



American Rare Earths Limited

ASX: ARR

OTCQB: ARNRF

FSE: 1BHA

An Australian exploration company focused on the discovery and development of Rare Earths and Critical mineral resources in North America

#### Commodity Exposure

Rare Earth Elements, in the USA

#### Directors & Management

##### Creagh O'Connor

Non-Executive Chairman

##### Chris Gibbs

Managing Director  
& Chief Executive Officer

##### Geoff Hill

Non-Executive Director  
& Deputy Chairman

##### Richard Hudson

Non-Executive Director

##### Clarence McAllister

Non-Executive Director

##### Mel Sanderson

Non-Executive Director

##### Sten Gustafson

Non-Executive Director

##### Noel Whitcher

CFO & Company Secretary

#### Capital Structure

Ordinary Shares on Issue  
446,480,799

#### American Rare Earths Limited

ARBN 003 453 503

#### Head Office

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# September 2022 Quarterly Activities Report



## HIGHLIGHTS

### La Paz Metallurgical Test Work Completed

- Watts & Fisher's proprietary technology has been demonstrated to achieve high extraction of rare earth metals. The technology shows good promise with further development, moving into piloting down the track.
- Rapid dissolution of rare earth values within 2 to 3 minutes at leaching temperatures above 225°C.

### US Department of Energy (DOE) Funds Next-Generation Rare Earths Processing Research Collaboration

- Consortium will receive up to \$500K USD to fund R&D work
- Research could potentially reduce capex and opex costs while improving recovery efficiencies in rare earths processing
- Advantages: simple process; high throughput/rapid mass transfer rates; fast extraction kinetics

### Halleck Creek Exploration Target increases 328%

- Halleck Creek Exploration Target more than three times larger than previous estimate.
- Exploration Target has potential to make Halleck Creek one of the largest, rare-earth projects in North America.

### Assay results from New Claims Area Show Significant Upside for Halleck Creek

- Newly staked claim area "Bluegrass" indicates consistent rare earth mineralisation throughout the expanded Halleck Creek project.

### Completion of A\$14M Institutional Placement

- Placement to global institutional, professional, and sophisticated investors
- Placement provides American Rare Earths with a balance sheet that is well capitalised to accelerate exploration activities at its North American Projects.

American Rare Earths Limited (**ASX: ARR, OTCQB: ARRF, FSE: 1BHA**) or (**the Company**) is pleased to provide the following activities report for the September 2022 Quarter.

## Company Outlook – December Quarter

During the quarter volatility on global markets increased, along with a significant strengthening of the USD against the AUD. As part of prudent risk management, the Board elected to conduct an opportunistic capital raise to institutional, sophisticated, and professional investors. This raise was to ensure the Company has the resources required to execute on its business plans over the longer term, de-risk projects and allowing project development works to be brought forward.

In the coming quarter we will be continuing work with Nagrom laboratories in Western Australia on the metallurgical test work for the Halleck Creek Ore. Recently the Company executed contracts for this round of test work and shipped ore from the project site in Wyoming, USA to Perth, Australia. The scope builds on previous metallurgical test work undertaken on the La Paz project ore. Wood Australia will oversee, and project manage the process. The company looks forward to providing updates on metallurgical test work as results come to hand.

Further drilling commenced at the Halleck Creek Project to define a significant JORC Resource. The drilling commenced early October and is progressing well. It is anticipated the campaign, analysis and subsequent announcements relating to a maiden JORC resource will be completed in the first quarter of calendar year 2023.

Permitting activities relating to the Southwest Area of the La Paz resource are underway. This will enable future expanded drilling campaigns to be undertaken to significantly increase the current JORC resource on the project.

Business development activities are being undertaken, with several very promising targets under evaluation as future Rare Earth Projects in North America. Works on these targets is expected to increase during the quarter with additional resources being allocated internally to fast track the assessment of these opportunities.

R&D activities in the USA with the various collaborations the Company is part of are progressing well. These projects are now maturing, and it is expected over the coming quarter further announcements will be made

## Operational Review

### *La Paz Metallurgical Test Work Completed*

The Company was pleased to provide an update of the results from metallurgical test work from its La Paz rare earths deposit, confirming that the ore responds positively to conventional processing. It is important to recognise that all learnings from the La Paz program have direct bearing on upcoming Halleck Creek ore testing given the similarities in mineralogy and RE mineralisation in allanite, thus providing valuable insight into unlocking value and accelerating technical development.

#### **Key results & findings from the test work include:**

**Mineralogy** - XRD confirms that silica is the largest component of the ore at nearly 60% of total mass, present as free silica and feldspar minerals. QEMSCAN confirms that 85% of rare earth element (REE) mineralisation resides in the orthosilicate mineral allanite.

- ✓ Comminution – testing confirms excellent amenability to SAG milling and HPGR processing, with lower-than-average abrasiveness tendencies.

**Magnetic Separation** - the ore responds to sequential grinding and magnetic separation steps, allowing rejection of significant gangue mass for low rare earth values loss.

- ✓ LIMS for rejection of ferromagnetic minerals such as magnetite does not appear to be necessary, simplifying the flowsheet.

WHIMS testing has demonstrated excellent amenability to upgrading allanite content in the ore through rejection of non- magnetic silica and silicates.

- ✓ Two stage WHIMS with intermediate magnetics regrind achieved 75.5% silica rejection and 66.4% TREOs recovery, with 71.5% scandium recovery.

**Flotation** - collector screening identified two fatty acid-based products that were promising for further development.

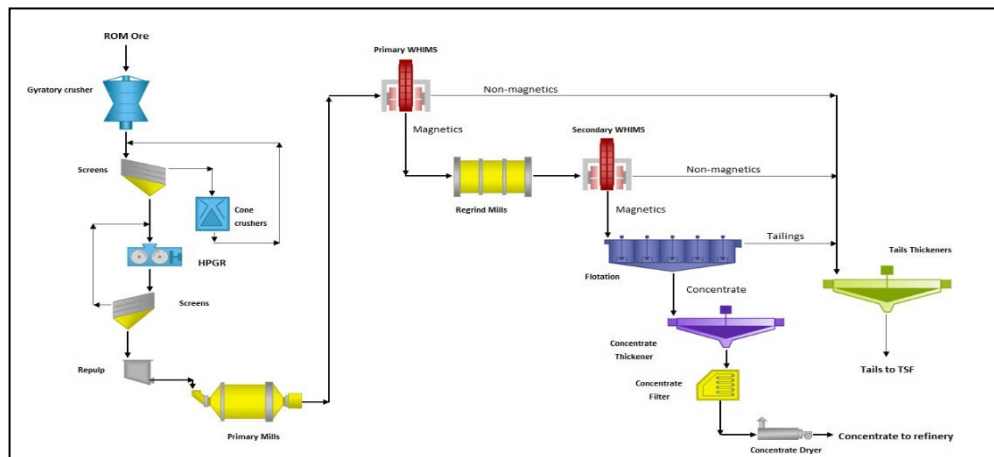
- ✓ The best outcome achieved was 83.6% TREO stage recovery for a grade of 1824 ppm.

**Leaching** - Watts & Fisher's proprietary technology has been successfully demonstrated to achieve high extraction of rare earth metals content from WHIMS concentrate.

- ✓ The technology shows good promise with further development, moving into piloting down the track.
- ✓ with rapid dissolution of rare earth values within 2 to 3 minutes at leaching temperatures above 225°C.

