491904	5933808	102.0	Aircore	76	16	0	-90
KM0326	491855	5933007	102.0	Aircore	76	17	0	-90
KM0327	491831	5932710	102.0	Aircore	76	15.5	0	-90
KM0328	491764	5931632	98.9	Aircore	76	15	0	-90
KM0329	491736	5931226	97.8	Aircore	76	12	0	-90
KM0330	491713	5930841	97.2	Aircore	76	12	0	-90
KM0331	491687	5930438	96.7	Aircore	76	12	0	-90
KM0332	491626	5931109	97.6	Aircore	76	16	0	-90
KM0333	491312	5931360	98.4	Aircore	76	10	0	-90
KM0334	491011	5931619	98.0	Aircore	76	11	0	-90

KM0335	490932	5931673	98.4	Aircore	76	25	0	-90
KM0336	491698	5930044	93.2	Aircore	76	12	0	-90
KM0337	491948	5929941	94.6	Aircore	76	7	0	-90
KM0338	492537	5929761	95.1	Aircore	76	7	0	-90
KM0339	493013	5929626	98.4	Aircore	76	12	0	-90
KM0340	493785	5937796	101.0	Aircore	76	18.5	0	-90
KM0341	493390	5937800	101.0	Aircore	76	15.5	0	-90
KM0342	492989	5937796	101.0	Aircore	76	15.5	0	-90
KM0343	492589	5937796	101.0	Aircore	76	16	0	-90
KM0344	492089	5937795	100.0	Aircore	76	15	0	-90
KM0345	491592	5937793	100.0	Aircore	76	17	0	-90
KM0346	491007	5937845	100.0	Aircore	76	16.5	0	-90
KM0347	490185	5937932	98.4	Aircore	76	15	0	-90
KM0348	489868	5937952	97.7	Aircore	76	12	0	-90
KM0349	488379	5937928	98.3	Aircore	76	15	0	-90
KM0350	487994	5937917	98.4	Aircore	76	17	0	-90
KM0351	487588	5937899	98.2	Aircore	76	16	0	-90
KM0352	486993	5937916	96.6	Aircore	76	15	0	-90
KM0353	486590	5937887	96.3	Aircore	76	15	0	-90
KM0354	486222	5937852	96.6	Aircore	76	15	0	-90
KM0355	485067	5937797	98.9	Aircore	76	20.5	0	-90
KM0356	484652	5937787	99.7	Aircore	76	18	0	-90
KM0357	484268	5937811	100.0	Aircore	76	21	0	-90
KM0358	483853	5937795	99.2	Aircore	76	18	0	-90
KM0359	482551	5937811	98.7	Aircore	76	16	0	-90
KM0360	480948	5937772	91.6	Aircore	76	13	0	-90
KM0361	480665	5937769	91.1	Aircore	76	12	0	-90
KM0362	490477	5936734	99.4	Aircore	76	15	0	-90
KM0363	490478	5936523	101.0	Aircore	76	16	0	-90
KM0364	479484	5937949	86.8	Aircore	76	5.5	0	-90
KM0365	477708	5937927	87.5	Aircore	76	9	0	-90
KM0366	475801	5938037	82.1	Aircore	76	18	0	-90
KM0367	475504	5938107	80.9	Aircore	76	18.5	0	-90
KM0368	475324	5938149	80.3	Aircore	76	21	0	-90
KM0369	487760	5937901	98.0	Aircore	76	20	0	-90
KM0370	487866	5937907	98.2	Aircore	76	18	0	-90
KM0371	488091	5937919	98.4	Aircore	76	18	0	-90
KM0372	493551	5927814	96.6	Aircore	76	8	0	-90
KM0373	493253	5927812	94.9	Aircore	76	12	0	-90
KM0374	492858	5927773	92.9	Aircore	76	14	0	-90
KM0375	491908	5927793	92.6	Aircore	76	12	0	-90

