



Quarterly Activities Report for the Period Ending 31 December 2023

Highlights

- **Completed Autumn Drilling Campaign, totaling 2,389 metres (23 holes), with exceptional assay results.**
- **Additional mapping and sampling have yielded the potential for a much larger, higher-grade resource at Halleck Creek.**
- **Metallurgical test results show recoveries of Neodymium and Praseodymium Oxide (NdPrO) increased 28.5% from prior designs.**

[American Rare Earths](#) (ASX: ARR | ADRs - OTCQX: AMRRY | Common Shares - OTCQB: ARRNF) (“ARR” or the “Company”) is pleased to provide an overview of its quarterly activities for the period ending 31 December 2023 (“Quarter”, “Reporting Period”).

CEO, Donald Swartz commented on the quarter:

“This was the first full quarter under the direction of the new U.S. management team and illustrates our focus and delivery on execution. The drilling campaign was performed on time and under budget, such that the results could be efficiently processed and incorporated into our upcoming JORC resource upgrade. We’ve not only produced phenomenal drilling/assay results but have been able to rapidly iterate and develop our first iterations of mine planning that have far exceeded our expectations. Our recent metallurgical breakthroughs have unlocked a significant leap in processing, paving the way for greater efficiency and viability which will be revealed in our forthcoming scoping study.”

“As we enter 2024, this is more than just progress, it’s a fundamental shift for our Company, and I couldn’t be more excited about the future we’re building together.”

Positive Metallurgical Test Results

In the Reporting Period, ARR continued to advance the Halleck Creek project as potentially the largest strategic rare earth project in the United States, with a previously announced 1.43 billion tonne JORC resource. The mineralisation in this deposit is allanite and testing show that rare earth elements can be leached from allanite utilising atmospheric acid tank leaching, a positive differentiator from monazite or bastnaesite deposits. In the most recent tests, sulphation baking kilns were removed from updated flowsheet design in favour of acid tank leaching resulting in significantly lower capital and operating costs. In addition, the main reagents utilised are in plentiful supply in the Western U.S. and the project is proximate to interstate highway and railroad transportation.

Technical Summary

- NdPr represents a favorable 23% of the Total Rare Earth Oxides (TREO) grade in the resource.
- The coarse grain structure offers relatively low energy costs, allowing sequential grinding and beneficiation to reject 84% of feed mass – which has subsequently been improved to 94%.
- The ore exhibits favorable selectivity for magnetic separation utilising Wet High Intensity Magnetic Separator (WHIMS) magnetics at a grind size of 80% passing 106 microns, and the concentrated ore has a TREO grade of 1.51%, illustrating an impressive upgrade ratio of 4.3:1 using WHIMS processing alone. In subsequent work, this has since been improved to 12:1 ratio utilizing Dense Media Separation.
- Preliminary acid tank leach testing adopted 6 hours of residence time at 90 deg C with 250 kg/t sulfuric acid addition, extracted 82-87% of the NdPr from feed material. Future work will continue to optimise the design and increase recoveries.