The test work has allowed the development of a conceptual flowsheet to be developed for a concentrator at La Paz. A simplified schematic of the proposed concentrator flowsheet is included as (Figure 1). Principal flow lines are indicated in bold.

**Figure 1 : Proposed Simplified La Paz Concentrator Flowsheet**



Further work will be undertaken to optimize the process and build on the results from the first round of metallurgical test work. Under the guidance of Wood, Nagrom has been engaged to conduct further test work on both the La Paz and Halleck Creek ore over the coming months.

We look forward to updating the market as these results become available.

### ***US Department of Energy (DOE) Rare Earth Processing Research Collaboration***

The Company was proud to announce that its wholly owned US subsidiary, Western Rare Earths (WRE), has joined as the industrial partner in a research consortium that includes the technology company, Phinix, LLC and Virginia Tech University.

The team was awarded R&D funding by DOE's Office of Energy Efficiency and Renewable Energy (EERE) Advanced Manufacturing Office (AMO)1 in an AMO program known as Critical Materials: Next-Generation Technologies and Field Validation. The consortium will receive up to \$500K USD to fund the work. WRE will provide rare earths bearing ores as feedstock for extraction and separation focused processing technology studies.

The project goal is to produce light, medium, and heavy rare earth oxide products of greater than 95% purity. Given the criticality of neodymium, a neodymium oxide product of greater than 95% purity will also be produced. An innovative extractor technology, based on gas-assisted micro-flow extraction (GAME) theory, will be employed with an efficient task-specific ionic liquid (TSIL) for rare earths extraction and separation. Success could reduce capex and opex expenditures for producing high value rare earths from lower grade sources while improving recovery efficiencies, thus reducing the loss of valuable rare earths to the tailings pile.

## Halleck Creek Exploration Target Increase

On the 1<sup>st</sup> of September the Company advised the market of a significant expansion of the JORC compliant Exploration Target at Halleck Creek. The expanded estimate is based on the latest surface sampling, and 2022 maiden drilling results.



The updated exploration targets outline between 1.01 and 1.27 billion tonnes of rare earth mineralised rocks with TREO grades ranging between 2,245 ppm and 2,807 ppm (Table 1). Readers are advised that the potential quantity and grade of the Halleck Creek resource are conceptual in nature, and there has been insufficient exploration to estimate a Mineral Resource and that it is uncertain if further exploration will result in the estimation of a Mineral Resource.

TREO Range	Area	In-Place Tonnage	Average TREO Grade	Average MREO* Grade	Average Nd2O3 Grade	Average Pr6O11 Grade
(ppm)	(ha)	(millions)	(ppm)	(ppm)	(ppm)	(ppm)
1,500 – 2,000	90	168 - 210	1,398 - 1,748	461 - 576	336 - 420	89 - 111
2,000 – 2,500	82	183 - 229	1,807 - 2,259	470 - 588	340 - 425	91 - 114
2,500 – 3,000	103	254 - 318	2,213 - 2,766	524 - 655	379 - 473	103 - 129
3,000 – 3,500	133	220 - 275	2,597 - 3,246	593 - 742	433 - 542	119 - 149
3,500 – 4,000	111	149 - 186	2,964 - 3,705	647 - 808	474 - 593	131 - 163
>4,000	42	40 - 50	3,409 - 4,262	740 - 925	547 - 683	149 - 187
<b>Grand Total</b>	<b>561</b>	<b>1,015 - 1,269</b>	<b>2,245 - 2,807</b>	<b>545 - 682</b>	<b>397 - 496</b>	<b>108 - 135</b>

The Exploration Target was prepared and reported in accordance with the 2012 edition of the JORC code. This is an update and an increase from the original Exploration Target of 308 – 385 million tonnes of rare earth mineralised rocks previously disclosed to market. The mass of mineralised rocks in the new Exploration Target is more than three times larger than that previously estimated.

## Halleck Creek “Bluegrass” Assay Results

The company was excited to update investors on a new section of the Halleck Creek project “Bluegrass” during the quarter. The vast Halleck Creek Project is made up three major connected resource areas, Red Mountain, Overton Mountain, and the newly claimed Bluegrass. During the quarter the Company was pleased to announce initial assay results from the “Bluegrass” section of the project.



The newly claimed Bluegrass area consists of 32 unpatented federal land claims covering approximately 633 acres (256 ha). It is located approximately 2 miles Northeast of the Red Mountain area and 1 mile East of the Overton Mountain area.

Surface samples collected in the Bluegrass area exhibit an average TREO value of 3051 ppm. All samples were collected from the same lithology, clinopyroxene quartz monzonite (CQM) within the Red Mountain Pluton (RMP). This is the same lithotype that occurs within the Overton Mountain and Red Mountain Areas.

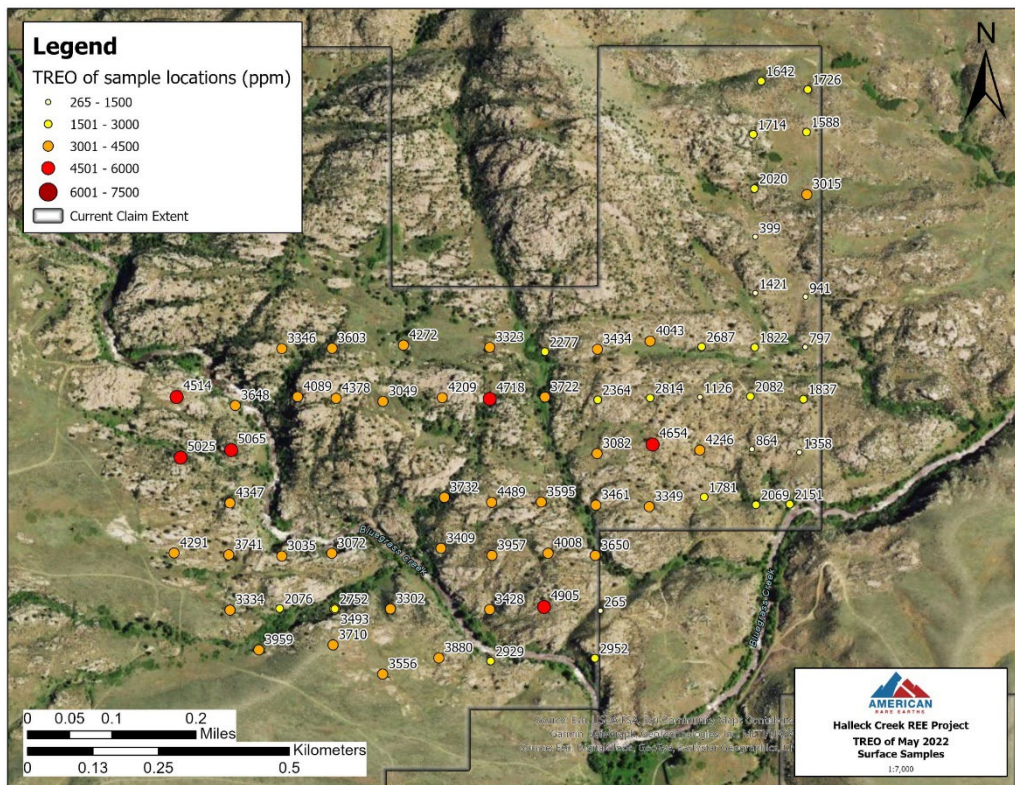
71 samples from the Bluegrass area were assayed and they exhibited an average TREO value of 3051 ppm. These latest assays demonstrate that REE mineralisation has the potential to expand significantly beyond the current resource target and that rare earth mineralisation may be prevalent throughout the majority of the Red Mountain Pluton (RMP).