KM0376	491383	5927783	93.1	Aircore	76	12	0	-90
KM0377	490992	5927776	93.6	Aircore	76	12	0	-90
KM0378	489112	5927655	91.6	Aircore	76	14	0	-90
KM0379	486455	5926721	87.9	Aircore	76	15	0	-90
KM0380	485714	5926471	87.9	Aircore	76	13	0	-90
KM0381	485358	5926342	86.3	Aircore	76	12	0	-90
KM0382	483944	5925814	90.2	Aircore	76	9	0	-90
KM0383	483564	5925677	89.1	Aircore	76	12	0	-90
KM0384	482521	5925353	87.1	Aircore	76	12	0	-90
KM0385	481634	5925247	87.0	Aircore	76	9	0	-90
KM0386	481143	5925172	87.3	Aircore	76	24	0	-90
KM0387	481163	5921555	79.0	Aircore	76	15	0	-90
KM0388	480964	5921572	78.7	Aircore	76	9	0	-90
KM0389	479449	5921627	76.3	Aircore	76	12	0	-90
KM0390	478060	5921684	72.8	Aircore	76	12	0	-90
KM0391	477855	5921692	73.2	Aircore	76	15	0	-90
KM0392	476870	5921818	81.7	Aircore	76	18	0	-90
KM0393	481647	5935265	90.1	Aircore	76	18	0	-90
KM0394	481734	5935230	88.7	Aircore	76	24	0	-90
KM0395	481827	5935189	89.9	Aircore	76	12	0	-90
KM0396	482017	5935117	88.3	Aircore	76	14	0	-90
KM0397	482106	5935075	89.3	Aircore	76	13	0	-90
KM0398	482195	5935038	89.1	Aircore	76	27	0	-90
KM0399	491794	5927793	92.8	Aircore	76	9	0	-90
KM0400	490195	5934167	101.0	Aircore	76	15	0	-90
KM0401	489990	5934165	101.0	Aircore	76	16	0	-90
KM0402	489587	5934144	101.0	Aircore	76	19	0	-90
KM0403	489192	5934127	101.0	Aircore	76	18	0	-90
KM0404	488783	5934115	101.0	Aircore	76	18	0	-90
KM0405	488597	5934103	101.0	Aircore	76	18	0	-90
KM0406	488388	5934091	101.0	Aircore	76	18	0	-90
KM0407	487998	5934072	101.0	Aircore	76	21	0	-90
KM0408	487795	5934068	102.0	Aircore	76	20	0	-90
KM0409	487600	5934059	101.0	Aircore	76	18	0	-90
KM0410	491992	5927792	92.2	Aircore	76	9	0	-90
KM0411	493151	5927804	94.2	Aircore	76	6	0	-90
KM0412	493044	5927808	93.9	Aircore	76	9	0	-90
KM0413	492953	5927798	93.5	Aircore	76	7	0	-90
KM0414	492772	5927744	92.5	Aircore	76	10	0	-90
KM0415	492668	5927714	92.2	Aircore	76	10	0	-90
KM0416	492560	5927684	92.0	Aircore	76	8	0	-90

KM0417	492468	5927695	91.5	Aircore	76	7	0	-90
KM0418	492377	5927729	91.1	Aircore	76	9	0	-90
KM0419	492280	5927767	91.2	Aircore	76	10	0	-90
KM0420	492183	5927794	91.6	Aircore	76	8	0	-90
KM0421	492091	5927791	92.0	Aircore	76	9	0	-90
KM0422	487171	5934039	98.7	Aircore	76	18	0	-90
KM0423	478154	5921683	72.6	Aircore	76	27	0	-90
KM0424	477964	5921690	72.8	Aircore	76	23	0	-90
KM0425	482326	5930736	90.9	Aircore	76	9	0	-90
KM0426	482136	5930730	90.9	Aircore	76	9	0	-90
KM0427	481932	5930734	90.0	Aircore	76	7	0	-90
KM0428	481735	5930721	90.1	Aircore	76	7	0	-90
KM0429	481340	5930726	90.3	Aircore	76	13	0	-90
KM0430	481133	5930722	89.7	Aircore	76	12	0	-90
KM0431	481038	5930741	89.5	Aircore	76	14	0	-90
KM0432	480970	5930768	89.2	Aircore	76	13	0	-90
KM0433	482238	5930727	90.9	Aircore	76	11	0	-90
KM0434	482034	5930723	90.7	Aircore	76	9	0	-90
KM0435	481842	5930729	89.8	Aircore	76	10	0	-90
KM0436	481227	5930723	90.2	Aircore	76	12	0	-90
KM0437	480443	5930744	87.9	Aircore	76	22	0	-90
KM0438	480359	5930709	88.0	Aircore	76	15	0	-90
KM0439	480151	5930637	89.2	Aircore	76	24	0	-90
KM0440	480011	5930741	87.5	Aircore	76	12	0	-90
KM0441	479910	5930808	84.1	Aircore	76	9	0	-90
KM0442	479727	5930866	82.4	Aircore	76	10	0	-90
KM0443	479633	5930871	83.9	Aircore	76	9	0	-90
KM0444	479528	5930877	83.9	Aircore	76	12	0	-90
KM0445	479415	5930873	84.1	Aircore	76	12	0	-90
KM0446	479322	5930874	84.6	Aircore	76	7	0	-90
KM0447	479232	5930881	85.0	Aircore	76	9	0	-90
KM0448	479033	5930866	84.8	Aircore	76	16	0	-90
KM0449	478846	5930839	87.5	Aircore	76	10	0	-90
KM0450	478628	5930842	84.9	Aircore	76	22	0	-90
KM0451	478336	5930805	83.3	Aircore	76	24	0	-90
KM0452	478247	5930802	83.6	Aircore	76	21	0	-90
KM0453	478036	5930799	85.1	Aircore	76	12	0	-90
KM0454	477943	5930797	83.4	Aircore	76	16	0	-90
KM0455	477870	5930777	83.2	Aircore	76	8	0	-90
KM0456	477736	5930760	82.9	Aircore	76	14	0	-90
KM0457	477628	5930744	83.1	Aircore	76	15	0	-90