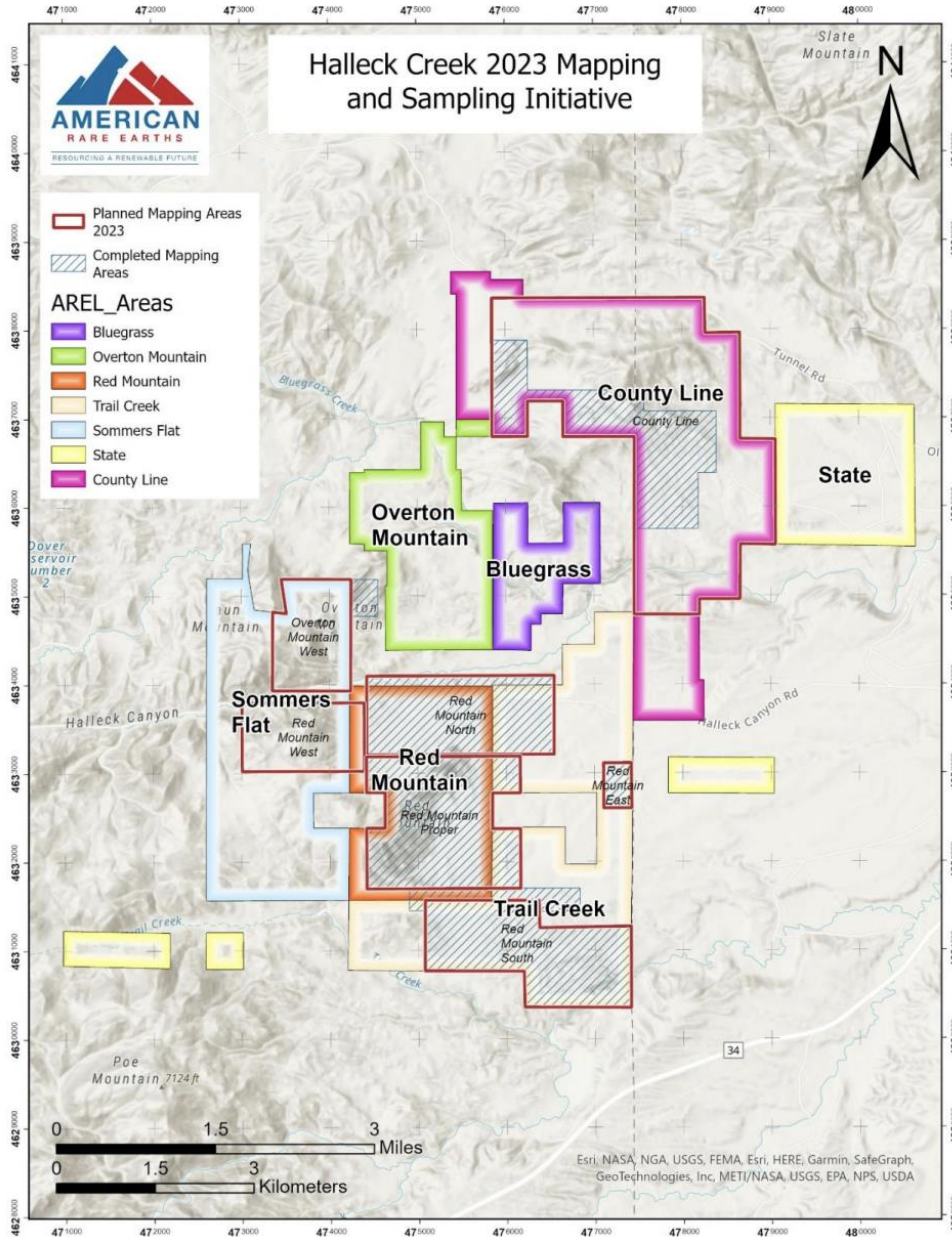
Mapping and Sampling Results

During the Quarter, ARR completed significant mapping and sampling work at Halleck Creek, through which the Company has identified potential for a much larger, higher-grade resource.

The Company, which had previously focused on the Red Mountain and Overton claims¹, identified the future potential in the surrounding claims of Bluegrass, Sommers Flat, Trail Creek and County Line areas, as shown in Exhibit 2 to this release. Geologists were able to tightly constrain important contacts and boundaries between the REE enriched material and surrounding rocks. Through GPS-confirmed geology, staff geologists are optimising future drillhole locations, JORC exploration target(s) and placement of conceptual mine layout/facilities.

¹ ASX announcement - 29 June 2023

Exhibit 1 - Halleck Creek REE Exploration Areas, Mapped Areas, and Future Map Areas



Exceptional Drill Results

In December, ARR received results for the interim 8 diamond drill holes at Halleck Creek. The results provide key inputs to upgrading the current 1.43 billion tonne JORC Resource, and furthermore confirms that the deposit remains open at depth to at least 302 m (990.81 ft). The assays received to date exhibit TREO averages 4,478 ppm, which is significantly higher than the 3,309 ppm TREO deposit average from the Company’s previous resource estimate.