The Bluegrass area assay results indicate that rare earth enrichment continues east of Overton Mountain across Bluegrass Creek (Figure 1, Table 2).

**Table 2: Statistical Summary of May 2022 Sampling Initiative**

	Total Rare Earth Oxide ppm (TREO)	Magnetic Rare Earth Oxide ppm (MREO)	Light Rare Earth Oxide ppm (LREO)	Heavy Rare Earth Oxide ppm (HREO)
Minimum	265	60	236	29
Maximum	5065	1353	4604	461
Average	3051	812	2738	313

**Figure 1 : TREO Values and Location of Surface Samples from May 2022 Samling Initiative**



## Corporate

### *Completion of A\$14m Institutional placement*

During the quarter, the Company undertook an opportunistic placement to global institutional, professional, and sophisticated investors raising A\$14.0 million. There was very strong demand from several high-quality domestic and offshore institutions, providing a strong endorsement of American Rare Earths' North American growth strategy.

The additional funding provides American Rare Earths with a balance sheet that is well capitalised to accelerate exploration activities at its emerging North American rare earths projects, fast tracking development as the company seeks to securely supply Critical Minerals to the North American supply chain.

The proceeds raised will be used to advance resource definition and expansion drilling at the Halleck Creek and La Paz Rare Earths Projects, metallurgical test work, economic assessments, and feasibility studies.

Placement shares were issued at \$0.29 per share. The Placement price represented a 18.3% discount to the last trading price of \$0.355 prior to the Placement, a 20.7% discount to the 5-day VWAP and a 9.2% discount to the 10-day VWAP.

### *Management Changes*

During the quarter Mr Denis Geldard retired from the Board of American Rare Earths. Mr Geldard was a long serving Non-Executive Director of the Company and instrumental in advising and executing on our North American strategy, including finding and developing the La Paz project. Whilst retiring from the Board, Denis remains a part of the company, offering his support and expertise in a consulting arrangement.

The Board wishes Mr Geldard all the best in his well earned retirement, and thanks him for his many years of service.

### *Cash and Financial Assets*

The Company is well funded to deliver on its objectives and as of 30 June has a cash position of A\$17,417,000.

The Company holds 4,000,000 COB shares worth A\$2,840,000, at a COB closing price of A\$0.71 on 30 September.

The Company holds a A\$3M Promissory Note (PN) interest-free for years one to three with interest payable in arrears at 6% per annum for years four and five. The PN is currently in year three and secured over title to tenements. The Promissory note matures in January 2025. On 30 September 2022 this note has a financial asset value of A\$2,774,000

The Company holds rights to a Net Smelter Return (NSR) royalty of 2% on all cobalt production from the Thackaringa Project, which was sold to Cobalt Blue Holdings Limited in February 2020.

A total of 400,000 shares were issued due to the exercise of options during the period. The options were exercised at A\$0.15.

## **Expenditure**

During the quarter net cash movements for operating activities of A\$1.164M were incurred. Administration and corporate net expenditure totaling A\$946k was the main area of expenditure, along with staffing costs of A\$236k. Included in administrative and corporate costs during the quarter were a number of one-off expenditure items. Consequently, expenditure on operating activities is expected to decline in the coming quarters.

Cash movements for investing activities totaling A\$890k during the quarter primarily consisted of E&E expenditure for the La Paz and Halleck Creek projects and included staking of new tenement claims in Halleck Creek and significant works on metallurgy testing for La Paz and Halleck Creek ore. With drilling commencing late in the quarter at Halleck Creek it is anticipated expenditure on E&E will increase in the coming quarter.

Cash flows from financing activities were very strong during the quarter on the back of a capital raise in August to institutional, professional and sophisticated investors of A\$14M before costs.

Aggregate payments to related parties included at item 6 of Appendix 5B total A\$163k. This figure consists of Directors fees, Managing Director salary payments and direct reimbursement for business travel and incidentals made to related parties during the quarter.

## **Tenement Schedule**

Listings of tenements held by ARR and its subsidiaries as of 30 September 2022 for each project are shown in Annexures 1 to 3.

## **Subsequent events:**

Subsequent to quarter end the Company was pleased to announce that exploration drilling commenced on October 5, 2022, to drill 36 reverse circulation (R/C) holes to define a maiden JORC resource at the 100% owned Halleck Creek project. Each drill hole is planned for a depth of 150 metres, for a total length of 5,400 metres. An additional 19 holes have been permitted to enable the program to be further expanded should the company elect.

The Company contracted with FTE Drilling USA Inc to perform the work and expects drilling to be completed by Mid-December 2022.

The Company will hold its Annual General meeting on the 8th of November 2022. Details of the meeting can be found at [2022 AGM Details](#)



## ASX Announcements made during the quarter:

14 July	<a href="#">Further Outstanding Drill Results for Halleck Creek</a>
20 July	<a href="#">Quarterly Activities/Appendix 5B Cash Flow Report</a>
28 July	<a href="#">Addendum to June quarterly report</a>
28 July	<a href="#">June 2022 - quarterly webinar presentation</a>
1 August	<a href="#">Retirement of Mr Denis Geldard</a>
4 August	<a href="#">Assays indicate significant upside for Halleck Creek</a>
17 August	<a href="#">A\$14M Placement to Support North American Growth Strategy</a>
17 August	<a href="#">Changes to Managing Directors remuneration package</a>
23 August	<a href="#">DOE Funds Next-Generation Rare Earths Processing Research</a>
25 August	<a href="#">Completion of Institutional Placement</a>
25 August	<a href="#">Cleansing notice</a>
25 August	<a href="#">Change in substantial holding</a>
31 August	<a href="#">Final Director's Interest Notice</a>
1 September	<a href="#">Halleck Creek Exploration Target increases 328%</a>
21 September	<a href="#">Annual Report to shareholders</a>
21 September	<a href="#">2022 Corporate Governance Statement</a>
30 September	<a href="#">Metallurgical Test Work Successfully Completed</a>

The Company confirms it is not aware of any new information or data that materially affects the information included in the original market announcements, and, in the case of estimates of Mineral Resources, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed. ARR confirms that the form and context in which the Competent Person's findings presented have not been materially modified from the original market announcements.

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

Mr Chris Gibbs  
CEO & Managing Director

## **About American Rare Earths:**

American Rare Earths Limited (ASX: ARR, OTCQB: ARRNF, FSE: 1BHA) is an Australian company listed on the ASX with assets in the growing rare earth metals sector of the United States of America, emerging as an alternative international supply chain to China's market dominance of a global rare earth market expected to expand to US\$20 billion by the mid-2020s. The Company's mission is to supply Critical Materials for Renewable Energy, Green Tech, Electric Vehicles, National Security, and a Carbon-Reduced Future.

