ASX: AR3 27 October 2023

Quarterly Activities Report

For the three months ended 30 September 2023

Highlights

Koppamurra Province

- Mineral Resource estimate increased 84% to 186 million tonnes at 712 ppm TREO[1,2]; Contained TREO tonnage up 60% to 132,000 tonnes
- Koppamurra is one of the largest ionic clay-hosted rare earth provinces in Australia with extensive scope for growth, positioning it as a multi-generational supplier to the electric vehicle, renewable energy and robotic markets
- Significant scope for ongoing Resource growth with the current Mineral Resource covering only ~2% of AR3's total Koppamurra tenure[2]

Queensland Exploration

- Increased landholding in the Kennedy Province, North Queensland - an emerging highly prospective ionic clay hosted rare earths region
- Applications lodged for another 800 km2 of exploration tenure, hosting the Forty Mile Scrub, Sandy Tate, and Oaky Valley prospects - complementing existing tenements at the Massie Creek and Dalrymple prospects
- Sampling and metallurgical test work planned for the December 2023 quarter on the Massie Creek and Dalrymple prospects

Board Chair Change & Management Appointment

- Professor Dudley Kingsnorth has chosen to step down as Chairman with effect from the close of the Company's 2023 AGM and will continue to provide his extensive sector expertise to AR3 as a non-executive Director
- Non-Executive Director, Mr Angus Barker, will assume the role of Board Chairman (subject to his election by shareholders as a Director at the AGM) effective from the close of the 2023 AGM
- Mr Stephen McEwen will join AR3 as Studies Manager to oversee all studies for the Koppamurra project on 30 October 2023

Financials

- Cash position at 30 September 2023 is $12.273m
- Research and Development Tax Incentive rebate estimate for FY23 totalling $771k, expected to be received in December quarter

[1] Total Rare Earth Oxide (TREO)
[2] 84% Increase to Koppamurra Resource (ASX 19 September 2023)

For personal use only

For personal use only

Executive Summary

Australian Rare Earths Limited (ASX: AR3) is pleased to provide an update on progress made during the Quarter ended 30 September 2023.

AR3 continues to rapidly progress towards its goal of bringing diversity to the global supply of rare earths with the announcement of a 30,000m aircore drilling campaign for the 2023/24 financial year.

The campaign aims to endorse the on-going potential for the growth of the Koppamurra Resource further enlarging AR3's globally significant Exploration Target while continuing to convert that Exploration Target into Resource.

The Company announced an updated Mineral Resource Estimate (MRE) during the quarter. The MRE was based on the extensive drill campaign of ~16,000m conducted from February to June 2023. Interpretation of the geological samples and assays, using appropriate industry standard methods resulted in an increase of 84% to 186 Mt of total Mineral Resource estimate with an average TREO grade of 712 ppm. This includes 99 Mt in the Measured and Indicated categories.

During the quarter the Company announced it had increased its landholding in the Kennedy Province, North Queensland - an emerging highly prospective ionic clay hosted rare earths region. Applications were lodged for another 800 km^2 of exploration tenure, hosting the Forty Mile Scrub, Sandy Tate, and Oaky Valley prospects, complementing existing tenements at the Massie Creek and Dalrymple prospects. Work is planned for the December 2023 quarter to continue sample and test work of the Queensland tenements.

Australian Rare Earths Chairman, Professor Dudley Kingsnorth, has chosen to step down as Chairman of the Board at the close of the forthcoming Annual General Meeting (AGM) on 8 November 2023. Under Professor Kingsnorth's guidance and leadership, the Company has delineated a rare earths deposit of a very large scale, attracted Neo Performance Materials as a foundation shareholder and key technical partner with an off-take MOU, and a suite of other key achievements for the Company and rare earths industry. Professor Kingsnorth will continue to provide his extensive sector expertise to AR3 as a non-executive Director.

Subject to his election as a Non-Executive Director at the upcoming AGM, Mr Angus Barker will assume the Chairman's role for AR3.