KM0458	477557	5930737	83.7	Aircore	76	14	0	-90
KM0459	477440	5930722	84.5	Aircore	76	6	0	-90
KM0460	477342	5930709	84.3	Aircore	76	24	0	-90
KM0461	477249	5930697	84.5	Aircore	76	14	0	-90
KM0462	477144	5930695	85.3	Aircore	76	21	0	-90
KM0463	477044	5930675	85.6	Aircore	76	15	0	-90
KM0464	476947	5930665	85.1	Aircore	76	8	0	-90
KM0465	476857	5930663	85.2	Aircore	76	10	0	-90
KM0466	476743	5930650	84.3	Aircore	76	17	0	-90
KM0467	476658	5930645	83.2	Aircore	76	12	0	-90
KM0512	481922	5935159	90.2	Aircore	76	12	0	-90
KM0513	487600	5934062	101.0	Aircore	76	18	0	-90
KM0514	489185	5934132	100.0	Aircore	76	18	0	-90
KM0515	491626	5931108	97.6	Aircore	76	14	0	-90
KM0516	492466	5927699	91.4	Aircore	76	7	0	-90

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**

JORC Table 1

Section 1 Sampling Techniques and Data		
Criteria	**Explanation**	**Comment**
Sampling techniques	*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.* *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*	*RC Aircore drilling methods were used obtain samples from the October / December 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 laboratories, 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 either the XRF-ICP-MS method (BV Adelaide) or the Laser ablation ICP-MS (LA-ICP-MS) analytical method (Perth BV)* • *A laboratory repeat was taken at ~ 1 in 21 samples at both laboratories.*

Criteria	Explanation	Comment
	required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g., submarine nodules) may warrant disclosure of detailed information.	• *Commercially obtained standards were inserted by the laboratories at a rate of ~ 1 in 10 into the sample.*
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 2 m and 30 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 bags and the remaining 80% (5 kg to 8 kg) was collected in plastic UV bags*

Criteria	Explanation	Comment
		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 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*	• *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*

Criteria	Explanation	Comment
	appropriateness of the sample preparation technique. *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* *Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.* *Whether sample sizes are appropriate to the grain size of the material being sampled.*	*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 Naracoorte base at the end of each day. The polyweave bags where then placed on pallets and dispatched to Bureau Veritas laboratories in Adelaide and Perth 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 40 samples. 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 geologist oversaw the sampling and logging process and selected samples for analysis based on the logging descriptions and handheld XRF response. Clay rich samples 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 of previous exploration results.*

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**

Criteria	Explanation	Comment
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 of accuracy (i.e., lack of bias) and precision have been established.*	• *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 potentially mineralised zone.* • *The 1.5 kg aircore samples were assayed by Bureau Veritas' laboratories in Wingfield, Adelaide, South Australia, and in Canning Vale, Perth, WA.* • *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.* • *Samples were analysed using either Multiple Elements Fusion/Mixed Acid Digest analytical method (Adelaide BV) or the Laser ablation ICP-MS (LA-ICP-MS) analytical method (Perth BV);* • *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 (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).* • *The Perth BV laboratory used XRF-LA_ICP-MS combo package which requires a single lithium borate fusion to provide major elements from XRF and trace minor elements from LA-ICP-MS assay method.* • *Field duplicates were collected and submitted at a frequency of 1 per 15 samples.*