ARR announced continued exceptional drill results from its October-November 2023 drilling campaign^{2,3} at Overton Mountain. Of the fifteen-reverse circulation (RC) holes drilled, there was an average TREO value 24% higher than that of the Company’s previous JORC resource estimate (3,309 ppm TREO). Nine of the

² ASX announcement November 1, 2023

³ ASX announcement December 7, 2023

fifteen RC holes exhibit an average TREO value of greater than 4,000 ppm, utilising a cutoff value of 1,500 ppm. The addition of the final RC assays will be a significant contribution to upgrading the Company's current 1.43 billion tonne JORC resource. The cross sections and fence diagrams presented herein illustrate the homogenous nature of the deposit which lends itself to low-cost, near-zero strip ratio mining operations.

Numerous holes exhibit grades exceeding our previous JORC resource estimate along nearly their entire 102m length, including;

- o HC23-OM044: 102m @ 5472 ppm TREO
- o HC23-OM038: 100.5m @ 4493 ppm TREO
- o HC23-OM033: 102m @ 4291 ppm TREO
- o HC23-OM042: 100.5m @ 4281 ppm TREO

Figure 1 - Location of drillholes from Fall 2023 Drilling Campaign

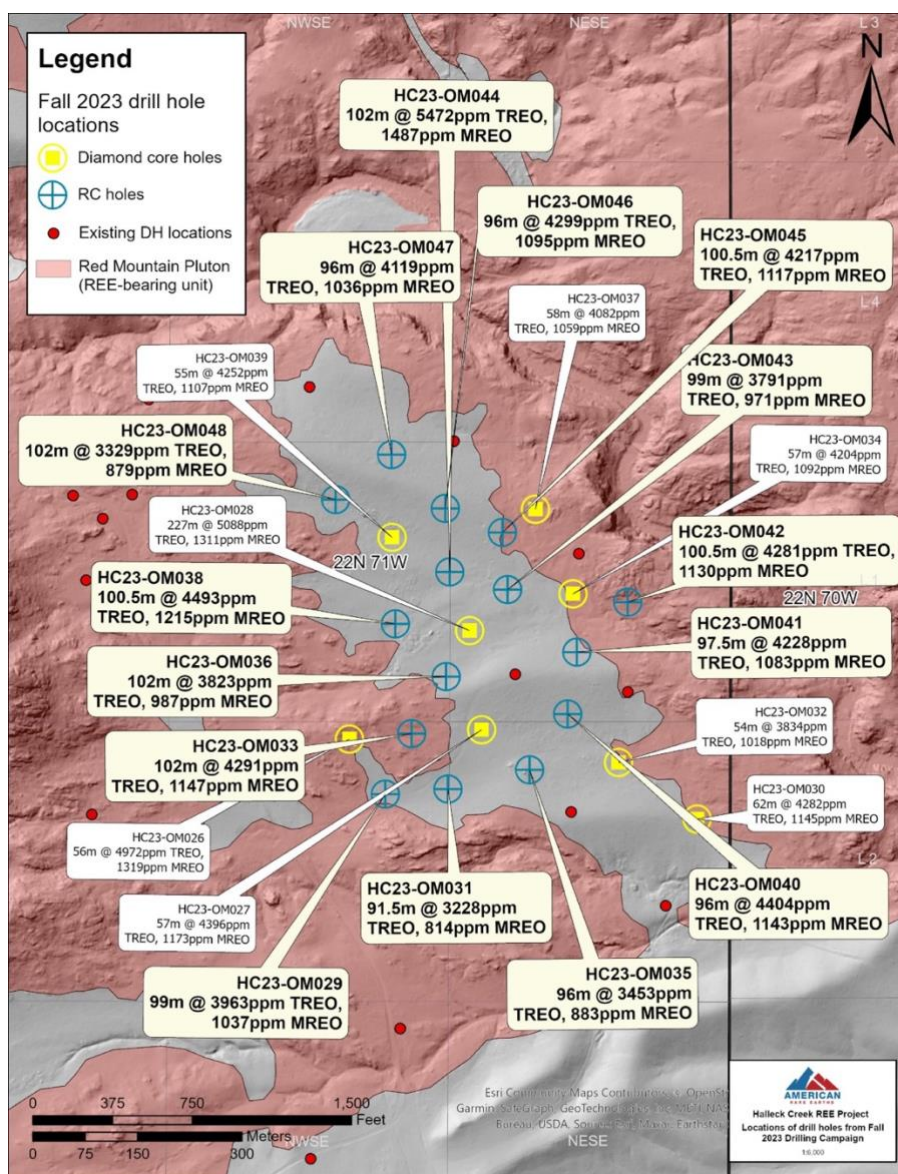


Figure 2 - Cross plot of NdPr vs. TREO from Fall 2023 drilling campaign

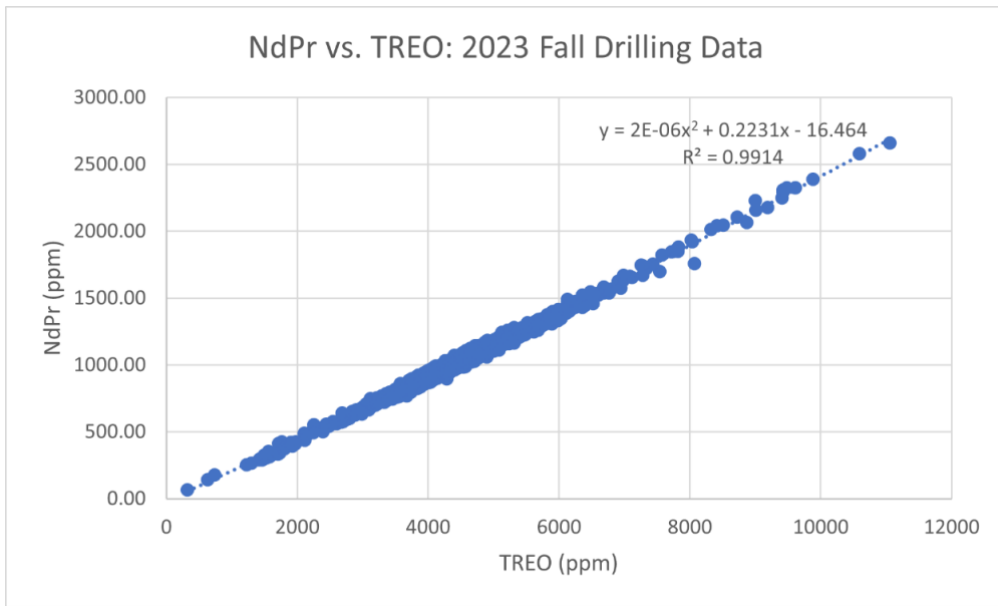
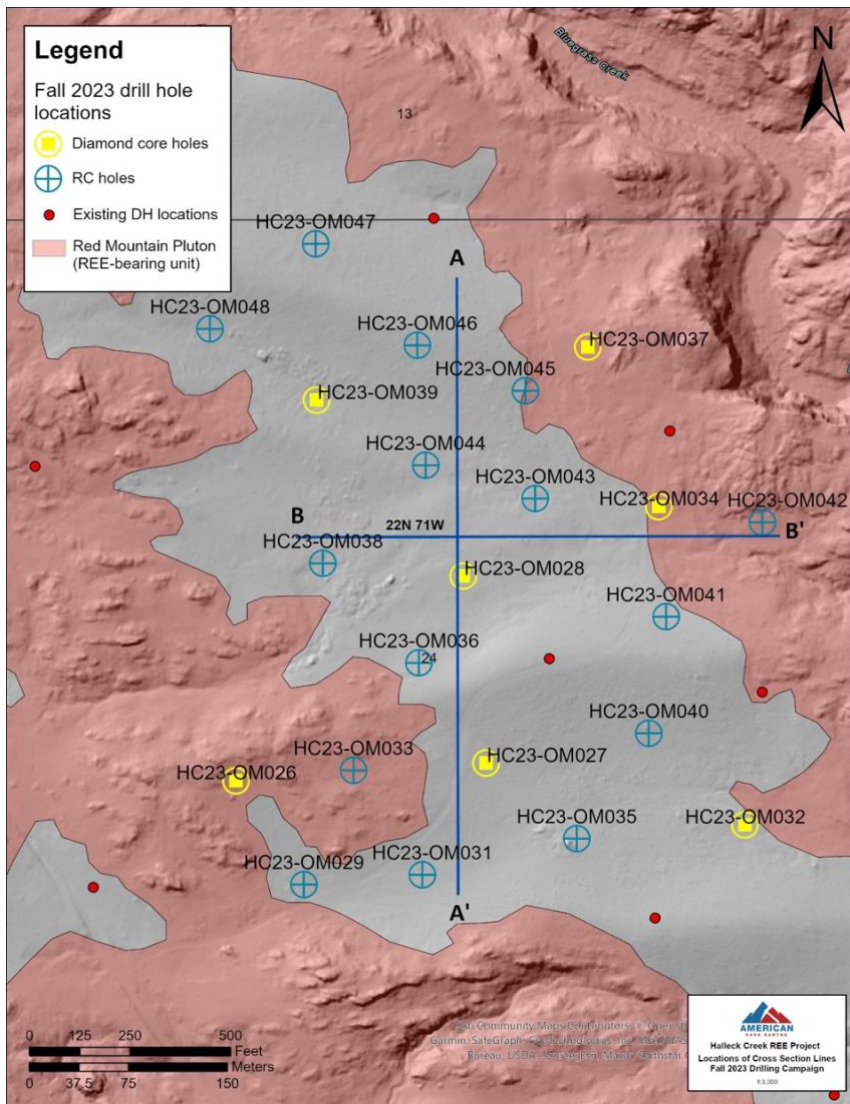