Western Rare Earths (WRE) is the wholly owned US subsidiary of the Company. The Company owns 100% of the La Paz Rare Earth Project, located 170km northwest of Phoenix, Arizona. As a large tonnage, bulk deposit, La Paz is potentially the one of the largest, rare-earth deposit in the USA and benefits from containing exceptionally low penalty elements such as radioactive thorium and uranium. Approximately 742 - 928 million tonnes of Rare Earths mineralised rocks are identified as an exploration target in the La Paz Rare Earths Project's Southwest area with an average TREO Grade of 350 - 400ppm and Scandium Oxide grade of 20 - 24.5ppm. The new exploration Target is additive to the La Paz Rare Earth project recently upgraded 170MT Resource. (ASX Announcement, 29 September 2021). During the period from February to April 2022 the Company drilled nine holes for 821 metres and collected 677 samples in the La Paz southwest area. The assay results from the first 332 samples demonstrate rock type associated with higher rare earth grades. The enhanced grades and thickness of the mineralised zone have accelerated exploration planning. The Company is working on establishing a JORC resource for the southwest area (ASX Announcement, 14 June 2022). Preliminary metallurgical test work demonstrates that La Paz ore can be effectively concentrated using conventional magnetic separation, selective grinding and direct flotation. Under the guidance of Wood Australia, advanced metallurgy and mineral processing test work is near completion with Nagrom Laboratories in Perth Western Australia (ASX Announcement, 7 April 2022).

In the first half of 2021, The Company acquired the USA REE asset, the Halleck Creek Project in Wyoming. Since acquiring the asset, the Company has increased the land holding to over 6,000+ acres. Approximately 1,015 to 1,268 million tonnes of rare earths mineralised rocks were identified as an exploration target for the Halleck Creek project area with an average Total Rare Earth Oxide (TREO) grade of 2,245 - 2,807 ppm (ASX Announcement, 1 September 2022). Initial surface sampling of the Overton Mountain area conducted in 2018 revealed average TREO values of 3,297 ppm, average Heavy Rare Earth Oxide (HREO) values of 244 ppm, and average Magnetic Rare Earth Oxide (MREO) values of 816 ppm. (ASX Announcement, 26 April 2022). The maiden exploration drilling program was completed in April 2022. Additional surface sampling over additional Halleck Creek claims showed average TREO values of 3051 ppm, and average MREO values of 812 ppm. (ASX announcement, 4 August 2022).

La Paz and Halleck Creek's mineral profiles are incorporated into emerging US advanced rare earth processing technologies in collaboration with US national laboratories, major universities and the US DOE innovation hub, the Critical Materials Institute.

## **Appendix 1 – La Paz Tenements as at 30 September 2022**

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 as at 30 September 2022**

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 Interest %	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
0-43568 – 0-43571	Halleck Creek	Wyoming Rare (USA) Inc	100%			0-43568 – 0-43571	Halleck Creek	Wyoming Rare (USA) Inc
WY105771605 - WY105772540*	REX 75 - REX 257	Wyoming Rare (USA) Inc	100%			WY105771605 - WY105772540*	REX 75 - REX 257	Wyoming Rare (USA) Inc

\*Non-inclusive range

## **Appendix 3 – Searchlight Tenements as at 30 September 2022**

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 Interest %	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 A – JORC Table 1

<b>JORC Code, 2012 Edition – Table 1 Halleck Creek Exploration Area</b>		
<b>Section 1 Sampling Techniques and Data</b>		
(Criteria in this section apply to all succeeding sections.)		
<b>Criteria</b>	<b>JORC Code explanation</b>	<b>Commentary</b>
<b>Sampling techniques</b>	<i>Nature and quality of sampling (e.g., cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole gamma sondes, handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</i>	In March and April 2022, WRE drilled nine HQ-sized core holes across the Halleck Creek Resource claim area. All holes were approximately 350 ft with the exception of one hole which was terminated at 194 ft. Total drilled length of 3,008 ft (917 m). Rock core was divided into sample lengths of 5 ft (1.52 m) long and at key lithological breaks.
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	Core recoveries and RQD's were calculated by WRE field geologists.
	<i>Aspects of the determination of mineralisation that are Material to the Public Report.</i>	
	<i>In cases where 'industry standard' work has been done; this would be relatively simple (e.g., 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g., submarine nodules) may warrant disclosure of detailed information.</i>	Rock core samples 5 ft (1.52 m) long are being fillet cut. The fillet cuts are being pulverized and sampled for 60 elements including rare earth elements using ICP-MS and industry standards. A select number of samples are additionally being assayed for whole rock geochemistry. American Assay Labs in Sparks, NV is performing the analyses.
<b>Drilling techniques</b>	<i>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 another type, whether the core is oriented and if so, by what method, etc.).</i>	Core: HQ, diamond tip, 5-ft runs, unoriented. Total drilled depth of 3,008 ft (917 m).

<i>Drill sample recovery</i>	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	All drill core was visually logged, measured, and photographed by WRE geologists. Drill core was collected in lengths (runs) of 5 ft (1.52 m). Recoveries were calculated for each core run.
	<i>Measures are taken to maximise sample recovery and ensure the representative nature of the samples.</i>	All core and associated samples were immediately placed in core boxes.
	<i>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.</i>	Recoveries were very high in competent rock. No loss or gain of grade or grade bias related to recovery
<i>Logging</i>	<i>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.</i>	All drill core was visually logged, measured, and photographed by WRE geologists. Drill core was collected in lengths (runs) of 5 feet (1.52m). WRE geologists calculated recoveries for each core run. WRE geologists logged lithology, various types of alteration and mineralization, fractures, fracture conditions, and RQD.
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</i>	Core logging is quantitative in nature. All core was photographed.
	<i>The total length and percentage of the relevant intersections logged.</i>	All drill core was visually logged, measured, and photographed by WRE geologists. Drill core was collected in lengths (runs) of 5 feet (1.52m). WRE geologists calculated recoveries for each core run. WRE geologists logged lithology, various types of alteration and mineralization, fractures, fracture conditions, and RQD.
<i>Sub-sampling techniques and sample preparation</i>	<i>If core, whether cut or sawn and whether quarter, half or all cores taken.</i>	Drill core was fillet cut by American Assay Labs, with approximately 1/3 of the core used for assay. The remaining core material will be kept in reserve by WRE in a secure location.
	<i>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</i>	
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	All samples were dry. Sample preparation: 1kg samples split to 250g for pulverizing to -75 microns. Sample analysis: 0.5g charge assayed by ICP-MS technique.
	<i>Quality control procedures adopted for all sub-sampling stages to maximise the representivity of samples.</i>	WRE submitted CRM sample blanks, CRM standard REE samples from CND Labs and duplicate samples for analysis. Blank samples were added one for every 10 core samples, REE samples were added one for every 25 core samples, and Duplicate samples were added one per every 25 core samples.