Criteria	Explanation	Comment
		• *Bureau Veritas completed its own internal QA/QC checks that included a Laboratory repeat roughly every 21st sample and a standard reference sample roughly every 10th 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.* *Discuss any adjustment to assay data.*	• *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.* • *Standard Reference Material sample results are checked from each sample batch to ensure they are within tolerance (<3SD) and that there is no bias.* • *Data validation criteria within the Australian Rare Earths Limited database are included to check for overlapping sample intervals, end of hole match between 'Lithology', 'Sample', 'Survey' files and other common errors.*

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**

Criteria	Explanation	Comment
		• *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><th>Element Name</th><th>Element Oxide</th><th>Oxide Factor</th></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 hand held 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</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</td></tr>
</table>

Criteria	Explanation	Comment
	continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. *Whether sample compositing has been applied.*	*area, and to explore for extensions of the Red Tail and Yellow Tail Resource areas.* *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 flat 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 roughly 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.*

AUSTRALIAN RARE EARTHS

Criteria	Explanation	Comment
		• *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.*
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 South Australian Exploration Licenses (EL), EL6509, EL6613, EL6690, EL6691 and Victorian EL7254 covering a combined area of greater than 4,000 km^2 - which are 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 **Error! Reference source not found.** of Australian Rare Earths Prospectus dated 7 May 2021.*

Criteria	Explanation	Comment
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 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.* *The extensive drilling and geological work undertaken by AR3 to date in the region has not identified 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.*
Data aggregation methods	*In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g., cutting of high grades) and cut-off grades are usually Material and should be stated.* *Where aggregate intercepts incorporate short lengths of high-grade*	*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
	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.*	
Relationship between mineralisation widths and intercept lengths	*These relationships are particularly important in the reporting of Exploration Results.* *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g., 'down hole length, true width not known').*	*All intercepts reported are down hole lengths.* *The mineralisation is interpreted to be flat lying and 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.*
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*	*Diagrams are included in the body of this report.*

Criteria	Explanation	Comment
	appropriate sectional views.	
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 avoiding misleading reporting of Exploration Results.*	*This report 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 report.*
Further work	*The nature and scale of planned further work (e.g., tests for lateral extensions or depth extensions or large-scale step-out drilling).* *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations*	*The proposed ongoing exploration program is detailed in Chapter* ***Error! Reference source not found.*** *of Australian Rare Earths Prospectus dated 7 May 2021 and includes drilling, assay, ground based geophysical surveys and further metallurgical testwork.*

Criteria	Explanation	Comment
	and future drilling areas, provided this information is not commercially sensitive.	