Figure 3 – Map of cross section line locations



Corporate

Kenneth 'Ken' Traub was appointed as Chairman of the Board of Directors following the resignation of Francis Creagh O'Connor who had served the Company since its inception in 2011.

The Company's Annual General Meeting was held on 16 November 2023.

Cash and Financial Assets

The Company is well funded, with a 31 December 2023 cash position of AUD\$6.3m and financial assets, associated with ASX listed Cobalt Blue Holdings (ASX: COB) and Godolphin Resources (ASX: GRL), of AUD\$5.2m. During the quarter the Company increased its stake in Godolphin Resources Limited (ASX: GRL) from 13.21% to 15.32%.

The Company has sufficient resources to carry out its planned activities for FY2024.

Expenditure

The Company had net cash expenditures of AUD\$1.3m for operating costs and AUD\$1.8m for investing activities. Investing cash flows consisted primarily of investments in tenements and exploration & evaluation activities, that together totalled AUD\$1.6m of all investing activities for the quarter.

Aggregate payments to related parties are included in item 6 of Appendix 5B. Item 6.1 relates to the payment of salaries, superannuation, non-executive directors' fees, and consulting fees for the current quarter together with some fees from the prior quarter.

This market announcement has been authorised for release by the CEO of American Rare Earths Limited.

Competent Persons Statement: The information in this document is based on information compiled by personnel under the direction of Mr. Dwight Kinnes. This work was reviewed and approved for release by Mr Dwight Kinnes (Society of Mining Engineers #4063295RM) who is employed by American Rare Earths and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 JORC Code. Mr Kinnes consents to the inclusion in the report of the matters based upon the information in the form and context in which it appears.

