American Rare Earths – 1.43 Billion Tonne JORC Resource

written by Raj Shah | March 31, 2023

Halleck Creek is positioning itself to be one of the largest rare earth projects in the United States and a key asset for the domestic supply chain

Highlights

- Total JORC Resource of 1.43 billion tonnes
- Estimated 4.73 million tonnes of contained Total Rare Earth Oxides (TREO) in-situ
- Mineralization contains approximately 24% highly valuable magnetic rare earth elements
- TREO average grade of 3,309 ppm
- Significant upside potential with 75% of district yet to be drilled and deposit remaining open at depth
- Deposit is from surface to at least 150 meters with consistent grades throughout making it ideal for large scale, low-cost open pit mining
- Environmentally friendly with low levels of penalty thorium and uranium elements

March 31, 2023 (Source) – **The Board of American Rare Earths (ASX: ARR | OTCQB: ARRNF | FSE: 1BHA)** the **'Company'** is pleased to announce a maiden JORC Resource estimate for its Halleck Creek Rare Earths Project **'Halleck Creek'** in Wyoming, USA. The JORC Resource at Halleck Creek is 1.43 billion tonnes with an average TREO grade of 3,309 ppm, and an average NdPr grade of

734 ppm. The JORC Resource estimate has exceeded expectations in comparison to previous exploration target estimates and has demonstrated the Halleck Creek project has the potential to become a world class deposit. The resource area covers 949 acres of the total exploration area held by the Company which totals 8,165 acres, meaning the JORC Resource has the potential to greatly increase with future exploration campaigns.

Chief Executive Officer and Managing Director Chris Gibbs said*: "These results confirm the Company has a strategically significant rare earth asset, in the United States, which should enable the largest economy in the world to reduce its dependence on China or other imported rare earths.*

"Global magnetic rare earth oxide consumption is forecast to more than triple by 2035. The US government has made no secret that it is seeking to onshore supply of all critical materials for supply chain and national security purposes. There is only one producing rare earth mine within the USA, the Mountain Pass mine in California. The USA needs a number of these mines to secure onshore supply of rare earths and we believe Halleck Creek is part of the future solution.

"With a maiden JORC Resource estimate of 1.43 billion tonnes this project is strategically significant, containing over 4.73 million tonnes of rare earth oxides. With only a quarter of the licence area drilled and remaining open at depth, the upside potential is significant. The Halleck Creek project is shaping up to be a strategic asset for the USA to supply rare earths for future generations".

Table 1 summarizes estimated in-situ resources at Halleck Creek by resource area and category using a TREO cut-off of 1,500 ppm.

Table 1 – Estimated Rare Earth Resources at Halleck Creek

Resource Area	Tonnes (millions)			Kg TREO (millions)			Kg NdPr (millions)			Grade (ppm)	
	Indicated	Inferred	Total	Indicated	Inferred	Total	Indicated	Inferred	Total	TREO	NdPr
Overton Mountain	348	434	782	1,202	1,464	2,666	274	326	600	3,408	767
Red Mountain	274	373	647	907	1,158	2,065	202	248	450	3,190	695
Grand Total	622	807	1,430	2,109	2,622	4,731	477	573	1,050	3,309	734

Next Steps

Under the supervision of Wood PLC, one of the world's leading consulting and engineering companies, metallurgical test work is ongoing to optimize the process flow sheet. This includes bulk WHIMS and floatation test work which are well advanced, to assess the likely constituents of an upgraded concentrate product. Testing will commence immediately thereafter on the further upgrade of the concentrates via a leaching process. The metallurgical test work will provide the foundation for the Scoping Study scheduled for later this year. Additional exploration and development work also continues at Halleck Creek.

"This is an excellent outcome from our drilling program and a key step towards creating significant shareholder value. We are committed to growing our rare earth resources and developing our operations in the USA.