Mr Stephen McEwen has been appointed to the position of Study Manager with the Company. Stephen has more than 20 years' experience in the resources sector, most recently with Ionic Rare Earths (ASX:IXR) where he held the role of Study Manager and successfully delivered the Definitive Feasibility Study (DFS) for the Stage 1 development of its Makuutu Rare Earths Project in Uganda. Stephen will commence on Monday 30 October 2023.

For personal use only

Operational Review

Koppamurra Mineral Resource Update

The updated Mineral Resource incorporates results from the drilling program conducted between February and June 2023. The overall program added 16,394 m (1,317 holes) to the existing 39,585 m (3,966 holes) drilled for the previous Mineral Resource estimate announced in April 2023.

Interpretation of the geological samples and assays using the appropriate industry standard methods resulted in an increase of 84% to 186 Mt of total Mineral Resource estimate with an average TREO grade of 712 ppm. This includes 99 Mt in the Measured and Indicated categories.

The updated September 2023 (ASX: AR3 MRE) Mineral Resource estimate is set out in the table below.

Koppamurra Mineral Resource Estimate – September 2023										
			Magnet Rare Earths							
JORC	Tonnes	TREO	Pr_6O_{11}		Nd_2O_3		Tb_4O_7		Dy_2O_3	
Category	Mt	ppm	ppm	% TREO	ppm	% TREO	ppm	% TREO	ppm	% TREO
Measured	0.8	747	33	4.4	122	16.4	3.3	0.4	19	2.5
Indicated	98	716	32	4.4	122	17.0	3.3	0.5	18	2.6
Inferred	88	709	32	4.5	121	17.0	3.2	0.4	18	2.5
Total	**186**	**712**	32	4.5	121	17.0	3.2	0.5	18	2.5

Table 1 – Koppamurra MRE September 2023 - Rounding may cause differences in the last significant figure.

For personal use only

Koppamurra Exploration Target Estimate

The Exploration Target for the Koppamurra project increased significantly, informed by an extensive road verge drilling program focused on testing the eastern extent of mineralisation within AR3's Victorian tenure EL's 7254 and 7719. The regional road verge drilling combined with additional drilling proximal to the Koppamurra resource resulted in a revised global Exploration Target of 340 Mt @ 780 ppm TREO to 3,100 Mt @ 510 ppm TREO. The potential quantity and grade of the Exploration Target is conceptual in nature, as there has been insufficient exploration undertaken to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource.

Road verge drilling has continued to be highly effective in quickly evaluating and defining large Exploration Targets. A similar road verge program is planned in the December Quarter 2023 within AR3's South Australian EL's 6509 and 6613 to test the area north of the main resource and south of the currently defined Exploration Target where very limited drilling has been completed (Figure 1).

The planned road verge drilling in South Australia will assist in identifying prospective areas which will guide land access agreements with landholders for an accelerated campaign of follow-up drilling over sections of the Exploration Target in early 2024. Negotiations for further access agreements are in progress.

The updated September 2023 Exploration Target estimate is set out in Table 2 below. This Exploration Target has been reported using a cut-off grades range of 225 ppm and 425 ppm TREO-CeO2.

Koppamurra Exploration Target – September 2023										
			Magnet Rare Earths							
Exploration	Tonnes	TREO	Pr_6O_{11}		Nd_2O_3		Tb_4O_7		Dy_2O_3	
Target	Mt	ppm	ppm	% TREO	ppm	% TREO	ppm	% TREO	ppm	% TREO
Total	340-3,100	510 - 780	20 - 30	3.9-3.8	90 - 140	18-18	2.4 - 3.6	0.5-0.5	13 - 20	2.6-2.6

Table 2– Koppamurra Exploration Target September 2023

More Resource growth planned

To further expand and demonstrate the provincial nature of the Koppamurra project, during the quarter the Company announced the commencement of a 30,000m aircore drilling program at Koppamurra. The drilling will target a highly prospective and untested 10km-long northern strike extension of the Koppamurra Resource (Figure 1). In addition, drilling will target resource definition upgrades in the southern resource area.

