

American Rare Earths Reports Positive Metallurgical Test Results

written by Raj Shah | June 2, 2023

June 2, 2023 ([Source](#)) – [American Rare Earths](#) (ASX: ARR | OTCQB: ARRF | FSE:1BHA) (ARR or the Company) is pleased to report on the latest in a series of metallurgical tests on ore from its Halleck Creek project in Wyoming. With a [JORC Resource of 1.43 billion tonnes](#) the Halleck Creek project is potentially the largest rare earth project in the United States. The metallurgy test work continues to pave the way for low-cost processing using conventional technology.

Highlights

- The latest test work supports previous results showing a simple process flow sheet to produce a rare earth concentrate and maximize the recovery of magnet metals Neodymium and Praseodymium (NdPr).
- Bulk rougher/scavenger (primary) Wet High Intensity Magnetic Separation (WHIMS) produced 72% recovery and rejected 77% of feed mass, an upgrade ratio of 3.1.
- Further testing will commence in the coming weeks to generate the final concentrate for refinery testing.
- Current internal studies focus on annualized ore processing rates of 10, 15 and 20 million tonnes per annum feed rate to the concentrator to establish optimal project economics.
- This equates to a modelled production of 3,800 tonnes, 5,700 tonnes and 7,600 tonnes, respectively of the highly valuable NdPr oxides contained in Mixed Rare Earth

Carbonate (MREC) as a saleable product to be processed within the USA.

Recent tests rejected a highly encouraging 77% of waste material in the early processing stages prior to the flotation circuit, demonstrating potential opportunities to reduce the project's operating and capital costs. This is a 5% improvement from preliminary test work results announced in December 2022. These promising results are further enhanced by the low levels of penalty elements thorium and uranium, which remain well below regulatory standards.

CEO and Managing Director, Mr. Chris Gibbs, commented:

"Rare earth projects typically have complex metallurgy. Under the technical leadership of Wood PLC, these outstanding test results provide confidence for a simple process flow sheet. Halleck Creek ore continues to pass all the key tests from a processing perspective: good recovery using conventional processing methods, low radioactive penalty elements and the ability to produce a mixed rare earth concentrate product."

"In short, Halleck Creek has the right rare earths (NdPr) and low penalty elements. This means a valuable product, simple metallurgy, and lower costs. Most importantly, the project is in the heart of the USA, the largest economy in the world."

"As an exploration company I'm also excited to advance our exploration activities at Halleck Creek. to support the economic and feasibility studies currently underway."

"With less than 25% of the area drilled, the deposit remains open at depth and with significant upside potential. To further enhance the project economics, we are keen to test the depth of the deposit, seek to upgrade resources and explore potential higher-grade zones within the project footprint."

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

Mr. Chris Gibbs
CEO & Managing Director

Competent Persons Statement:

The information in this document is based on information compiled by Mr. Greg Henderson. Mr. Henderson is a Senior Process Consultant at Wood Australia. Mr. Henderson is a Fellow of the Australian Institute of Mining and Metallurgy (AUSIMM), number 109007, 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. Henderson consents to the inclusion in the report of the matters based upon the information in the form and context in which it appears.

This work was reviewed and approved for release by Mr. Dwight Kinnes (Society of Mining Engineers #4063295RM) who is employed by American Rare Earths and has sufficient experience which is relevant to the style of 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.

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, Halleck Creek in Wyoming, and La Paz in Arizona. 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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