	<p><i>Measures are taken to ensure that the sampling is representative of the in-situ material collected, including, for instance, results for field duplicate/second-half sampling.</i></p>	<p>Fillet cuts along the entire length of all cores are representative of the in-situ material.</p>
	<p><i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></p>	<p>Allanite is generally well distributed across the core and the sample sizes are representative of the fine grain size of the Allanite.</p>
<p><i>Quality of assay data and laboratory tests</i></p>	<p><i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></p>	<p>AAL Labs uses acid digestion and 60 element analysis including REE reported in ppm using method REE-5AO48 and whole-rock geochemical XRF analysis using method X-LIB15.</p>
	<p><i>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.</i></p>	<p>No geophysical tools used in the drilling program.</p>
	<p><i>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.</i></p>	<p>WRE submitted CRM sample blanks, CRM standard REE samples from CND Labs and duplicate samples for analysis. Blank samples were added one for every 10 core samples, REE samples were added one for every 25 core samples, and Duplicate samples were added one per every 25 core samples. Internal laboratory blanks and standards will additionally be inserted during analysis.</p>
<p><i>Verification of sampling and assaying</i></p>	<p><i>The verification of significant intersections by either independent or alternative company personnel.</i></p>	<p>Consulting company personnel have observed the assayed samples. Company personnel sampled the entire length of each hole.</p>
	<p><i>The use of twinned holes.</i></p>	<p>No twinned holes were used.,</p>
	<p><i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></p>	<p>Data entry was performed by WRE personnel and checked by WRE geologists. All field logs were scanned and uploaded to company file servers. All photographs of the core were also uploaded to the file server daily. Drilling data will be imported into</p>

		<p>the DHDB drill hole database. All scanned documents are cross-referenced and directly available from the database.</p> <p>Assay data was received electronically from AAL labs. These raw data as elements reported ppm were imported into the database with no adjustments.</p>
	<i>Discuss any adjustment to assay data.</i>	Oxide values are calculated in the database using the molar mass of the element and the oxide
<i>Location of data points</i>	<i>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.</i>	Down hole surveyed were not used.
	<i>Specification of the grid system used.</i>	Drill hole location is based on GPS coordinates +/- 10 ft (3 m) accuracy.
	<i>Quality and adequacy of topographic control.</i>	The grid system used to compile data was NAD83 Zone 13N.
<i>Data spacing and distribution</i>	<i>Data spacing for reporting of Exploration Results.</i>	Topography control is +/- 10 ft (3 m).
	<i>Whether the data spacing, and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i>	Both randomly spaced and localized clustering of drillholes.
	<i>Whether sample compositing has been applied.</i>	The data is not at a sufficient spacing to determine a mineral resource or reserve. No resources or reserves are being reported for the Halleck creek area.
<i>Orientation of data in relation to geological structure</i>	<i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i>	Each sample is the result of assaying a 5 ft interval of core. Composite assay values have not been calculated or applied.
	<i>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.</i>	6 holes were vertical, and three were angled at 65° in various directions depending on drill hole location.
<i>Sample security</i>	<i>The measures are taken to ensure sample security.</i>	All core was collected from the drill rig daily and stored in a secure, locked facility until the core was dispatched by bonded courier to



		America Assay Labs. Chains of custody were maintained at all times.
<i>Audits or reviews</i>	<i>The results of any audits or reviews of sampling techniques and data.</i>	No external audits or reviews have been conducted to date. However, sampling techniques are consistent with industry standards.

<b>Section 2 Reporting of Exploration Results</b>		
(Criteria listed in the preceding section also apply to this section.)		
<b>Criteria</b>	<b>JORC Code explanation</b>	<b>Commentary</b>
<i>Mineral tenement and land tenure status</i>	<i>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.</i>	Wyoming Rare Earths Project Acquisition – 5 Unpatented mining claims on BLM US Federal Land totaling 71.6 acres (29 has) were acquired from Zenith Minerals Ltd. Sixty-seven (67) additional unpatented mining claims were staked by ARR that totaled 1193.3 acres (482 ha). Overall, the ARR subsidiary controls 3101 acres (1255 ha) of mining claims and Wyoming State Leases. ARR staked an additional 182 federal claims in March 2022 covering an area of approximately 3,088 acres (1,250 ha).
	<i>The security of the tenure held at the time of reporting and any known impediments to obtaining a licence to operate in the area.</i>	No impediments to holding the claims exist. To maintain the claims an annual holding fee of \$165/claim (\$11,880.00) is payable to the BLM. To maintain the State leases minimum rental payments of \$1/acre for 1-5 years; \$2/acre for 6-10 years; and \$3/acre if held for 10 years or longer.
<i>Exploration done by other parties</i>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	Prior to sampling by WIM on behalf of Blackfire Minerals and Zenith Minerals there was no previous sampling by any other groups within the ARR claim and Wyoming State Lease blocks.
<i>Geology</i>	<i>Deposit type, geological setting and style of mineralisation.</i>	The REE's occur within allanite which occurs as a variable constituent of the Red Mountain Pluton. The occurrence can be characterized as a disseminated type of rare earth deposit.

<i>Drill hole Information</i>	<i>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:</i>	Authentic Drilling from Kiowa, Colorado used both a track mounted and ATV mounted core rig to drill nine HQ diameter core holes. From March to April 2022, WRE drilled nine core holes across the Halleck Creek claim area. Drill holes ranged in depth from 194 to 352.5 ft with a total drilled length of 3,008 ft (917 m).
	<i>easting and northing of the drill hole collar</i>	All relevant information for this section can be found in Table 1 of the report entitled “Summary of Maiden Exploration Drilling at the Halleck Creek Project Area”, May 2022.
	<i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i>	
	<i>dip and azimuth of the hole</i>	
	<i>downhole length and interception depth</i>	
	<i>Hole length.</i>	
<i>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.</i>	No Drilling data has been excluded	
<i>Data aggregation methods</i>	<i>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.</i>	Average Grade values were cut at minimum of TREO 1,500 ppm.
	<i>Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</i>	Assays are representative of each 5 ft (1.52 m) sample interval.
	<i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i>	No metal equivalents used.
<i>Relationship between mineralisation widths and intercept lengths</i>	<i>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 unknown and only the downhole lengths are reported, there should be a clear statement to this effect (e.g., ‘down hole length, true width not known’).</i>	The geometry of the mineralization with respect to drill hole angle is not yet known. Vertical holes represent true depth and angled holes represent down-hole length.

Diagrams	<i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to, a plan view of drill hole collar locations and appropriate sectional views.</i>	See Figures in this report.
Balanced reporting	<i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practised to avoid misleading reporting of Exploration Results.</i>	The latest exploration results reported in “Mapping and Surface Sampling Summary at the Halleck Creek Project Area: April 2022”.  All relevant information for this section can be found in Table 1 of the report entitled “Summary of Maiden Exploration Drilling at the Halleck Creek Project Area”, May 2022.
Other substantive exploration data	<i>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.</i>	In hand specimen this rock is a red colored, hard and dense granite with areas of localized fracturing. The rock shows significant iron staining and deep weathering.  Microscopic description: In hand specimen the samples represent light colored, fairly coarse-grained granitic rock composed of visible secondary iron oxide, amphibole, opaques, clear quartz and pink to white colored feldspar. All of the specimens show moderate to strong weathering and fracturing. Allanite content is variable from trace to 2%. Rare Earths are found within the allanite.  Metallurgical testing to date consisted of concentrating the allanite by both gravity and magnetic separation. The rare earth rich allanite concentrate will be further evaluated for extraction of the rare earths.
Further work	<i>The nature and scale of planned further work (e.g., tests for lateral extensions or depth extensions or large-scale step-out drilling).</i>	Further drilling, mapping and sampling is planned.
	<i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i>	Locations of additional drillholes will be based on assay results when received.