To further enlarge AR3's very large Exploration Target and continue to convert this Target into Resource, this drill campaign aims to continue growing the Koppamurra Resource, which remains open along strike.

The drill campaign commenced in late September 2023 and will run until late May 2024.

For personal use only

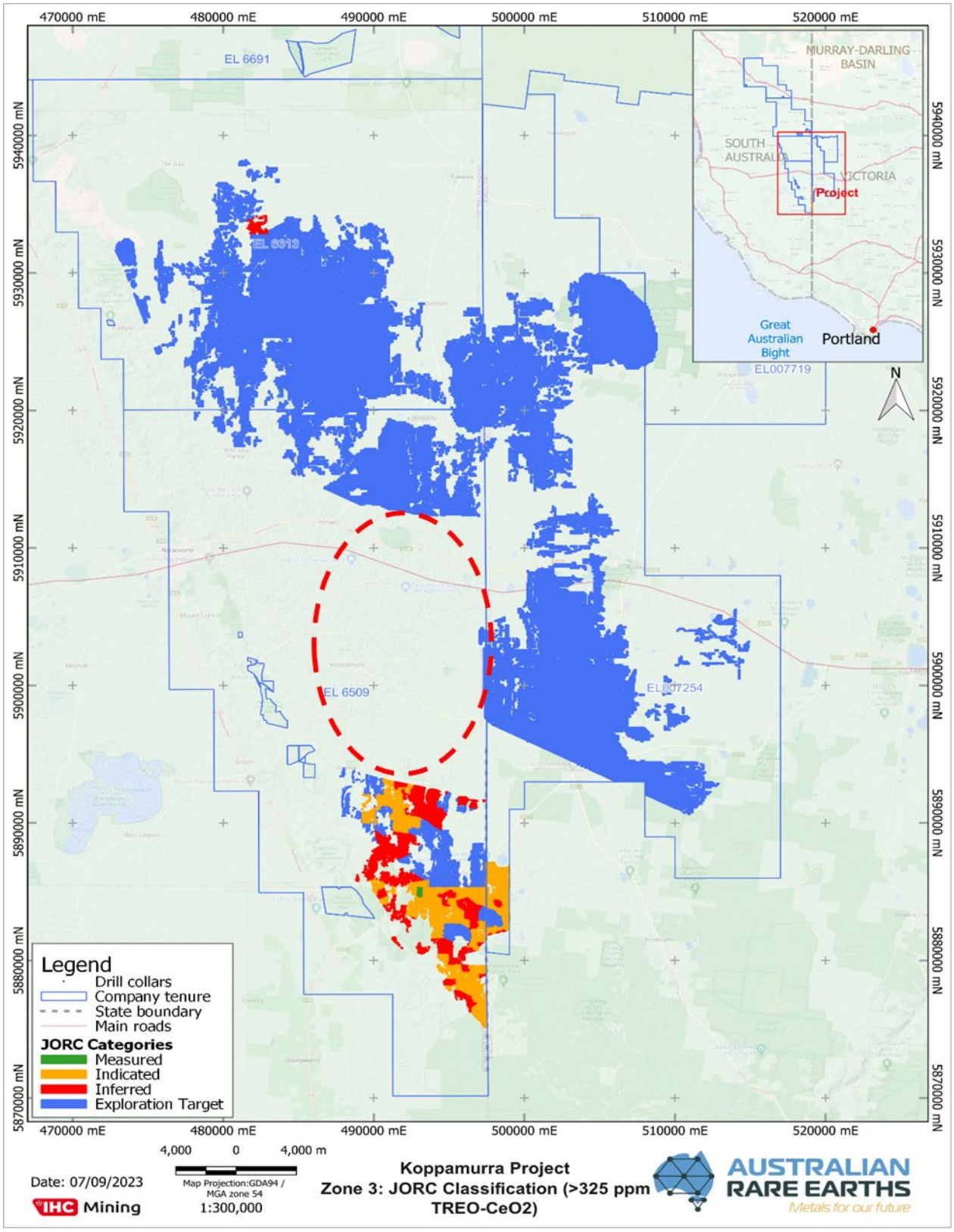

Figure 1 – Koppamurra Mineral Resource. Note drilling will be targeting strike extension of area north of resource (outlined in red). Target area is highly prospective and previously untested.

