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AMERICAN RARE EARTHS

(ASX: ARR | OTCQX: ARRNF | ADR: AMRRY)

July 2025 Investor Presentation

United States' Solution to Securing the Feedstock Needed for a Domestic Mine to Magnet Supply Chain

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This work was reviewed and approved for release by Mr Kelton Smith (Society of Mining Engineers #4227309RM) who is employed by Tetra Tech and has sufficient experience which is relevant to the processing, separation, metallurgical testing 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. Smith is an experienced technical manager with a degree in Chemical engineering, operations management and engineering management. He has held several senior engineering management roles at rare earth companies (Molycorp and NioCorp) as well as ample rare earth experience as a industry consultant. Mr. Smith 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 Patrick A Sobecke (Society of Mining Metallurgy and Exploration #04133849) who is employed by Stantec and has sufficient experience which is relevant to the mining plan 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. Patrick is a Professional Engineer (IL 062.064122) with over 21 years of experience in multiple commodities, mining methods and countries. Mr. Sobecke 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 is based on information compiled by personnel under the direction of Mr. Dwight Kinnes who is Chief Technical Officer of American Rare Earths. This geological work was reviewed and approved for release by Mr. Kinnes (Society of Mining Engineers #4063295RM) who is employed by American Rare Earths and has sufficient experience which is relevant to the style of mineralisation 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.

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Halleck Creek Investment Highlights

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Halleck Creek

1

World-Class REE Project in a Tier 1 Jurisdiction

- Poised to be largest domestically sourced rare earths asset in the U.S., with current JORC resource of 2.63 bn tonnes and grade of 3,292 ppm TREO
- Halleck Creek to be developed in two separate and independent phases:
  - Phase 1: The Cowboy State Mine ("**CSM**"), located on 100% Wyoming State Land & Minerals, with an LOM NdPr Eq. production of ~58kt over a 20-year mine life;
  - Phase 2: Development of Halleck Creek on Federal Land & Minerals, which has the potential to support generations of additional production
- Located in a top-tier mining jurisdiction with favorable regulatory environment - Wyoming ranked as 9th best mining jurisdiction globally by Fraser Institute in 2023
  - Permitting process commenced, license to explore received, and management believes permit to mine can be obtained in 2-3 years (vs. federal permits of +10 years)

2

Robust Project Economics[1]

- Scalable project with post-tax $NPV_{10\%}$ of US$558 mm, IRR of 24%, and a ~2.5-year payback period
- Competitive average LOM NdPr Eq. cost of ~US$36 / kg, ranking higher than peer projects and profitable even at depressed NdPr prices

3

Constructive Demand Outlook for Rare Earths

- Rare earths poised to see growing demand on the back of national security and electrification due to their importance in the production of high-performance magnets used in military and defense applications, EV motors, wind turbines, and generators
- Fundamental boosted by future supply-demand imbalance and supply chain vulnerability of the West due to historical reliance on China

4

Significant Government Support and Interest

- Received State of Wyoming grant of US$7.1 mm to help advance the development of the Cowboy State Mine
- Received a non-binding letter of interest from the U.S. EXIM Bank for up to US$456 mm debt financing, covering all initial CSM capex[2]

5

Tremendous Resource Growth Potential

- Phase 1 is a 3 Mtpa separate and independent case that will mine ~62.3Mt of ore over 20 years, utilizing just ~2.4% of the 2.63 bn tonnes JORC resource. With further studies underway, CSM could support a larger, long-term operation, with potential for extended mine life and increased production capacity

Source: 2025 Halleck Creek Updated Scoping Study Technical Report (ASX release February 24, 2025)

1. Study assumes US$91.0/kg NdPr, US$2.0/kg La, US$10.0/kg SEG , US$1,500.0/kg Tb and US$400.0/kg Dy.
2. ASX release dated September 24, 2024