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

The Company prepared a comprehensive technical report entitled "Technical Report of Exploration and Maiden Resource Estimates of the Halleck Creek Rare Earths Project March 2023" for the Halleck Creek project. This report is available from the ARR website https://americanrareearths.com.au/wp-content/uploads/2023/03/Halleck_Creek_Technical_Report_Appendices19.pdf.

Mr. Creagh O’Connor
Chairman

Competent Persons Statement:

The information in this document is based on company work performed in March 2023. This work was reviewed and approved for release by Mr. Dwight Kinnes (Society of Mining Engineers #4063295RM) is employed by American Rare Earths and has sufficient experience which is relevant to the style of mineralization 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.

The information in this document that relates to Mineral Resource Estimate is based on information provided by Mr. Alfred Gillman. Mr. Gillman is Principal of the independent consultant firm Odessa Resources Pty Ltd. Mr. Gillman is a Fellow and Chartered Professional of the Australian Institute of Mining and Metallurgy (AUSIMM) and has sufficient experience which is relevant to the style of mineralization 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. Gillman consents to the inclusion in the report of the matters based upon the information in the form and context in which it appears.

The information in this report that relates to Halleck Creek Exploration Results were reviewed by Mr. Jim Guilinger. Mr. Guilinger is a Member of a Recognized Overseas Professional Organization included in a list promulgated by the ASX (SME Registered Member of the Society of Mining, Metallurgy and Exploration Inc). Mr. Guilinger is Principal of independent

consultants World Industrial Minerals LLC. Mr. Guilinger has sufficient experience which is relevant to the style of mineralization and type of deposit under consideration and to the activity which they are undertaking as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. Guilinger consents to the inclusion in the report of the matters based on their information in the form and context in which it appears.

Forward-Looking Statements

This press release contains "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements involve known and unknown risks, uncertainties, and other important factors that could cause the Company's actual results, performance, or achievements or industry results to differ materially from any future results, performance, or achievements expressed or implied by these forward-looking statements. These statements are subject to a number of risks and uncertainties, many of which are beyond American Rare Earths Limited's control.

Concurrently, this press release contains forward-looking statements within the meaning of the U.S. Securities Act of 1933, as amended, and U.S. Securities Exchange Act of 1934, as amended, including, but not limited to, statements regarding the potential development, economic feasibility, resource, grade and other mineralization characteristics, and drilling and exploration methods that may be utilized in potential exploration of the Company's projects. When used in this press release, the words "potential," "plans," "indicate," "expect," "intend," "hopes," "believe," "may," "will," "if," "possible," "anticipate" and similar expressions are intended to identify forward-looking statements. Although, not all forward-looking statements contain such identifying words. These statements

involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance, or achievements of the Company to be materially different from any future results, performance or achievements expressed or implied by such statements. Such factors include, among others, uncertainty of mineralized material and mineral resource estimates, risks to projected and estimated economics not reflecting actual economic results due to the uncertainty of mining processes, potential non-uniform sections of mineralized material, potential mining hazards and accidents, changes in equipment and labor costs, changes in projected mineral prices and demand, competition in the mining industry, risks related to project development determinations, the inherently hazardous nature of mining-related activities, potential effects on the Company's operations of environmental regulations, risks due to legal proceedings, liquidity risks and risks related to uncertainty of being able to raise capital on favorable terms or at all, as well as those factors discussed in filings with the Australian Securities Exchange. Any forward-looking statements included in this press release are made only as of the date of this release. Except as required by law, the Company assumes no obligation to publicly update any forward-looking statements. The Company cannot assure you that the projected results or events will be achieved.

Cautionary Note to US Investors

The United States Securities and Exchange Commission ("SEC") limits disclosure for U.S. reporting purposes to mineral deposits that a company can economically and legally extract or produce and that are compliant with SEC Industry Guide 7. Investors are cautioned, that where a Resource has not been specifically published, not to assume that any part or all of the proposed projects contains any mineral deposits that will ever be converted into resources or that any inferred mineral

resource or measured and indicated resources exists or is economically or legally mineable. The proposed projects do not contain any known proven or probable ore reserves or mineral resource compliant with SEC Industry Guide 7 reporting standards. Investors are urged to consider closely the disclosures set forth in the Company’s latest reports filed with the ASX.