For personal use only

Exploration activities increase in Queensland

During the quarter the Company announced it had increased its landholding in the Kennedy Province, North Queensland - an emerging highly prospective ionic clay hosted rare earths region. Applications were lodged for another 800 km^2 of exploration tenure, hosting the Forty Mile Scrub, Sandy Tate, and Oaky Valley prospects, complementing existing tenements at the Massie Creek and Dalrymple prospects.

The Kennedy Province is an emerging new clay hosted rare earth mineral province in North Queensland. The area is host to intrusive and extrusive, predominantly felsic, magmatism generated during the Carboniferous and Permian geological periods which comprises the most widespread and voluminous magmatic event in the region - known as the Kennedy Igneous Association (KIA). It is the Heberton and Tate sub provinces of the KIA that have been the focus of recent clay hosted rare earth exploration by AR3 and others.

These types of rock suites observed in the Kennedy Province and their exposure in tropical or subtropical regions where chemical weathering actively occurs, have previously been identified as important to the discovery of promising ion-adsorption type rare earth element (REE) mineralisation.

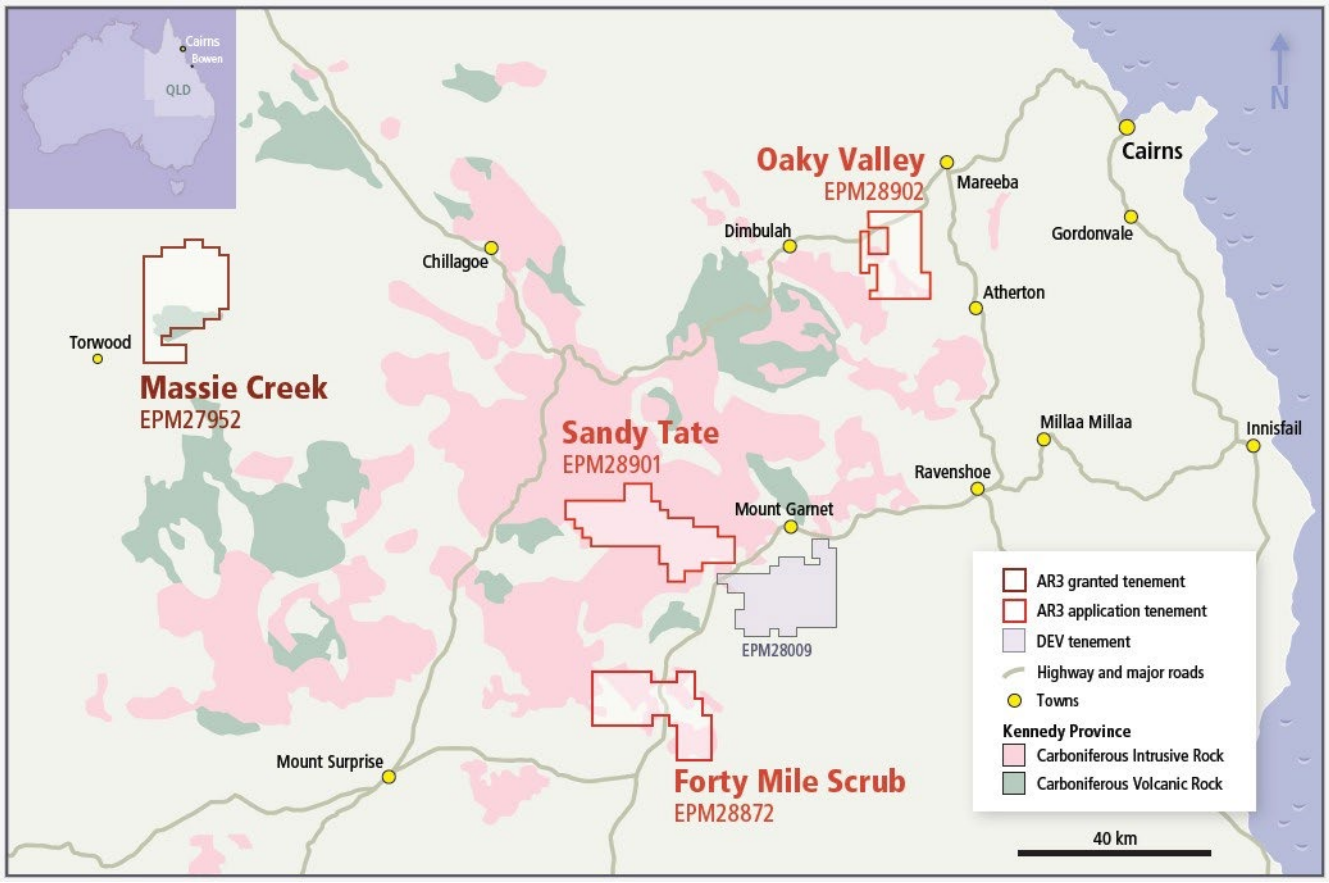

Figure 2– Project locations in Kennedy Province, North Queensland

For personal use only

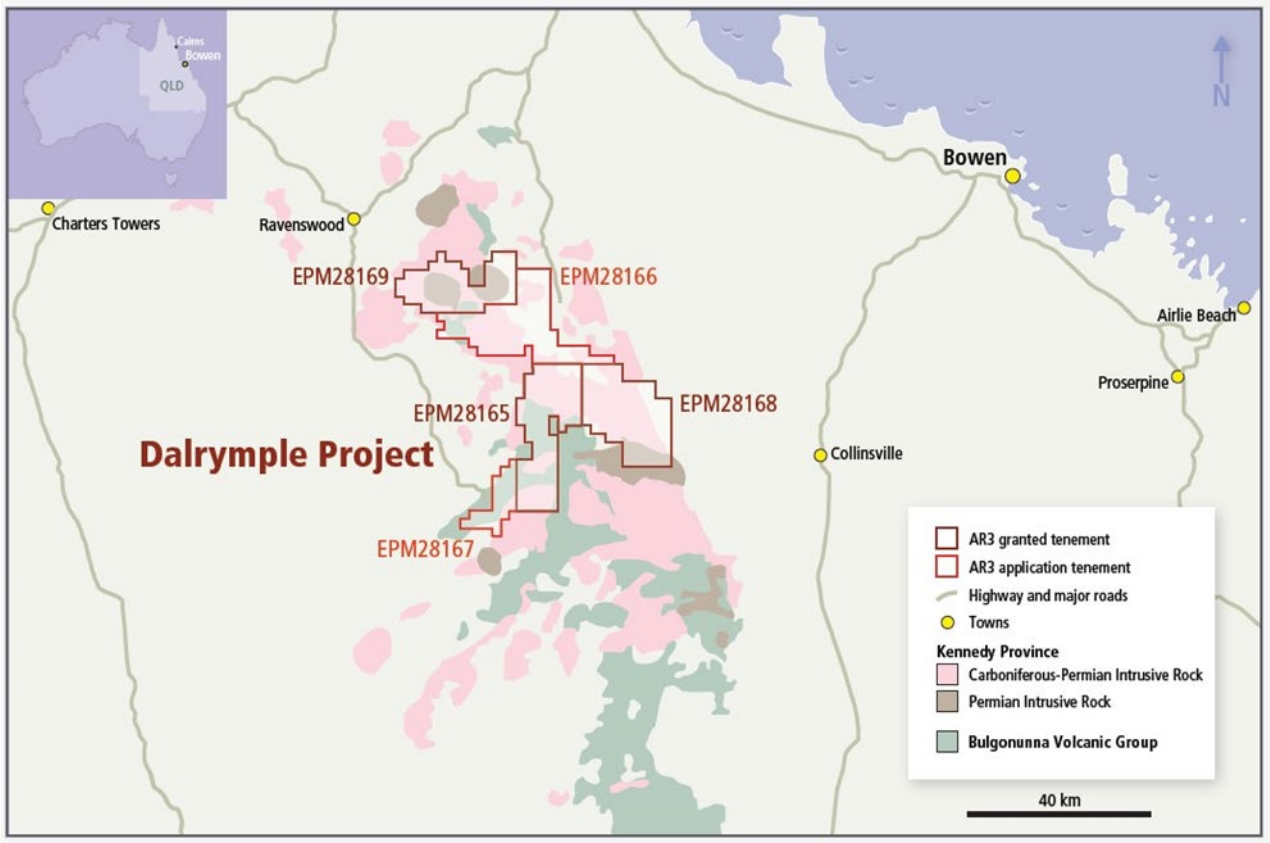

Figure 3– Dalrymple Project Location Plan