About American Rare Earths Limited:

[American Rare Earths](#) (ASX: ARR | ADRs - OTCQX: AMRRY | Common Shares - OTCQB: ARRNF) owns the Halleck Creek, WY and La Paz, AZ rare earth deposits which have the potential to become the largest and most sustainable rare earth projects in North America. American Rare Earths is developing environmentally friendly and cost-effective extraction and processing methods to meet the rapidly increasing demand for resources essential to the clean energy transition and US national security. The Company continues to evaluate other exploration opportunities and is collaborating with US Government-supported R&D to develop efficient processing and separation techniques of rare earth elements to help ensure a renewable future.

Media and Investor enquiries:

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1 – La Paz Tenements 31 December 2023

Mining tenements at the beginning of the quarter				Mining tenements acquired or disposed/expired during the quarter		Mining tenements held at the end of the quarter		
Serial Number	Claim Name	Claimant Name	Beneficial Interest %	Reference	Location	Serial Number	Claim Name	Claimant Name
639 Acres	Exploration License 008-120965-00	LA PAZ RARE EARTH LLC	100%			639 Acres	Exploration License 008-120965-00	LA PAZ RARE EARTH LLC
AZ101556959 - AZ101556965	LA PAZ-1 - LA PAZ-7	LA PAZ RARE EARTH LLC	100%			AZ101556959 - AZ101556965	LA PAZ-1 - LA PAZ-7	LA PAZ RARE EARTH LLC
AZ101558159 - AZ101558165	LA PAZ-8 - LA PAZ-14	LA PAZ RARE EARTH LLC	100%			AZ101558159 - AZ101558165	LA PAZ-8 - LA PAZ-14	LA PAZ RARE EARTH LLC
AZ101558166 - AZ101558178	LA PAZ-33 - LA PAZ-45	LA PAZ RARE EARTH LLC	100%			AZ101558166 - AZ101558178	LA PAZ-33 - LA PAZ-45	LA PAZ RARE EARTH LLC
AZ101559358 - AZ101559378	LA PAZ-46 - LA PAZ-66	LA PAZ RARE EARTH LLC	100%			AZ101559358 - AZ101559378	LA PAZ-46 - LA PAZ-66	LA PAZ RARE EARTH LLC
AZ101560374 - AZ101560379	LA PAZ-67 - LA PAZ-69	LA PAZ RARE EARTH LLC	100%			AZ101560374 - AZ101560379	LA PAZ-67 - LA PAZ-69	LA PAZ RARE EARTH LLC
AZ101560377	LA PAZ-71	LA PAZ RARE EARTH LLC	100%			AZ101560377	LA PAZ-71	LA PAZ RARE EARTH LLC
AZ101560378	LA PAZ-73	LA PAZ RARE EARTH LLC	100%			AZ101560378	LA PAZ-73	LA PAZ RARE EARTH LLC
AZ101560379	LA PAZ-75	LA PAZ RARE EARTH LLC	100%			AZ101560379	LA PAZ-75	LA PAZ RARE EARTH LLC
AZ101560380 - AZ101560389	LA PAZ-92 - LA PAZ-101	LA PAZ RARE EARTH LLC	100%			AZ101560380 - AZ101560389	LA PAZ-92 - LA PAZ-101	LA PAZ RARE EARTH LLC
AZ101859569 - AZ101859589	LA PAZ-108 - LA PAZ-128	LA PAZ RARE EARTH LLC	100%			AZ101859569 - AZ101859589	LA PAZ-108 - LA PAZ-128	LA PAZ RARE EARTH LLC
AZ101735180 - AZ101735200	LA PAZ-129 - LA PAZ-149	LA PAZ RARE EARTH LLC	100%			AZ101735180 - AZ101735200	LA PAZ-129 - LA PAZ-149	LA PAZ RARE EARTH LLC
AZ101736380 - AZ101736400	LA PAZ-150 - LA PAZ-170	LA PAZ RARE EARTH LLC	100%			AZ101736380 - AZ101736400	LA PAZ-150 - LA PAZ-170	LA PAZ RARE EARTH LLC
AZ101737338 - AZ101737358	LA PAZ-171 - LA PAZ-191	LA PAZ RARE EARTH LLC	100%			AZ101737338 - AZ101737358	LA PAZ-171 - LA PAZ-191	LA PAZ RARE EARTH LLC
AZ101738345 - AZ101738365	LA PAZ-192 - LA PAZ-212	LA PAZ RARE EARTH LLC	100%			AZ101738345 - AZ101738365	LA PAZ-192 - LA PAZ-212	LA PAZ RARE EARTH LLC
AZ101739385 - AZ101739391	LA PAZ-213 - LA PAZ-219	LA PAZ RARE EARTH LLC	100%			AZ101739385 - AZ101739391	LA PAZ-213 - LA PAZ-219	LA PAZ RARE EARTH LLC
AZ101924809 - AZ101924821	LA PAZ-220 - LA PAZ-232	LA PAZ RARE EARTH LLC	100%			AZ101924809 - AZ101924821	LA PAZ-220 - LA PAZ-232	LA PAZ RARE EARTH LLC
AZ101957743 - AZ101957763	LA PAZ-233 - LA PAZ-253	LA PAZ RARE EARTH LLC	100%			AZ101957743 - AZ101957763	LA PAZ-233 - LA PAZ-253	LA PAZ RARE EARTH LLC
AZ101958229 - AZ101958236	LA PAZ-254 - LA PAZ-261	LA PAZ RARE EARTH LLC	100%			AZ101958229 - AZ101958236	LA PAZ-254 - LA PAZ-261	LA PAZ RARE EARTH LLC
AZ105263134 - AZ105263153	LA PAZ-262 - LA PAZ-281	LA PAZ RARE EARTH LLC	100%			AZ105263134 - AZ105263153	LA PAZ-262 - LA PAZ-281	LA PAZ RARE EARTH LLC
AZ105764412 - AZ105764506	LA PAZ-282 - LA PAZ-376	LA PAZ RARE EARTH LLC	100%			AZ105764412 - AZ105764506	LA PAZ-282 - LA PAZ-376	LA PAZ RARE EARTH LLC