About American Rare Earths:

One of the only ASX listed companies with exposure to the rapidly expanding US market, American Rare Earths is developing its 100% owned magnet metals projects, La Paz in Arizona, and Halleck Creek in Wyoming. Both have potential to be among the largest, rare earths deposits in North America. The Company is concurrently evaluating other exploration opportunities while collaborating with US Government supported R&D to develop a sustainable domestic supply chain for the renewable future.

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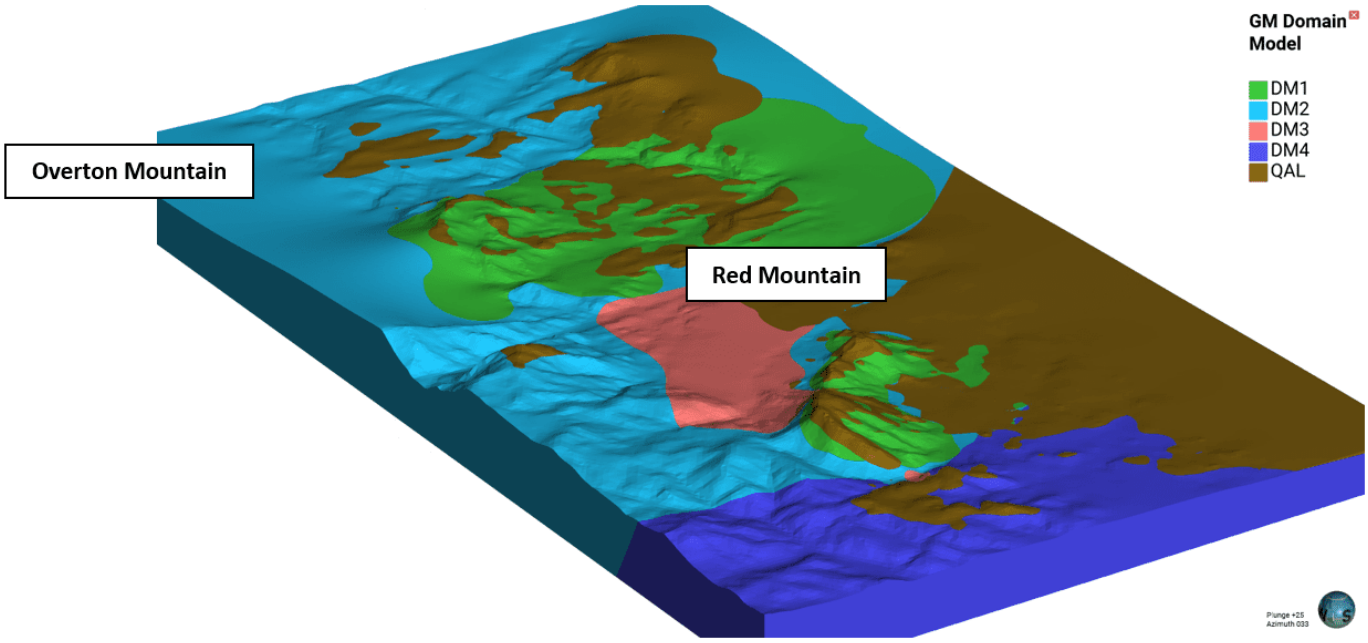

Figure 1 – Modelled geologic domains

The estimated in-place resource at Halleck Creek is 1.43 billion tonnes with an average TREO grade of 3,309 ppm , and an average NdPr grade of 734 ppm (Table 1). Total estimated indicated resources comprise approximately 43.5%, with 56.5% as inferred resources across the project area.

An image accompanying this announcement is available at https://www.globenewswire.com/NewsRoom/AttachmentNg/80765241-af1a-4347-bd2d-2ed20a116ad6