Mapping and targeted geochemical sampling will provide insight to the potential for regolith hosted REE mineralisation. Surface sampling, rare earth element concentration determinations and metallurgical recovery characteristics test work to rapidly test the prospectivity of the Massey Creek & Dalrymple projects is planned for the December 2023 quarter.

For personal use only

Board Chair Change

Australian Rare Earths Chairman, Professor Dudley Kingsnorth, has chosen to step down as Chairman at the close of the forthcoming Annual General Meeting (AGM) on 8 November 2023.

Inaugural Chairman, Professor Kingsnorth, was approached by the Company three years ago as it was seeking someone with considerable rare earths expertise to join the Board.

Since that time under Professor Kingsnorth's guidance and leadership, the Company has delineated a rare earths deposit of a very large scale, attracted Neo Performance Materials as a foundation shareholder and key technical partner with an off-take MOU.

In addition, he has played a key role in establishing a strong relationship with ANSTO to produce Australia's first Mixed Rare Earths Carbonate (MREC) from an Australian ionic clay hosted deposit; thereby establishing AR3 as a future global supplier of the magnet rare earths.

Picture – Current Chairman Professor Dudley Kingsnorth and Independent Non-Executive Director and incoming Chairman, Mr Angus Barker

Professor Kingsnorth will continue to make available his lifetime of industry knowledge and contacts to AR3 as a Non-Executive Director. The Board would like to thank Dudley for the significant contribution he has made to Australian Rare Earths in his capacity as Chairman, and his continuing support of the project and Company.

Subject to his election by shareholders as a Non-Executive Director at the AGM, Mr Angus Barker will become AR3's Non-Executive Chairman with effect from the close of the 2023 AGM. Mr Barker is an independent Director.

For personal use only

Listing Rule 5.23 disclosure

The Company confirms that it is not aware of any new information or data that materially affects the Exploration Results and/or the estimates of Mineral Resources in this release, and in respect of the estimates of Mineral Resources reported, that all material assumptions and technical parameters underpinning the estimates continue to apply and have not changed.

List of Tenements

Tenement	Location	Commodity	Project	Jurisdiction
EL6509	Naracoorte	Rare Earths	Koppamurra	SA
EL6613	Frances	Rare Earths	Koppamurra	SA
EL6690	Keith	Rare Earths	Koppamurra	SA
EL6691	Bordertown	Rare Earths	Koppamurra	SA
EL007254	Apsley	Rare Earths	Koppamurra	Victoria
EL007719	Minimay	Rare Earths	Koppamurra	Victoria
EMP27952	Massie Creek	Rare Earths	Massie Creek	QLD
EMP28169	Stones Creek	Rare Earths	Dalrymple	QLD
EMP28168	Mt Wickham	Rare Earths	Dalrymple	QLD
EMP28165	Riverside	Rare Earths	Dalrymple	QLD

1 – All tenements are 100% held by AR3

Finance Update

The Company's cash balance at the end of the Quarter was A$12,273,000.

Capital Structure

Shares on issue: 154,165,962 fully paid ordinary shares.