Halleck Creek Project Overview

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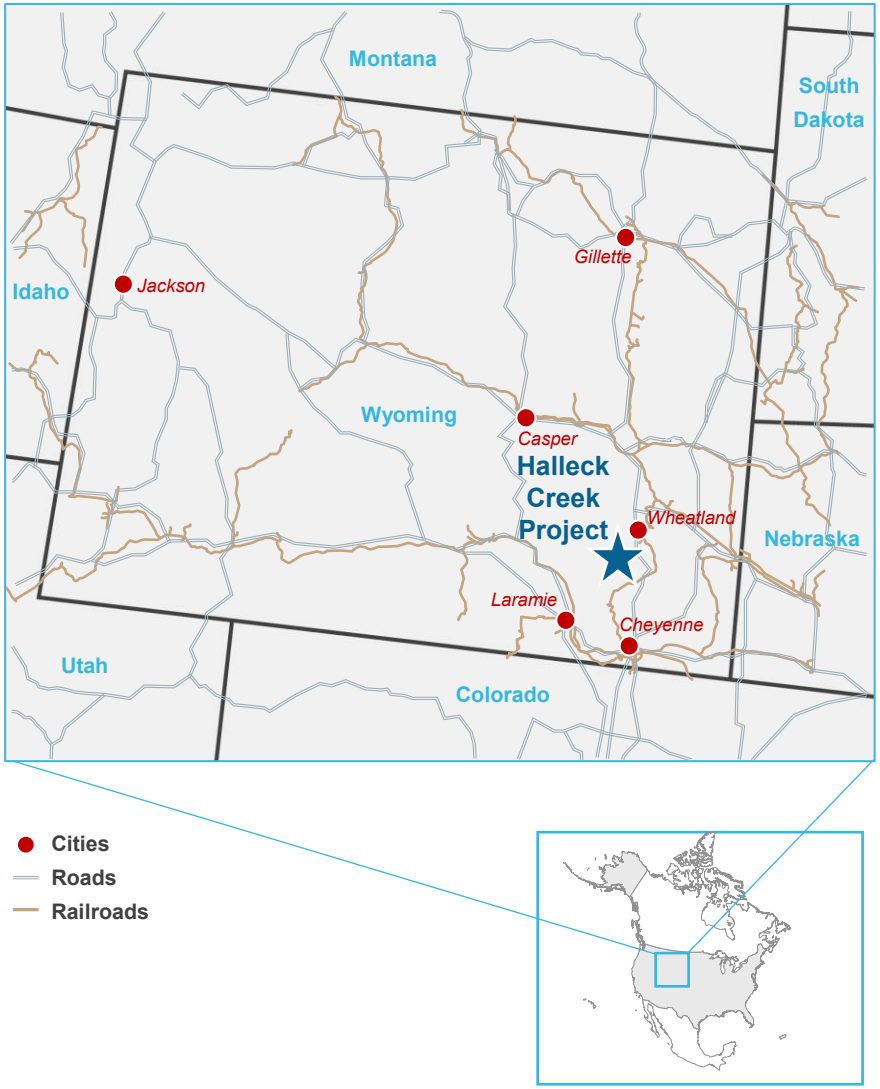
Project Overview

- Halleck Creek is American Rare Earths' (**"ARR"**) flagship project located in Wyoming, U.S., a tier 1 mining jurisdiction
  - The initial separate and independent Phase 1 development of Halleck Creek will be at the Cowboy State Mine ("CSM"), located on 100% State-owned Land and Minerals
  - The Wyoming State permit to mine process is typically 2-3 years (vs. federal permits of +10 years), which is a strategic advantage for the project
- The Halleck Creek deposit has a JORC resource estimate of 2.63 bn tonnes with grades of 3,292 ppm TREO
- The project 2025 Updated CSM Scoping Study showed a post-tax $NPV_{10\%}$ US$558 mm and ~24% IRR[1]
- Mineral processing using gravity spiral separation and induced roll magnetic separation test work achieved with a 10:1 TREO upgrade ratio, a significant milestone in the technical de-risking of the Halleck Creek project. In addition, this beneficiation process removes a significant number of impurities like iron and aluminum[2]
- Initial leach test results are promising with solid recoveries for key magnet rare earths. In addition, atmospheric tank leach chosen as the preferred leach method, which is typically more energy and reagent efficient and less costly than other rare earth leaching methods, such as an acid-bake (i.e. cracking)[3]
- Mining at CSM will be open pit, with initial beneficiation processing at the mine site, and further refining (i.e. hydrometallurgy) at facilities near Wheatland, Wyoming to produce payable rare earth metal oxides (NdPr, La, Dy, Tb, and SEG)
- The CSM is located on state-owned land where there is a streamlined permitting process, and nearby developed infrastructure (i.e. rail, power and highways) and has access to a trained workforce

Location



Source: 2025 Halleck Creek Updated Scoping Study Technical Report (ASX release February 24, 2025)

1. Study assumes US$91.0/kg NdPr, US$2.0/kg La, US$10.0/kg SEG , US$1,500.0/kg Tb and US$400.0/kg Dy.
2. See February 20, 2025 ASX announcement for additional details.
3. See July 16, 2025 ASX announcement for additional details.

