

# Halleck Creek Resource Expands to 2.63 Billion Tonnes with Higher Grades

written by Raj Shah | January 29, 2025

**Wyoming Rare Earth Project Positioned to Meet U.S. Critical Mineral Needs**

## Highlights

- Halleck Creek Total Mineral Resource Estimate increased by 12.2% to 2.63 billion tonnes at 3,292 ppm Total Rare Earth Oxides (TREO).
- Red Mountain Area within Halleck Creek saw a 29.7% growth in resources, increasing to 1.24 billion tonnes, with an 8.3% uplift in grade to 3,252 ppm TREO.
- Cowboy State Mine, representing the first phase of project development within Red Mountain, grew by 29.4% to 543 million tonnes, with a 2.7% increase in TREO grade to 3,438 ppm.
- The deposit remains open at depth and along strike, offering significant upside potential, with the mineral resource estimate covering approximately 16% of the greater Halleck Creek project surface area.

January 29, 2025 ([Source](#)) – [American Rare Earths](#) (ASX: ARR | OTCQX: ARRF | ADR: AMRRY) (“ARR” or “the Company”) and its wholly owned subsidiary Wyoming Rare (USA) Inc. (“WRI”) are pleased to announce a major milestone resource update for the Halleck Creek Rare Earth Project in Wyoming. The updated JORC-compliant Mineral Resource Estimates (MRE) further establish Halleck Creek as one of the largest rare earth deposits in North

America and underscore ARR's continued progress in unlocking its potential as a strategic U.S. asset.

The Halleck Creek resource now exceeds 2.63 billion tonnes, representing a significant 12.2% increase over the previous estimate. This growth highlights the transformational scalability of the project, which remains open at depth and along strike.

The Cowboy State Mine, located within the Red Mountain area, continues to deliver robust resource growth and remains central to ARR's development strategy. Its location on Wyoming State land provides a streamlined permitting process, accelerating ARR's ability to unlock the project's full value. The project's favorable geology and near-surface mineralization support the potential for a low-cost open-pit mining operation, while ongoing metallurgical test work continues to demonstrate the potential for efficient processing of rare earths. These results reinforce ARR's ability to support the U.S. government's efforts to secure domestic critical mineral independence, reducing reliance on imports and supporting economic growth and national security objectives.

**Chris Gibbs, CEO of American Rare Earths, commented:**

*"This resource update demonstrates the continued growth, scale, and strategic importance of Halleck Creek as a cornerstone project for the U.S. rare earth supply chain. With the deposit still open at depth, and along strike, the upside potential is truly remarkable. With the Halleck Creek mineral resource estimate covering approximately 16% of the greater Halleck Creek project surface area, we believe opportunities exist to expand mineral resource estimates with additional exploration."*

*"The expanded resources will strengthen the project's economics as we finalize the updated Scoping Study, which is set for*

*release shortly, and continue integrating this data into the Pre-Feasibility Study, scheduled for completion later this year. Halleck Creek is positioned to become one of the most significant rare earth assets in North America, supporting U.S. critical mineral independence and economic growth.”*

## **Next Steps and Path Forward**

The updated resource model and mine plans will have a positive impact on Halleck Creek’s project economics, further enhancing its strategic importance. ARR is currently integrating the updated resource and high-grade data into the Scoping Study, which was originally released in March 2024. The updated study is nearing completion and will be released in February 2025.

In parallel, ongoing metallurgical test work continues to deliver promising results, highlighting the potential for cost-efficient processing at Halleck Creek. As outlined in the 2024 Scoping Study, approximately 90% of the gangue (waste) material can be removed during gravity and magnetic separation, significantly increasing REE grades through physical separation methods prior to leaching, which significantly reduces operational costs. Optimization of these processing techniques is ongoing, and further results will be announced as the next round of metallurgical testing is completed in the March 2025 quarter.

In addition, the updated resource estimates will be incorporated into the ongoing Pre-Feasibility Study (PFS), which remains on track for completion later this year. The PFS will provide a more detailed evaluation of Halleck Creek’s technical and economic potential, supporting ARR’s phased approach to development and commercial production.

*Table 1 – Mineral Resource Estimate at Halleck Creek (1000ppm TREO cut off)*

Classification	Tonnage	Grade				Contained Material			
		TREO	LREO	HREO	MREO	TREO	LREO	HREO	MREO
	t	ppm	ppm	ppm	ppm	t	t	t	t
Measured	206,716,068	3,720	3,352	370	904	769,018	692,935	76,550	186,836
Indicated	1,272,604,372	3,271	2,900	360	852	4,162,386	3,689,999	458,140	1,084,256
<b>Meas + Ind</b>	<b>1,479,320,439</b>	<b>3,334</b>	<b>2,963</b>	<b>361</b>	<b>859</b>	<b>4,931,405</b>	<b>4,382,934</b>	<b>534,691</b>	<b>1,271,092</b>
Inferred	1,147,180,795	3,239	2,878	361	837	3,715,661	3,302,005	413,651	960,355
<b>Total</b>	<b>2,626,501,234</b>	<b>3,292</b>	<b>2,926</b>	<b>361</b>	<b>850</b>	<b>8,647,066</b>	<b>7,684,939</b>	<b>948,341</b>	<b>2,231,447</b>

This announcement is authorized for release by the Board of American Rare Earths.

For the full technical report see [here](#).

**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., 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. The Halleck Creek Project boasts a JORC-compliant resource of 2.63 billion tonnes, representing approximately 16% of the greater Halleck Creek project surface area, making it one of the largest rare earth deposits in the United States. 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.

The opportunities ahead for Halleck Creek are transformational, positioning it as a multi-generational resource that aligns with U.S. national priorities for critical mineral independence.

**For additional information**

**Media Contact:**

Susan Assadi

[sassadi@americanree.com](mailto:sassadi@americanree.com)

347 977 7125

**Investor Relations US Contact:**

Beverly Jedynak

[Beverly.jedynak@viriathus.com](mailto:Beverly.jedynak@viriathus.com)

312 943 1123