Options on issue: 38,719,044 unlisted options, comprising:

- 9,058,697 exercisable at $0.57 and expiring 13 December 2023
- 6,597,200 exercisable at $0.45 and expiring 29 June 2024
- 1,600,000 exercisable at $1.44 and expiring 1 December 2024
- 6,000,000 exercisable at $0.30 and expiring 25 January 2025
- 8,163,147 exercisable at $0.57 and expiring 9 May 2025
- 1,000,000 exercisable at $1.02 and expiring 9 May 2025
- 500,000 exercisable at $0.57 and expiring 4 July 2025
- 2,000,000 exercisable at $0.60 and expiring 29 July 2025
- 1,750,000 exercisable at $0.50 and expiring on 2 December 2025
- 500,000 exercisable at $0.47 and expiring on 28 February 2026
- 1,550,000 exercisable at $0.50 and expiring on 2 December 2026

For personal use only

Appendix 5B Disclosures

AR3's accompanying Appendix 5B (quarterly Cashflow Report) includes an amount in item 6.1 which constitutes salaries and payment of the FY23 short term incentive to the executive director and payment of non-executive director fees for the quarter.

During the period, the Company spent approx. $960,000 on exploration activities, including direct costs associated with the Koppamurra exploration and development programs, which included, drilling, geochemical assays, metallurgical test work. This figure also includes allocation of wages directly attributed to specific exploration and development activities.

Activities for the December 2023 quarter

- Drilling activities will re-commence at the Koppamurra project, with first assay results from the campaign expected to be received in November 2023.
- Annual General Meeting to be held on 8 November 2023 at 10:00am (Adelaide).
- Ongoing studies to support the development of a Mining Lease Application.

The Board of AR3 authorised this announcement to be released to the ASX.

For further Information please contact:

Australian Rare Earths Limited
Mr Travis Beinke
Chief Executive Officer
Tel: 1300 646 100
E: hello@ar3.com.au

Media Enquiries
Nicholas Read / Paul Armstrong
Read Corporate
T: 08 9388 1474

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 highly prospective ionic clay hosted rare earth element (REE) deposit; uniquely rich in all the REE's required in the manufacture of rare earth permanent magnets which are essential components in energy efficient motors. The Company is focused on executing a growth strategy that will ensure AR3 is positioned to become an independent and sustainable source of REE's, playing a pivotal role in the global transition to a green economy.

Appendix 5B

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Name of entity

Australian Rare Earths Limited

ABN	Quarter ended ("current quarter")
73 632 645 302	30 September 2023

Consolidated statement of cash flows		Current quarter $A'000	Year to date (3 months) $A'000
1.	**Cash flows from operating activities**		
1.1	Receipts from customers	-	-
1.2	Payments for		
	(a) exploration & evaluation	-	-
	(b) development	-	-
	(c) production	-	-
	(d) staff costs - *net of allocations to capitalised exploration assets*	(1,040)	(1,040)
	(e) administration and corporate costs	(745)	(745)
1.3	Dividends received (see note 3)	-	-
1.4	Interest received	147	147
1.5	Interest and other costs of finance paid	-	-
1.6	Income taxes paid	-	-
1.7	Government grants and tax incentives – R&D Tax incentive	-	-
1.8	Other (provide details if material)	-	-
1.9	**Net cash from / (used in) operating activities**	**(1,638)**	**(1,638)**

2.	**Cash flows from investing activities**		
2.1	Payments to acquire or for:		
	(a) entities	-	-
	(b) tenements	-	-
	(c) property, plant and equipment	(42)	(42)
	(d) exploration & evaluation	(1,104)	(1,104)
	(e) investments	-	-
	(f) other non-current	-	-

For personal use only

For personal use only

Consolidated statement of cash flows		Current quarter $A'000	Year to date (3 months) $A'000
2.2	Proceeds from the disposal of:		
	(a) entities	-	-
	(b) tenements	-	-
	(c) property, plant and equipment	-	-
	(d) investments	-	-
	(e) other non-current assets	-	-
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other (provide details if material)	(23)	(23)
2.6	**Net cash from / (used in) investing activities**	**(1,169)**	**(1,169)**