# JORC Code, 2012 Edition – Table 1 La Paz SW Rare Earth Exploration Project

## Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<i>Nature and quality of sampling (e.g., cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</i>	From February to April 2022, WRE drilled nine core holes across the La Paz SW claim area. HQ size core, chip samples from sonic drill cuttings, and minor NQ sized core was collected during the project. Drill holes ranged in depth from 116.5 feet to 441 with a total drilled length of 2692.5 feet (821 meters). Rock core was divided into sample lengths 5 feet (1.52m) long and at key lithological breaks.
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	The lengths of each drill core were measured, and recoveries were calculated by WRE field geologists
	<i>Aspects of the determination of mineralisation that are Material to the Public Report.</i>	
	<i>In cases where ‘industry standard’ work has been done this would be relatively simple (e.g., ‘reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay’). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g., submarine nodules) may warrant disclosure of detailed information.</i>	Rock core samples 5 feet (1.52m) long are being fillet cut. The fillet cuts are being pulverized and sampled for 60 elements including rare earth elements using ICP-MS and industry standards. American Assay Labs in Sparks, NV is performing the analyses.
Drilling techniques	<i>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).</i>	From February to April 2022, WRE drilled nine core holes across the La Paz SW claim area. HQ size core, chip samples from sonic drill cuttings, and minor NQ sized core was collected during the project. Drill holes ranged in depth from 116.5 feet to 441 with a total drilled length of 2692.5 feet (821 meters).
Drill sample recovery	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	All drill core was visually logged, measured, and photographed by WRE geologists. Drill core was collected in lengths (runs) of 5 feet (1.52m). WRE geologists calculated recoveries for each core run.
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	All core and samples were immediately placed in core boxes. When core drilling became difficult, sonic drilling techniques were employed to increase recovery.
	<i>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.</i>	



Logging	<i>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.</i>	All drill core was visually logged, measured, and photographed by WRE geologists. Drill core was collected in lengths (runs) of 5 feet (1.52m). WRE geologists calculated recoveries for each core run. WRE geologists logged lithology, various types of alteration and mineralization, fractures, fracture conditions, and RQD.
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i>	The core logging is quantitative in nature
	<i>The total length and percentage of the relevant intersections logged.</i>	All drill core was visually logged, measured, and photographed by WRE geologists. Drill core was collected in lengths (runs) of 5 feet (1.52m). WRE geologists calculated recoveries for each core run. WRE geologists logged lithology, various types of alteration and mineralization, fractures, fracture conditions, and RQD.
Sub-sampling techniques and sample preparation	<i>If core, whether cut or sawn and whether quarter, half or all cores taken.</i>	Drill core was fillet cut by American Assay Labs, with approximately 1/3 of the core used for assay. The remaining core material will be kept in reserve by WRE in a secure location.
	<i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i>	Rock chips from sonic drilling will be split riffled on a dry basis.
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	All samples were dry. Sample preparation: 1kg samples split to 250g for pulverizing to -75 microns. Sample analysis: 0.5g charge assayed by ICP-MS technique
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	WRE submitted CRM sample blanks, CRM standard REE samples from CND Labs and duplicate samples for analysis. Blank samples were added one for every 10 core samples, REE samples were added one for every 25 core samples, and Duplicate samples were added one per every 50 core samples.
	<i>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.</i>	Fillet cuts along the entire length of all cores are representative of the in-situ material.
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	Allanite is generally well distributed across the core and the sample sizes are representative of the fine grain size of the Allanite.
Quality of assay data and laboratory tests	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>	AAL Labs uses acid digestion and 60 element analysis including REE reported in ppm (D5A ICP-OES finish ICP-5AM60).

	<i>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.</i>	No geophysical tools, spectrometers, handheld XRF instruments, etc used.
	<i>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.</i>	WRE submitted CRM sample blanks, CRM standard REE samples from CND Labs and duplicate samples for analysis. Blank samples were added one for every 10 core samples, REE samples were added one for every 25 core samples, and Duplicate samples were added one per every 50 core samples.
<i>Verification of sampling and assaying</i>	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	Significant intercepts were verified by an independent consultant geologist as part of the resource estimation.
	<i>The use of twinned holes.</i>	No twinned holes were used.
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	Data entry was performed by WRE personnel and checked by WRE geologists. All field logs were scanned and uploaded to company file servers. All photographs of the core were also uploaded to the file server daily. Drilling data will be imported into the DHDB drill hole database. All scanned documents are cross-referenced and directly available from the database.
	<i>Discuss any adjustment to assay data.</i>	None
<i>Location of data points</i>	<i>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.</i>	Down hole surveyes were not used due to the short length (max 30m depth). Hole collars were surveyed using a handheld GPS.
		Drill holes were located using a Garmin personal GPS unit.
	<i>Specification of the grid system used.</i>	UTM grid system NAD 1983 Zone 12
	<i>Quality and adequacy of topographic control.</i>	Drill hole elevations were estimated using existing USGS topographic DTM models as control.
<i>Data spacing and distribution</i>	<i>Data spacing for reporting of Exploration Results.</i>	
	<i>Whether the data spacing, and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i>	The data is not at a sufficient spacing to determine a mineral resource or reserve. No resources or reserves are being reported for the La Paz SW area.
	<i>Whether sample compositing has been applied.</i>	Samples have not been composited as all sample intervals were equal (5 feet /1.52m).

Orientation of data in relation to geological structure	<i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i>	Core drilling was vertical, except for one drill hole. Additional drilling needed to determine if structures bias sampling.
	<i>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.</i>	
Sample security	<i>The measures taken to ensure sample security.</i>	All core was collected from the drill rig daily and stored in a secure, locked facility until the core was dispatched by bonded courier to America Assay Labs. Chains of custody were maintained at all times.
Audits or reviews	<i>The results of any audits or reviews of sampling techniques and data.</i>	No external audits or reviews have been conducted to date.

## Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<i>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.</i>	The tenement schedule is included in the appendix to this report. The tenements are in the form of 20-acre United States Bureau of Land Management lode mining claims. The total land package controlled by the Company in the La Paz Project Area consists of 261 unpatented lode mining claims totaling 5392.26 acres (2178.47 has). The State Exploration Permit totals 640 acres (259 has). The mining claims are 100% owned by the Company with no royalties. All claims are outside of any wilderness or national park and environmental settings. An historic railroad line crosses a portion of the claims but is outside of any historic or planned exploration programs. The State leased land is subject to a state royalty (as yet undetermined) once the exploration activity has advanced to the exploitation level. At this point the State engineers and geologists will evaluate any defined mineral deposit and determine an appropriate royalty.
	<i>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.</i>	As long as annual Arizona State lease holding fees and annual claim holding fees are paid to both the BLM and the County (La Paz) in which the claims reside, tenure is secure.
Exploration done by other parties	<i>Acknowledgment and appraisal of exploration by other parties.</i>	Rare earths were first recognized in June 2010 by John Petersen, a geologist, who submitted for analysis a reconnaissance sample from the Swansea and Bill Williams River areas that analyzed 459.98 ppm total rare earth elements (TREE). A further 119 samples returned TREE values of 20.6 to 674.21 ppm. Scandium varied from 1.1 to 30.2 ppm. AusAmerican then conducted a confirmation sampling exercise of 22 samples that returned values of 6 to 588 ppm TREE, followed in February 2011, by a sample grid of 199 samples that returned 49 to 714 ppm TREE. 195 percussion drill holes were drilled in early 2011. Additional sampling was conducted in 2019 and 2020.
		Drilling prior to 2021 was carried out by AusAmerican Mining Corporation and at the time the company was listed on the ASX.
Geology	<i>Deposit type, geological setting and style of mineralisation.</i>	The project lies within the Harcuvar metamorphic core complex within the Basin and Range Province of Arizona. Mineralisation is hosted in alkali granitic gneiss and to a lesser extent, a structurally superimposed suite of continental red beds. REEOs occur in Allanite (epidote) that occurs as fine-grained disseminations and micro-fracture fillings.

