

Test Mining Completed at the Cowboy State Mine, Comminution Optimization Tests Underway

written by Raj Shah | September 23, 2025

Highlights

- ~3,080 tonnes of Halleck Creek ore mined and crushed
- ~13.7 tonnes of ore samples sent to comminution vendors for optimization testing
- Tests will target low-effort, but high-yield opportunities to increase overall rare earth magnet element recoveries and strengthen project economics
- Remaining ore will be stockpiled as feedstock for a demonstration plant

September 23, 2025 ([Source](#)) – American Rare Earths (ASX: ARR | OTCQX: ARRNF | ADR: AMRRY) (“ARR” or the “Company”), through its subsidiary Wyoming Rare (USA) Inc. (“WRI”), has successfully completed excavation and primary crushing of approximately 3,080 tonnes of rare earth ore from a test mine at the Cowboy State Mine (“CSM”), part of the Halleck Creek deposit, under its License to Explore by Dozing¹ (see Figures 1 to 4).

Weathered surface material was blasted, excavated and stockpiled adjacent to the test pit. The underlying non-weathered Halleck Creek ore was then blasted, excavated, crushed and stockpiled. Four bulk samples of ore, totaling approximately 13.7 tonnes (see Table 1), were collected and dispatched for comminution testing and additional process optimization work². The remainder of the extracted ore will be stockpiled at the CSM site and the

Western Research Institute in Laramie, Wyoming. This ore stockpile will be used as the feedstock for a demonstration plant.

The goal of the comminution testing is to assess different milling methods to minimize the volume of fines generated. Reducing the proportion of fines entering the beneficiation process (i.e., ore upgrading) will enhance overall rare earths recoveries across the entire mineral processing circuit, thereby improving the economic outcomes of the Pre-Feasibility Study (“PFS”).

Local contractors are now backfilling the excavated area with the altered surface material from the first blast. They will then replace the stockpiled topsoil and perform preliminary seeding to reclaim the area.

The test mining will also provide data to validate technical assumptions in the PFS, including drill penetration rates, blast fragmentation profiles and excavation efficiency.

¹ See ASX release dated January 8, 2025

² See ASX release dated July 18, 2025

Table 1 – Summary of dispatched samples for comminution and optimization testing

Vendor	Location	Approximate sample size (t)	Testing
Fl Smidth	Midvale, Utah	7.0	High pressure grinding roll (“HPGR”)

Loesche GmbH	Düsseldorf, Germany	4.7	Vertical roller mill
Corem	Quebec, Canada	1.0	Alternate HPGR
DISA Technologies	Casper, Wyoming	1.0	High pressure slurry ablation

Why it matters? The bulk samples extracted will underpin comminution and beneficiation optimization work³, which will identify low-effort, high-impact opportunities to improve overall rare earth magnet element recoveries, enhancing the PFS project economics and further validating underlying technical assumptions. The comminution tests will occur over the remainder of the calendar year, followed by the optimized beneficiation testing.

The demonstration plant, enabled by this test mining campaign, will play a critical role in validating processing methods, generating end-product samples, and supporting future technical studies. It will also serve to technically de-risk the Halleck Creek Project and increase confidence among stakeholders, potential investors, and strategic partners.

Together, these initiatives reinforce ARR's position as a cornerstone of the emerging domestic permanent magnet industry and advance the Company's commitment to building a 100% domestic, end-to-end supply chain for critical minerals.

³ For additional details see the ASX release dated July 18, 2025

Figure 1 – Preparing the CSM Test Pit for the Second Blast



Figure 2 – Aerial view of excavating and crushing at the CSM test pit



Figure 3 – Side view of excavating and crushing at the CSM test

pit



Figure 4 – Ore samples to be sent to vendors for comminution tests



This release was authorized by the Board of American Rare

Earths.

Investors can follow the Company's progress at www.americanree.com

About American Rare Earths Limited:

American Rare Earths (ASX: ARR | OTCQX: ARRF | ADR: AMRRY) is a critical minerals company at the forefront of reshaping the U.S. rare earths industry. Through its wholly owned subsidiary, Wyoming Rare (USA) Inc. ("WRI"), the company is advancing the Halleck Creek Project in Wyoming—a world-class rare earth deposit with the potential to secure America's critical mineral independence for generations. Located on Wyoming State land, the Cowboy State Mine within Halleck Creek offers cost-efficient open-pit mining methods and benefits from streamlined permitting processes in this mining-friendly state.

With plans for onsite mineral processing and separation facilities, Halleck Creek is strategically positioned to reduce U.S. reliance on imports—predominantly from China—while meeting the growing demand for rare earth elements essential to defense, advanced technologies, and economic security. As exploration progresses, the project's untapped potential on both State and Federal lands further reinforces its significance as a cornerstone of U.S. supply chain security. In addition to its resource potential, American Rare Earths is committed to environmentally responsible mining practices and continues to collaborate with U.S. Government-supported R&D programs to develop innovative extraction and processing technologies for rare earth elements.

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Figures accompanying this announcement are available at:

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