Significant Intersections at a 350ppm TREO Cut-off Grade

Hole ID	Depth	Depth	Thickness	TREO	Pr_6O_{11}		Nd_2O_3		Tb_4O_7		Dy_2O_3		Previously Reported
	From	To	m	ppm	ppm	% TREO	ppm	% TREO	ppm	% TREO	ppm	% TREO	n
KM0299	9	10	1	1312	58.8	4.49	240	18.3	5.65	0.43	30.2	2.3	n
KM0300	7	12	5	543	19	3.43	79.2	14.4	3.08	0.573	18.1	3.4	n
KM0301	17	19	2	812	41.6	5.07	156	19	3.06	0.382	14.8	1.86	n
KM0301	20	21	1	381	18.2	4.78	67.3	17.6	1.58	0.413	7.75	2.03	n
KM0302	10	11	1	1837	80.3	4.37	331	18	7.99	0.435	39.7	2.16	n
KM0303	9	10	1	719	34	4.72	133	18.5	2.91	0.404	15.8	2.2	n
KM0304	13	15	2	968	44.5	4.76	185	19.3	4.34	0.417	22.3	2.12	n
KM0305	12	14	2	566	26.5	4.77	106	18.9	2.48	0.426	13.2	2.24	n
KM0307	11	14	3	605	28.8	4.76	113	18.4	2.5	0.404	13.1	2.13	n
KM0307	15	16	1	374	17.6	4.72	69.9	18.7	1.54	0.412	7.91	2.12	n
KM0308	15	16	1	602	28.4	4.72	115	19	2.88	0.479	15.5	2.57	n
KM0309	16	19	3	507	22.2	4.3	86.9	17	2.18	0.438	11.6	2.35	n
KM0310	14	16	2	432	17.3	4.01	67.7	15.7	2.12	0.49	12	2.77	n
KM0311	15	16	1	582	23.8	4.09	98	16.8	2.74	0.471	14.5	2.49	n
KM0312	1	2	1	442	17.3	3.91	66.8	15.1	1.85	0.418	10	2.27	n
KM0312	13	15	2	386	16.2	4.19	63.4	16.4	2.06	0.535	11.4	2.95	n
KM0313	11	14	3	402	15	3.75	56.1	14	1.52	0.379	8.75	2.18	n
KM0314	9	10	1	440	18.5	4.2	70.8	16.1	1.96	0.446	11	2.49	n
KM0315	10	11	1	406	19.1	4.7	76.6	18.9	2.36	0.583	13.3	3.28	n
KM0316	11	12	1	384	14.7	3.84	60.4	15.7	1.71	0.444	9.76	2.54	n
KM0317	11	13	2	606	26.4	4.26	102	16.5	2.63	0.448	14.3	2.45	n
KM0318	11	13	2	527	23.3	4.42	89.3	16.9	2.65	0.504	14.5	2.76	n
KM0320	14	15	1	520	21.5	4.13	79.1	15.2	2.27	0.436	12.1	2.32	n
KM0321	1	2	1	358	11.8	3.31	46.7	13	1.61	0.45	9.64	2.69	n
KM0321	16	18	2	406	16.7	4.15	61	15.1	1.67	0.412	9.46	2.33	n
KM0323	12	15	3	462	17.5	3.64	67.4	14	2.06	0.429	11.9	2.48	n
KM0324	1	2	1	393	20.7	5.25	74.9	19	1.51	0.383	8.07	2.05	n
KM0324	13	14	1	495	24.3	4.91	91.3	18.5	2.62	0.53	14.9	3.02	n
KM0325	10	11	1	386	17.5	4.53	65.3	16.9	1.71	0.441	9.2	2.38	n
KM0327	8	9	1	366	16.4	4.48	64.3	17.5	1.8	0.491	9.64	2.63	n
KM0328	7	9	2	710	30.5	4.29	117	16.4	2.87	0.406	15.8	2.24	n
KM0329	3	4	1	432	12.6	2.91	46.7	10.8	1.35	0.313	7.66	1.77	n
KM0331	8	9	1	537	19.8	3.69	78.9	14.7	2.65	0.493	15	2.8	n
KM0332	10	12	2	758	31	4.1	123	16.1	3.55	0.464	19.6	2.55	n
KM0333	6	8	2	401	12.6	3.11	48.7	12	1.64	0.408	8.98	2.24	n
KM0334	7	8	1	599	23.1	3.85	92.5	15.5	2.94	0.491	16.6	2.78	n
KM0335	18	20	2	862	36.6	4.28	137	16	2.99	0.347	15.9	1.85	n