		<p>In December 2021, WRE geologists updated surface geologic maps across the La Paz project area based upon field observations and analytical results.</p>
<p><i>Drill hole Information</i></p>	<p><i>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:</i></p>	<p>AusAmerican in 2011 contracted Dynamic Rock Solutions LLC of Salome, Arizona, to conduct exploratory drilling using a track-mounted percussion drill. Drilling began on April 20, 2011 and was completed on May 31, 2011. One hundred and ninety-five 3.5" diameter holes were completed for the purpose of obtaining samples of the rock types of present. Holes varied in depth from 40 to 100 feet: most holes (142 of 195) were completed to 100 feet and total footage drilled was 18,805 feet. Distances between holes was 100 feet and holes were situated along 4 lines: Lines A, B, and C were oriented NW-SE, and one, Line D, was oriented in the NE direction and crossed the other lines. The map below illustrates the La Paz percussion drill hole locations and the sample lines.</p>
		<p>Authentic Drilling from Kiowa, Colorado used a track mounted core rig to drill seven HQ diameter core holes. A track mounted sonic rig was used to drill 2 drill holes. From February to April 2022, WRE drilled nine core holes across the La Paz SW claim area. HQ size core, chip samples from sonic drill cuttings, and minor NQ sized core was collected during the project. Drill holes ranged in depth from 116.5 feet to 441 with a total drilled length of 2692.5 feet (821 meters).</p>
	<p><i>easting and northing of the drill hole collar</i></p>	<p>March 2022 Core Drilling: Locations of the March 2022 Core Hole data are located in the Report.</p>
	<p><i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></p>	
	<p><i>dip and azimuth of the hole</i></p>	
	<p><i>down hole length and interception depth</i></p>	
<p><i>hole length.</i></p>		
<p><i>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.</i></p>		

<p><i>Data aggregation methods</i></p>	<p><i>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.</i></p> <p><i>Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</i></p> <p><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></p>	<p>All drill core was visually logged, measured, and photographed by WRE geologists. Drill core was collected in lengths (runs) of 5 feet (1.52m). WRE geologists calculated recoveries for each core run. WRE geologists logged lithology, various types of alteration and mineralization, fractures, fracture conditions, and RQD.</p> <p>March 2022 Core Drilling: All core was boxed in 10-foot long sections in core boxes. No aggregations of the core were performed.</p>
<p><i>Relationship between mineralisation widths and intercept lengths</i></p>	<p><i>These relationships are particularly important in the reporting of Exploration Results.</i></p> <p><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></p> <p><i>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').</i></p>	<p>The vertical drill hole orientations, 5' sample lengths are considered appropriate to the style mineralization and distribution of lithologies</p>
<p><i>Diagrams</i></p>	<p><i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i></p>	<p>Drill hole locations, and drill hole strip logs are included in this summary report.</p>
<p><i>Balanced reporting</i></p>	<p><i>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.</i></p>	<p>Assay results of the 2022 La Paz SW drilling are still being analysed.</p> <p>The exploration results from March 2021 were reported on July 29, 2021, Press Release and "2021 Core Hole Analysis Summary, June 2021"</p> <p>Additional, mapping and sampling results were reported in the March 24, 2022, Press Release and the associated report "Summary of Geologic Mapping and Surface Sampling from December 2021", March 2022</p> <p>This report summarizes assay results for four drill holes from the 2022 La Paz SW Exploration program including: LP22-SW02, LP22-SW04, LP22-SW05, and LP22-SW07.</p>

<p><i>Other substantive exploration data</i></p>	<p><i>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.</i></p>	<p>Metallurgical test work was completed following the 2011 drilling program. Drillhole LP-B7 was twinned, and sixteen samples submitted to Saskatchewan Research Council, Saskatoon, Saskatchewan, Canada for pre-concentration and preliminary leaching tests</p> <p>Representative rock specimens were submitted to SGS Canadian Laboratories, Vancouver, Canada from within the resource areas to determine overall mineral assemblages and liberations/association of rare earth element carriers</p> <p>March 2021 Core Drilling: Approximately 500 kg of core has been shipped to Nagrom Labs, in Perth Australia, for additional mineral processing and metallurgical testing. This work is ongoing.</p>
<p><i>Further work</i></p>	<p><i>The nature and scale of planned further work (e.g., tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></p> <p><i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></p>	<p>The Company is developing plans for additional geological mapping, surface sampling, aerial magnetics, and drafting permits for expanded exploration drilling.</p>



## JORC Code, 2012 Edition – Table 1 Searchlight Rare Earths Project

### Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
<i>Sampling techniques</i>	<ul style="list-style-type: none"> <li>• Nature and quality of sampling (e.g., cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>• Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>• Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>• In cases where 'industry standard' work has been done this would be relatively simple (e.g., 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g., submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>• Individual grab rock samples and were collected by hand at the surface, from in-situ outcrops.</li> <li>• Grab samples are believed to be representative of the outcrops they came from</li> <li>• 1-2kg rock samples were collected by a geologist, samples were broken using a hammer from outcrop. Rock samples were crushed in the laboratory and then pulverized before analysis.</li> </ul>
<i>Drilling techniques</i>	<ul style="list-style-type: none"> <li>• 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).</li> </ul>	<ul style="list-style-type: none"> <li>• No drilling</li> </ul>
<i>Drill sample recovery</i>	<ul style="list-style-type: none"> <li>• Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>• Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• No drilling</li> </ul>
<i>Logging</i>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>• The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>• Rock samples were geologically described and photographed.</li> <li>• No logging</li> </ul>

Criteria	JORC Code explanation	Commentary
<i>Sub-sampling techniques and sample preparation</i>	<ul style="list-style-type: none"> <li>• If core, whether cut or sawn and whether quarter, half or all cores taken.</li> <li>• If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>• For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>• Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>• 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.</li> <li>• Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>• Samples were analyzed at Activation Laboratories Ltd in Ancaster, Ontario, Canada, the samples were crushed, pulverized and assayed by Code 8-REE Assay</li> <li>• ~2kg of rock was crushed and pulverized and a subsample was taken in the laboratory and sent for analysis.</li> <li>• Grab sampling was selective based upon geological observations.</li> <li>• Each sample was 1kg to 2kg in weight which is appropriate to test for grain size of material.</li> </ul>
<i>Quality of assay data and laboratory tests</i>	<ul style="list-style-type: none"> <li>• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>• 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.</li> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• The samples were crushed and assayed for whole rock geochemistry and 45 elements using fusion ICP-OES and ICP-MS. The procedure will report near total results.</li> <li>• No geophysical tools used in the sampling program.</li> <li>• Internal laboratory standards were analysed with rock samples.</li> </ul>
<i>Verification of sampling and assaying</i>	<ul style="list-style-type: none"> <li>• The verification of significant intersections by either independent or alternative company personnel.</li> <li>• The use of twinned holes.</li> <li>• Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>• Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>• Consulting company personnel have observed and collected the assayed samples.</li> <li>• No drilling</li> <li>• Field data were all recorded in field notebooks and sample record books and then entered into a digital database.</li> <li>• No adjustments were made.</li> </ul>
<i>Location of data points</i>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Specification of the grid system used.</li> <li>• Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>• Sample location is based on GPS coordinates +/- 3m accuracy.</li> <li>• The grid system used to compile data was NAD83 Zone 12N.</li> <li>• Topography control is +/- 10m</li> </ul>
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <li>• Data spacing for reporting of Exploration Results.</li> <li>• Whether the data spacing, and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>• Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>• Both randomly spaced surface chip sampling</li> <li>• The data alone will not be used to estimate mineral resource or ore reserve</li> <li>• None</li> </ul>