Potential to Supply US Rare Earths Magnet Makers

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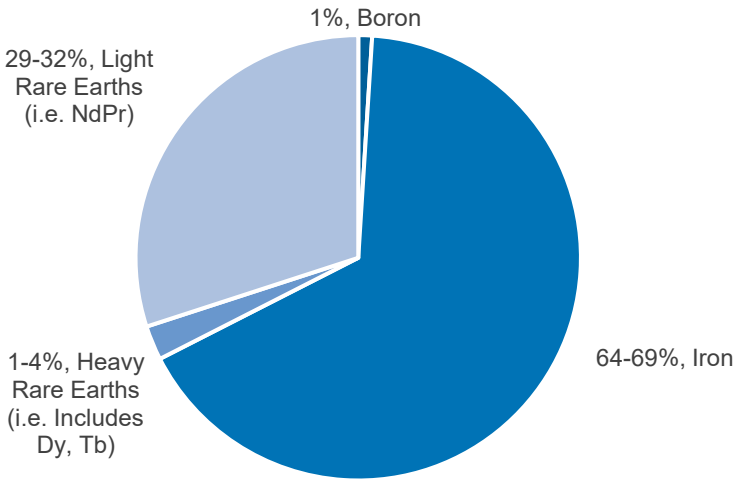
Positioned To Supply US Magnet Makers

- The focus from the US Government to date has mainly been on expanding downstream domestic rare earth magnet production capabilities. To date upwards of 15,000 tonnes[1] of rare earth magnet capacity has been announced to come online in the US in the near-term, with limited domestic mined feedstock to supply those announced facilities
  - The break down of rare earth magnets composition shown in the chart to the right implies that that upwards of ~4,800 tonnes of NdPr and ~600 tonnes of Heavy Rare Earths (i.e. Dy, Tb) would potentially be needed as feedstock to supply the announced US domestic magnet facilities annually
  - CSM's base case outlines a life of mine average annual production of 1,833 tonnes of NdPr, 98 tonnes of Dy and 24 tonnes of Tb[3]
- As US rare earths magnet production ramps in the near to midterm, new sources of rare earths production will be required fulfil the feedstock needs of these magnet facilities and secure a 100% US mine to magnet supply chain
  - CSM at Halleck Creek is well positioned to come online in the near term given its strategic State of Wyoming permit to mine advantage. Management believes the Project can receive a permit to mine in ~24 months, which is light speed when compared to other US domestic rare earths projects located on Federal Land and Minerals (i.e. +10 years)

Rare Earth Magnet Breakdown By Mass %[2]



Cowboy State Mine Avg. Annual Production

	Annual Avg. Production (tonnes)[3]
Light Rare Earths	
NdPr Oxide	1,833
La Carbonate	1,724
Heavy Rare Earths	
Tb Oxide	24
Dy Oxide	98
SEG Concentrate	488

1. Source: Morgan Stanley Research and additional public disclosures. Includes MP Materials announced expanded 10,000 tonne per annum facility.
2. Breakdown based on percentage of magnet mass. Source: Morgan Stanley Research and Woodmac.
3. 2025 Halleck Creek Updated Scoping Study Technical Report. 3.0 million tonnes per year base case life of mine average production shown.

Key Milestones & Catalysts

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- **Mar 2024**: Published Halleck Creek Scoping Study
- **Jun 2024**: Received State of Wyoming Grant Funding
- **Sep 2024**: Received Non-binding LOI from EXIM Bank to fund all Capex (US$456m)
- **Oct 2024**: Extended Drilling Program Completed at Halleck Creek
- **Feb 2025**: Published Updated Scoping Study, including updated resource estimate
- **Feb 2025**: Completed Bulk Separation & Concentration tests, Proving 10x ore upgrade at scale
- **May 2025**: Groundwater monitoring wells installed, a key step in the CSM permit to mine application process
- **Jul 2025**: Completed initial leach testing & announced mineral processing optimization program

Upcoming Catalysts

- **Commence test mining at the Cowboy State Mine to extract bulk samples of Halleck Creek ore for optimization tests, in addition to providing the feedstock required for a demonstration plant.**
- **Completion of on-going mineral processing optimization work to potentially increase overall rare earth recoveries.**
- **Publication of the Cowboy State Mine Pre-Feasibility Study.**
- **Continue baseline environmental and water data collection for permit to mine application.**
- **Submit Cowboy State Mine permit to mine application.**
- **Commence construction of a demonstration plant. Long lead time equipment has already been ordered.**

For additional details see ASX releases dated March 18, 2024, September 24, 2024; October 1, 2024; February 20, 2025; February 24, 2025; May 28, 2025; July 16, 2025; July 18, 2025.