KM0336	5	7	2	487	20.9	4.4	81.1	16.9	2.15	0.436	12.1	2.42	n
KM0337	2	3	1	365	15.5	4.23	59.6	16.3	1.87	0.512	10.3	2.83	n
KM0339	8	9	1	978	42.3	4.32	162	16.6	4.03	0.413	21.3	2.18	n
KM0344	1	2	1	381	15.2	3.99	59.7	15.7	1.67	0.438	9.57	2.51	n
KM0348	7	8	1	552	21	3.81	79.6	14.4	1.94	0.351	11.1	2.02	n
KM0349	12	13	1	448	17.3	3.86	70.9	15.8	2.28	0.51	12.6	2.82	n
KM0350	12	15	3	553	24.4	4.5	98.1	17.9	2.55	0.449	13.7	2.39	n
KM0350	16	17	1	435	19.2	4.42	79.4	18.3	2.07	0.476	11.1	2.56	n
KM0351	12	15	3	455	20.1	4.39	80.4	17.6	2.03	0.452	10.5	2.34	n
KM0353	11	13	2	434	19.8	4.5	77.9	17.8	1.81	0.422	9.54	2.25	n
KM0354	11	14	3	446	21.1	4.68	82.1	18.3	2.05	0.462	11	2.48	n
KM0355	17	19	2	479	23.9	4.97	99.8	20.3	1.98	0.398	9.27	1.87	n
KM0356	15	16	1	620	28.4	4.58	115	18.6	2.71	0.437	14.3	2.31	n
KM0357	20	21	1	1234	44.9	3.64	223	18.1	6.8	0.551	37.9	3.07	n
KM0359	12	14	2	479	23.7	4.94	92.1	19.2	2.21	0.46	11.7	2.43	n
KM0360	12	13	1	966	41	4.24	160	16.5	4.6	0.476	23.6	2.45	n
KM0361	9	10	1	618	24	3.89	96.5	15.6	3.31	0.535	17.6	2.84	n
KM0362	9	11	2	506	23	4.51	89	17.5	2.03	0.405	10.6	2.13	n
KM0363	12	14	2	502	21.3	4.23	84.9	16.9	2.2	0.441	12.1	2.44	n
KM0370	13	16	3	555	25.3	4.51	102	18.3	2.45	0.443	12.9	2.35	n
KM0371	15	16	1	463	20.3	4.38	81.4	17.6	2.29	0.495	12.3	2.65	n
KM0372	4	5	1	803	35.8	4.45	136	17	3.23	0.403	16.9	2.1	n
KM0373	5	8	3	577	26.5	4.57	104	17.9	2.43	0.428	12.8	2.26	n
KM0374	4	5	1	767	32.4	4.22	128	16.7	3.48	0.454	18.9	2.47	n
KM0375	5	6	1	435	18.6	4.27	74.2	17	2.4	0.551	13.4	3.08	n
KM0376	6	8	2	673	28.8	4.32	113	16.9	3.03	0.444	16.2	2.36	n
KM0377	6	9	3	634	25.2	3.94	105	16.4	3.4	0.536	19.3	3.05	n
KM0378	8	10	2	900	39.1	4.45	164	18.4	4.69	0.504	25	2.67	n
KM0378	11	12	1	719	27.8	3.87	122	17	4	0.556	22.6	3.15	n
KM0379	9	12	3	602	26.5	4.53	109	18.3	3.02	0.475	16.9	2.62	n
KM0380	8	10	2	1062	47.7	4.24	183	16.6	4.35	0.464	22.5	2.5	n
KM0381	8	10	2	664	28.6	4.6	115	18	3.22	0.457	17.9	2.49	n
KM0382	6	8	2	705	33.3	4.81	131	18.8	3.29	0.466	17.3	2.46	n
KM0383	7	8	1	539	25.6	4.75	103	19.1	2.29	0.425	12.2	2.26	n
KM0384	7	9	2	647	28.2	4.31	112	17.2	3.3	0.52	17.3	2.72	n
KM0385	1	2	1	361	16.1	4.45	60.4	16.7	1.47	0.407	8.17	2.26	n
KM0385	6	7	1	516	19.7	3.81	80.5	15.6	2.8	0.542	14.3	2.78	n
KM0387	7	8	1	1600	76.1	4.76	292	18.2	6.6	0.412	33.5	2.09	n
KM0387	9	10	1	1003	48.1	4.8	188	18.7	3.82	0.381	20.1	2	n
KM0387	12	14	2	455	20.2	4.42	77.9	17.1	2.13	0.469	11.4	2.52	n
KM0388	5	6	1	534	12.2	2.29	49.7	9.31	2.34	0.438	13.4	2.52	n