3.	**Cash flows from financing activities**		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	-	-
3.2	Proceeds from issue of convertible debt securities	-	-
3.3	Proceeds from exercise of options	-	-
3.4	Transaction costs related to issues of equity securities or convertible debt securities	(25)	(25)
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	-	-
3.7	Transaction costs related to loans and borrowings	(25)	(25)
3.8	Dividends paid	-	-
3.9	Other (provide details if material)	-	-
3.10	**Net cash from / (used in) financing activities**	**(50)**	**(50)**

4.	**Net increase / (decrease) in cash and cash equivalents for the period**		
4.1	Cash and cash equivalents at beginning of period	15,130	15,130
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(1,638)	(1,638)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(1,169)	(1,169)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	(50)	(50)

Consolidated statement of cash flows		**Current quarter $A'000**	**Year to date (3 months) $A'000**
4.5	Effect of movement in exchange rates on cash held	-	-
4.6	**Cash and cash equivalents at end of period**	**12,273**	**12,273**

5.	**Reconciliation of cash and cash equivalents** at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	**Current quarter $A'000**	**Previous quarter $A'000**
5.1	Bank balances	12,099	14,981
5.2	Call deposits	-	-
5.3	Bank overdrafts	-	-
5.4	Other (Term Deposits)	174	149
5.5	**Cash and cash equivalents at end of quarter (should equal item 4.6 above)**	**12,273**	**15,130**

6.	**Payments to related parties of the entity and their associates**	**Current quarter $A'000**
6.1	Aggregate amount of payments to related parties and their associates included in item 1 * *The payments disclosed here relate to fees and salaries paid to all Directors (including Technical Director) during the quarter.*	405
6.2	Aggregate amount of payments to related parties and their associates included in item 2	-

Note: if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a description of, and an explanation for, such payments.

For personal use only

For personal use only

7.	**Financing facilities** *Note: the term "facility' includes all forms of financing arrangements available to the entity.* *Add notes as necessary for an understanding of the sources of finance available to the entity.*	**Total facility amount at quarter end $A'000**	**Amount drawn at quarter end $A'000**
7.1	Loan facilities	-	-
7.2	Credit standby arrangements	-	-
7.3	Other (please specify)	-	-
7.4	**Total financing facilities**	-	-
7.5	**Unused financing facilities available at quarter end**		
7.6	Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.		

8.	**Estimated cash available for future operating activities**	**$A'000**
8.1	Net cash from / (used in) operating activities (item 1.9)	(1,638)
8.2	(Payments for exploration & evaluation classified as investing activities) (item 2.1(d))	(1,104)
8.3	Total relevant outgoings (item 8.1 + item 8.2)	(2,742)
8.4	Cash and cash equivalents at quarter end (item 4.6)	12,273
8.5	Unused finance facilities available at quarter end (item 7.5)	-
8.6	Total available funding (item 8.4 + item 8.5)	12,273
8.7	**Estimated quarters of funding available (item 8.6 divided by item 8.3)**	4.48 quarters

Note: if the entity has reported positive relevant outgoings (ie a net cash inflow) in item 8.3, answer item 8.7 as "N/A". Otherwise, a figure for the estimated quarters of funding available must be included in item 8.7.

8.8 If item 8.7 is less than 2 quarters, please provide answers to the following questions:

8.8.1 Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?

Answer: n/a

8.8.2 Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?

Answer: n/a

8.8.3 Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?

Answer: n/a

Note: where item 8.7 is less than 2 quarters, all of questions 8.8.1, 8.8.2 and 8.8.3 above must be answered.

Compliance statement

1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.

2 This statement gives a true and fair view of the matters disclosed.

Date: .....27 OCTOBER 2023.....

Authorised by: .....By the Board.....
(Name of body or officer authorising release – see note 4)

Notes

1. This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.

2. If this quarterly cash flow report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, *AASB 6: Exploration for and Evaluation of Mineral Resources* and *AASB 107: Statement of Cash Flows* apply to this report. If this quarterly cash flow report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.

3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.

4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [*name of board committee – eg Audit and Risk Committee*]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".

5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.

For personal use only