Appendix 2 – Halleck Creek Tenements 31 December 2023

Mining tenements at the beginning of the quarter				Mining tenements acquired during the quarter		Mining tenements held at the end of the quarter		
Serial Number	Claim Name	Claimant Name	Beneficial	Reference	Location	Serial Number	Claim Name	Claimant Name
WY101766644 - WY101766648	REX-1 - REX-5	Wyoming Rare (USA) Inc	100%			WY101766644 - WY101766648	REX-1 - REX-5	Wyoming Rare (USA) Inc
WY105250218 - WY105250231	REX 10 - REX 23	Wyoming Rare (USA) Inc	100%			WY105250218 - WY105250231	REX 10 - REX 23	Wyoming Rare (USA) Inc
WY105260482 - WY105260501	REX 25 - REX 43	Wyoming Rare (USA) Inc	100%			WY105260482 - WY105260501	REX 25 - REX 43	Wyoming Rare (USA) Inc
WY105250232 - WY105250260	REX 44 - REX 72	Wyoming Rare (USA) Inc	100%			WY105250232 - WY105250260	REX 44 - REX 72	Wyoming Rare (USA) Inc
WY105772327 - WY105772255*	REX 75 - REX 165	Wyoming Rare (USA) Inc	100%			WY105772327 - WY105772255*	REX 75 - REX 165	Wyoming Rare (USA) Inc
WY105772203 - WY105772278*	REX 167 - REX 176	Wyoming Rare (USA) Inc	100%			WY105772203 - WY105772278*	REX 167 - REX 176	Wyoming Rare (USA) Inc
WY105772299 - WY105772326*	REX 178 - REX 257	Wyoming Rare (USA) Inc	100%			WY105772299 - WY105772326*	REX 178 - REX 257	Wyoming Rare (USA) Inc
WY105804752 - WY105804869	REX 258 - REX 375	Wyoming Rare (USA) Inc	100%			WY105804752 - WY105804869	REX 258 - REX 375	Wyoming Rare (USA) Inc
0-43568 – 0-43571	Halleck Creek	Wyoming Rare (USA) Inc	100%			0-43568 – 0-43571	Halleck Creek	Wyoming Rare (USA) Inc
						*Non-inclusive range		