KM0389	8	10	2	1179	58.3	4.91	220	18.6	4.67	0.41	23.5	2.08	n
KM0389	11	12	1	510	26.2	5.14	101	19.8	2.09	0.41	10.9	2.14	n
KM0390	6	9	3	1133	54.3	4.76	199	17.5	4	0.355	21.8	1.95	n
KM0391	7	9	2	1639	94.7	5.37	360	20.6	6.55	0.424	32.1	2.15	n
KM0391	11	12	1	394	20.2	5.12	78.4	19.9	1.73	0.439	9.26	2.35	n
KM0393	11	14	3	526	23.6	4.53	96.9	18.6	2.56	0.485	14.1	2.65	n
KM0394	20	22	2	930	45.7	4.92	183	19.7	4.51	0.486	23.6	2.55	n
KM0395	7	9	2	920	39.4	4.29	159	17.3	4.25	0.466	22.8	2.51	n
KM0396	8	9	1	1277	55.1	4.31	243	19	7.79	0.61	43.7	3.42	n
KM0397	7	9	2	671	22.5	3.57	89.1	14.1	2.56	0.394	14.4	2.21	n
KM0397	10	11	1	443	17.4	3.93	67.8	15.3	1.63	0.369	9.15	2.06	n
KM0398	18	20	2	709	35.2	4.87	139	19.2	3.11	0.44	15.9	2.24	n
KM0399	7	9	2	436	18.9	4.35	75.5	17.4	1.98	0.454	11.1	2.55	n
KM0400	12	13	1	981	45.1	4.6	177	18.1	4.85	0.494	25.9	2.65	n
KM0401	13	14	1	690	34	4.92	132	19.1	3.61	0.523	19.1	2.76	n
KM0402	15	17	2	464	20	4.36	80.4	17.4	2.22	0.464	12.1	2.53	n
KM0403	14	16	2	597	27.2	4.43	110	17.9	3.24	0.538	17.7	2.96	n
KM0404	15	17	2	677	27	3.88	109	15.7	3.32	0.505	18.1	2.78	n
KM0405	14	16	2	673	27.9	4.1	111	16.3	2.91	0.44	16.1	2.45	n
KM0406	15	16	1	691	28.3	4.09	110	16	2.59	0.375	14.7	2.13	n
KM0407	17	19	2	456	19	4.17	76.8	16.8	2.09	0.459	11.6	2.54	n
KM0408	16	19	3	502	20.3	4.05	81.7	16.3	2.26	0.452	12.2	2.45	n
KM0409	15	17	2	516	18.4	3.58	75.7	14.8	2.75	0.533	16.7	3.25	n
KM0410	5	6	1	1014	43.4	4.28	166	16.3	4.87	0.48	26.6	2.63	n
KM0411	2	4	2	724	29.8	3.84	117	14.9	3.23	0.465	18.2	2.66	n
KM0412	4	5	1	1287	55.1	4.28	212	16.5	5.48	0.426	28.3	2.2	n
KM0413	3	4	1	643	24.6	3.84	97.3	15.1	2.72	0.423	15	2.34	n
KM0414	8	10	2	536	21.3	3.95	86.4	16	2.67	0.501	14.6	2.75	n
KM0415	4	5	1	354	15.3	4.33	59.1	16.7	1.79	0.505	9.87	2.79	n
KM0416	6	7	1	863	35.6	4.13	143	16.6	4.12	0.477	23.3	2.7	n
KM0417	3	5	2	573	24	4.27	94.5	16.7	2.73	0.481	15.3	2.71	n
KM0418	5	6	1	731	32.1	4.4	125	17.1	3.08	0.421	16.8	2.29	n
KM0419	5	7	2	556	20.7	3.8	81.3	15	2.45	0.451	13.9	2.54	n
KM0420	5	7	2	578	25.1	4.35	98.2	17	2.62	0.456	14.7	2.55	n
KM0421	5	6	1	817	29.8	3.65	118	14.4	3.46	0.423	19.2	2.35	n
KM0422	15	17	2	616	26.2	4.26	107	17.5	3.09	0.493	17	2.72	n
KM0423	19	27	8	1172	57.7	4.84	219	18.3	4.52	0.417	23.8	2.25	n
KM0424	12	13	1	469	17	3.63	75.6	16.1	3.55	0.757	20.9	4.45	n
KM0424	14	17	3	476	18.7	3.93	79.6	16.6	3.63	0.756	20.6	4.29	n
KM0425	7	8	1	944	41.8	4.43	174	18.4	5.55	0.588	28.8	3.05	y
KM0426	7	8	1	1510	87.1	5.77	311	20.6	7.79	0.516	35.2	2.33	n