Criteria	JORC Code explanation	Commentary
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <li>• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• Rock samples were taken of selected outcrops that were considered representative of varying rock types.</li> <li>• No drilling</li> </ul>
<i>Sample security</i>	<ul style="list-style-type: none"> <li>• The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>• Samples were kept in numbered bags until delivered to the laboratory.</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li>• The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>• Sampling techniques are consistent with industry standards.</li> </ul>

## Section 2 Reporting of Exploration Results

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• Western Rare Earths Acquisition – 81 unpatented mining claims on BLM US Federal Land totalling approx. 1620 acres were staked in the Searchlight Project Area.</li> <li>• The claims are 100% owned by WRE (100% owned ARR subsidiary).</li> <li>• No impediments to holding the claims exist. To maintain the claims an annual holding fee of \$165/claim (\$13,365) is payable to the BLM.</li> </ul>
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> <li>• Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>• Sampling in the region was completed by Elissa Resources Ltd/NexOptic on adjacent mining claims controlled by Red Hill Energy.</li> </ul>
<i>Geology</i>	<ul style="list-style-type: none"> <li>• Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>• The deposit is within veins/veinlets in pre-Cambrian granites/gneisses. REE elements are hosted in monazite, apatite, and xenotime which is found in veins and veinlets within the granites/gneisses.</li> <li>• Rare REEs are found in biotite enriched gneisses.</li> </ul>
<i>Drill hole Information</i>	<ul style="list-style-type: none"> <li>• 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: <ul style="list-style-type: none"> <li>○ easting and northing of the drill hole collar</li> <li>○ elevation or RL (Reduced Level – elevation above sea level in</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• No Drilling</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p>metres) of the drill hole collar</p> <ul style="list-style-type: none"> <li>○ dip and azimuth of the hole</li> <li>○ down hole length and interception depth</li> <li>○ hole length.</li> </ul> <ul style="list-style-type: none"> <li>• 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.</li> </ul>	
Data aggregation methods	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>• The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>• No high-grade cutting</li> <li>• No aggregation used</li> <li>• No metal equivalents used</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> <li>• These relationships are particularly important in the reporting of Exploration Results.</li> <li>• If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>• 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').</li> </ul>	<ul style="list-style-type: none"> <li>• No Drilling</li> <li>• No Drilling</li> <li>• No Drilling</li> </ul>
Diagrams	<ul style="list-style-type: none"> <li>• Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</li> </ul>	<ul style="list-style-type: none"> <li>• See maps in body of Report discussing "sample locations"</li> </ul>
Balanced reporting	<ul style="list-style-type: none"> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• Total REE's range in samples: 5 – 675 ppm; HREE's: 3 – 90 ppm See figures, tables, and appendices in report for sample site locations and assay values.</li> </ul>
Another substantive	<ul style="list-style-type: none"> <li>• 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</li> </ul>	<ul style="list-style-type: none"> <li>• None.</li> </ul>

Criteria	JORC Code explanation	Commentary
<i>exploration data</i>	<i>method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i>	
<i>Further work</i>	<ul style="list-style-type: none"> <li>• <i>The nature and scale of planned further work (e.g., tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li>• <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Further work will not be pursued at this time.</li> </ul>

## 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")

30 September 2022

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (3 months) \$A'000
<b>1. Cash flows from operating activities</b>		
1.1 Receipts from customers	-	-
1.2 Payments for		
(a) exploration & evaluation	-	-
(b) development	-	-
(c) production	-	-
(d) staff costs	(236)	(236)
(e) administration and corporate costs	(946)	(946)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	21	21
1.5 Interest and other costs of finance paid	(3)	(3)
1.6 Income taxes paid	-	-
1.7 Government grants and tax incentives	-	-
1.8 Other (provide details if material)	-	-
<b>1.9 Net cash from / (used in) operating activities</b>	<b>(1,164)</b>	<b>(1,164)</b>
<b>2. Cash flows from investing activities</b>		
2.1 Payments to acquire or for:		
(a) entities	-	-
(b) tenements	(62)	(62)
(c) property, plant and equipment	(16)	(16)
(d) exploration & evaluation	(799)	(799)
(e) investments	-	-
(f) other non-current assets	-	-

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): Lease payment	(13)	(13)
<b>2.6 Net cash from / (used in) investing activities</b>	<b>(890)</b>	<b>(890)</b>

<b>3. Cash flows from financing activities</b>		
3.1 Proceeds from issues of equity securities (excluding convertible debt securities)	14,000	14,000
3.2 Proceeds from issue of convertible debt securities	-	-
3.3 Proceeds from exercise of options	60	60
3.4 Transaction costs related to issues of equity securities or convertible debt securities	(960)	(960)
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)	-	-
<b>3.10 Net cash from / (used in) financing activities</b>	<b>13,100</b>	<b>13,100</b>

<b>4. Net increase / (decrease) in cash and cash equivalents for the period</b>		
4.1 Cash and cash equivalents at beginning of period	6,340	6,340
4.2 Net cash from / (used in) operating activities (item 1.9 above)	(1,164)	(1,164)
4.3 Net cash from / (used in) investing activities (item 2.6 above)	(890)	(890)
4.4 Net cash from / (used in) financing activities (item 3.10 above)	13,100	13,100



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

<b>Consolidated statement of cash flows</b>		<b>Current quarter \$A'000</b>	<b>Year to date (3 months) \$A'000</b>
4.5	Effect of movement in exchange rates on cash held	31	31
<b>4.6</b>	<b>Cash and cash equivalents at end of period</b>	<b>17,417</b>	<b>17,417</b>

<b>5.</b>	<b>Reconciliation of cash and cash equivalents</b> at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	<b>Current quarter \$A'000</b>	<b>Previous quarter \$A'000</b>
5.1	Bank balances	13,363	6,293
5.2	Call deposits	4,054	47
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
<b>5.5</b>	<b>Cash and cash equivalents at end of quarter (should equal item 4.6 above)</b>	<b>17,417</b>	<b>6,340</b>

<b>6.</b>	<b>Payments to related parties of the entity and their associates</b>	<b>Current quarter \$A'000</b>
6.1	Aggregate amount of payments to related parties and their associates included in item 1	163
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.*

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

7. <b>Financing facilities</b> <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>	<b>Total facility amount at quarter end \$A'000</b>	<b>Amount drawn at quarter end \$A'000</b>
7.1 Loan facilities	-	-
7.2 Credit standby arrangements	-	-
7.3 Other (please specify)	-	-
7.4 <b>Total financing facilities</b>	-	-
7.5 <b>Unused financing facilities available at quarter end</b>		-
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. <b>Estimated cash available for future operating activities</b>	<b>\$A'000</b>
8.1 Net cash from / (used in) operating activities (item 1.9)	(1,164)
8.2 (Payments for exploration & evaluation classified as investing activities) (item 2.1(d))	(799)
8.3 Total relevant outgoings (item 8.1 + item 8.2)	(1,963)
8.4 Cash and cash equivalents at quarter end (item 4.6)	17,417
8.5 Unused finance facilities available at quarter end (item 7.5)	-
8.6 Total available funding (item 8.4 + item 8.5)	17,417
8.7 <b>Estimated quarters of funding available (item 8.6 divided by item 8.3)</b>	8.87
<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:           ...27 October 2022.....

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.