Appendix 3 – Searchlight Tenements 31 December 2023

Mining tenements at the beginning of the quarter				Mining tenements acquired during the quarter		Mining tenements held at the end of the quarter		
Serial Number	Claim Name	Claimant Name	Beneficial	Reference	Location	Serial Number	Claim Name	Claimant Name
NV105228419 - NV105228498	T-01 - T-80	Western Rare Earth LLC	100%			NV105228419 - NV105228498	T-01 - T-80	Western Rare Earth LLC



Appendix 4 – Beaver Creek Tenements 31 December 2023

Mining tenements at the beginning of the quarter				Mining tenements acquired during the quarter		Mining tenements held at the end of the quarter			
Claim Name	Claim Name	Claimant Name	Beneficial Interest %	Reference	Location	Serial Number	Claim Name	Claimant Name	Beneficial Interest %
WY106313626 - WY106313662	BM 1 - BM 27	Wyoming Rare (USA) Inc	100%			WY106313626 - WY106313662	BM 1 - BM 27	Wyoming Rare (USA) Inc	100%
0-43773	0-43773	Wyoming Rare (USA) Inc	100%			0-43773	0-43773	Wyoming Rare (USA) Inc	100%

Appendix 5B

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

Name of entity

American Rare Earths Limited

ABN

83 003 453 503

Quarter ended ("current quarter")

31 December 2023

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 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	(609)	(939)
	(e) administration and corporate costs	(962)	(2,002)
1.3	Dividends received (see note 3)	-	-
1.4	Interest received	111	186
1.5	Interest and other costs of finance paid	(6)	(8)
1.6	Income taxes paid	-	-
1.7	Government grants and tax incentives	117	117
1.8	Other (provide details if material)	-	-
1.9	Net cash from / (used in) operating activities	(1,349)	(2,646)
2.	Cash flows from investing activities		
2.1	Payments to acquire or for:		
	(a) entities	-	-
	(b) tenements	(242)	(511)
	(c) property, plant and equipment	(3)	(40)
	(d) exploration & evaluation	(1,369)	(1,902)
	(e) investments	(129)	(1,087)
	(f) other non-current assets	-	(14)

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 months) \$A'000
2.2	Proceeds from the disposal of:		
	(a) entities	-	-
	(b) tenements	-	-
	(c) property, plant and equipment	-	-
	(d) investments	-	1
	(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): Lease payment	(31)	(46)
2.6	Net cash from / (used in) investing activities	(1,774)	(3,599)

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	-	-
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	-	-
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other (provide details if material)	-	-
3.10	Net cash from / (used in) financing activities	-	-

4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	9,553	12,485
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(1,349)	(2,646)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(1,774)	(3,599)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	-	-

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 months) \$A'000
4.5	Effect of movement in exchange rates on cash held	(134)	56
4.6	Cash and cash equivalents at end of period	6,296	6,296

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	4,748	1,987
5.2	Call deposits	1,548	7,566
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	6,296	9,553

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	296
6.2	Aggregate amount of payments to related parties and their associates included in item 2	-
Director Fees, Consulting Fees and Superannuation Expenses		
<i>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.</i>		

7. Financing facilities <i>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.</i>	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)	(1,349)
8.2 (Payments for exploration & evaluation classified as investing activities) (item 2.1(d))	(1,369)
8.3 Total relevant outgoings (item 8.1 + item 8.2)	(2,718)
8.4 Cash and cash equivalents at quarter end (item 4.6)	6,296
8.5 Unused finance facilities available at quarter end (item 7.5)	-
8.6 Total available funding (item 8.4 + item 8.5)	6,296
8.7 Estimated quarters of funding available (item 8.6 divided by item 8.3)	2.32
<i>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.</i>	
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	
<i>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.</i>	

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: 29 January 2024

Authorised by: By the Audit and Risk Committee
(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.