KM0427	5	7	2	623	28.3	4.55	108	17.4	3.51	0.564	18.5	2.99	n
KM0428	5	7	2	596	20.3	3.35	77.8	12.8	2.72	0.451	15.5	2.57	n
KM0429	5	10	5	611	25.5	4.19	104	17	2.96	0.478	15.9	2.55	n
KM0429	11	13	2	635	26.9	4.24	100	15.8	2.25	0.354	11.6	1.82	n
KM0430	7	10	3	539	24	4.43	91.2	16.9	2.15	0.4	11.2	2.09	n
KM0431	8	11	3	489	23	4.59	86.4	17.3	2.16	0.431	10.8	2.19	n
KM0432	0	1	1	412	17.5	4.26	64	15.6	1.25	0.303	6.03	1.46	n
KM0433	7	9	2	848	34.6	4.11	135	16	3.4	0.404	17.6	2.09	n
KM0433	10	11	1	394	16.7	4.23	61.9	15.7	1.34	0.34	6.66	1.69	n
KM0434	3	8	5	615	25.2	4.24	99.8	16.6	2.76	0.44	14.6	2.31	y
KM0435	6	8	2	430	16.9	3.94	67.2	15.6	2.01	0.465	11.2	2.58	n
KM0436	8	10	2	626	28.6	4.53	111	17.6	2.91	0.468	15.7	2.54	n
KM0437	18	19	1	479	25	5.22	93.1	19.4	1.67	0.349	7.86	1.64	n
KM0438	12	14	2	1200	50.7	4.14	195	16	5.87	0.497	32.4	2.77	n
KM0440	6	9	3	624	26.5	4.21	104	16.5	2.85	0.464	15.6	2.54	n
KM0441	3	6	3	672	31.5	4.39	122	17.2	3.19	0.472	16.9	2.55	y
KM0442	6	9	3	1595	74.7	4.58	284	17.6	7.21	0.451	37.7	2.38	n
KM0443	2	6	4	867	42.4	4.57	160	17.2	4.76	0.482	24.5	2.53	n
KM0444	8	10	2	1304	62	4.36	233	17	5.92	0.517	31	2.83	n
KM0444	11	12	1	663	30.2	4.55	119	17.9	2.82	0.426	14.5	2.18	n
KM0445	7	8	1	678	29.2	4.31	110	16.2	2.66	0.392	14.3	2.12	n
KM0447	3	4	1	558	26	4.65	98.2	17.6	2	0.358	11.2	2.01	n
KM0448	15	16	1	386	16.2	4.19	71.2	18.4	2.38	0.616	12.7	3.3	n
KM0449	5	7	2	501	21.8	4.33	82.7	16.4	2.03	0.407	12.1	2.43	n
KM0450	21	22	1	820	29.4	3.58	122	14.9	4.16	0.508	26.7	3.26	n
KM0451	0	2	2	512	17.3	3.38	71.8	14	2.63	0.514	18	3.5	n
KM0451	19	23	4	641	30.4	4.8	126	19.8	2.97	0.454	16.3	2.48	n
KM0452	16	18	2	529	26.3	4.99	108	20.5	2.31	0.433	12.8	2.4	n
KM0453	9	10	1	489	24	4.91	106	21.7	2.42	0.495	13.5	2.77	n
KM0454	12	13	1	609	23.6	3.87	98	16.1	3.03	0.499	19.3	3.17	n
KM0456	11	12	1	892	35.5	3.98	142	16	4.52	0.507	25.6	2.87	y
KM0458	7	8	1	413	17.4	4.22	69.2	16.8	1.34	0.325	8.26	2	n
KM0459	4	5	1	510	22.1	4.33	84.3	16.5	2.28	0.447	14.1	2.77	n
KM0461	9	12	3	466	17.7	3.69	68.1	14.2	1.98	0.422	12.6	2.71	n
KM0463	7	9	2	477	21.6	4.5	84.4	17.6	2.55	0.537	15.6	3.27	n
KM0464	4	6	2	656	25.6	3.75	101	14.7	3.12	0.476	19.2	2.95	n
KM0465	7	9	2	1311	51	3.78	199	15	5.92	0.481	34.9	2.91	n
KM0467	7	9	2	1008	35.9	3.54	152	15	6.43	0.647	36.9	3.73	y
KM0467	10	11	1	455	15.5	3.4	65	14.3	2.52	0.553	15.3	3.35	n
KM0512	9	10	1	853	35.5	4.17	145	17	4.07	0.477	21.8	2.56	y
KM0513	14	16	2	699	28.5	4.19	111	16.2	2.68	0.366	14.6	1.95	y

KM0514	14	17	3	602	29	4.66	114	18.3	3.06	0.502	16.5	2.75	y
KM0515	10	12	2	766	28.7	3.74	113	14.8	3.41	0.46	18.4	2.49	y
KM0516	4	5	1	830	33.7	4.06	134	16.2	3.95	0.476	22	2.66	y