Halleck Creek Resource Base & Growth Potential

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Mineral Resource Estimate – Jan 2025[1]

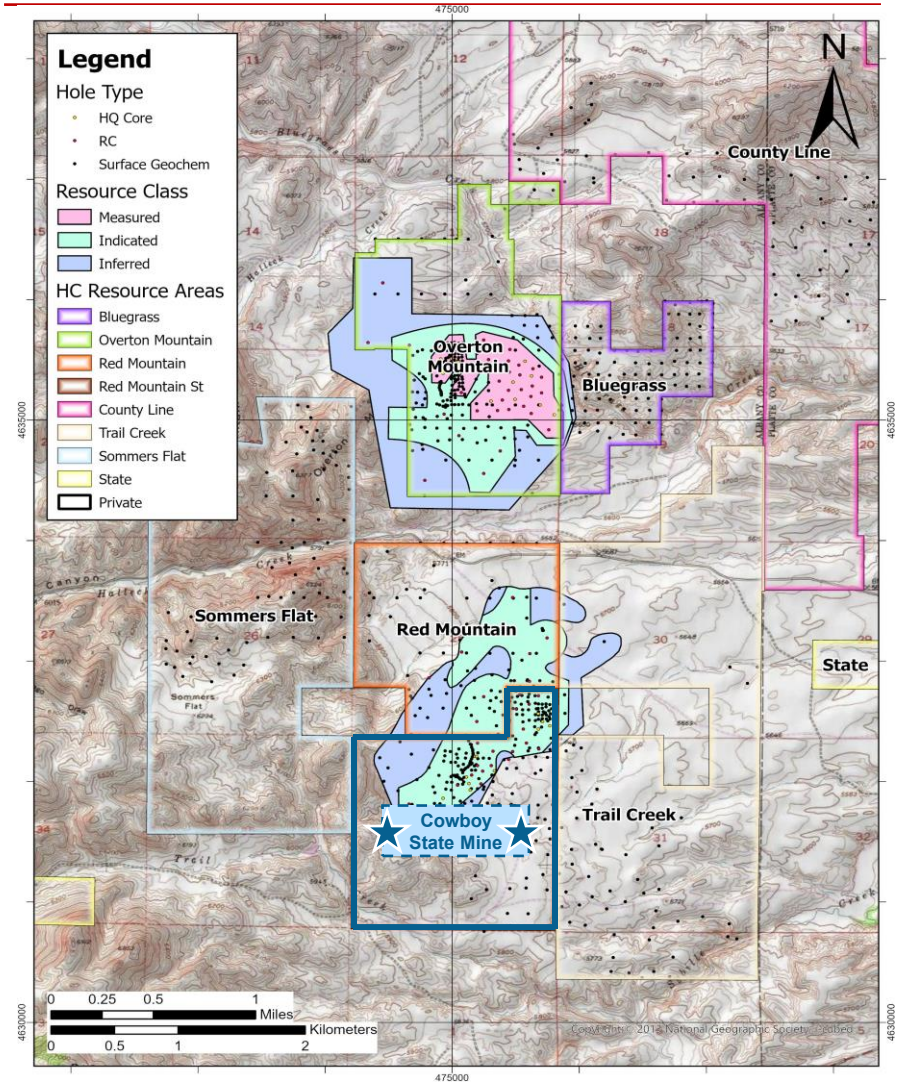
In addition to the Halleck Creek deposit's immense size and potential ability to support multi-generations of US domestic rare earths needs, the resource's rare earth oxide distribution is heavily weighted toward key magnet elements, which account for ~26% of the total rare earth oxide ("TREO") content. In particular, heavy rare earths account for ~11% of the TREO.

		Grade				Contained			
	Tonnage	TREO	LREO	HREO	MREO	TREO	LREO	HREO	MREO
	(Mt)	*(ppm)*	*(ppm)*	*(ppm)*	*(ppm)*	*(kt)*	*(kt)*	*(kt)*	*(kt)*
Measured & Indicated	1,479	3,334	2,963	361	859	4,931	4,383	535	1,271
Inferred	1,147	3,239	2,878	361	837	3,716	3,302	414	960
Total Mineral Resource	**2,627**	**3,292**	**2,926**	**361**	**850**	**8,647**	**7,685**	**948**	**2,231**

Resource Growth Potential

- **Cowboy State Mine resource only accounts for ~20% of the larger Halleck Creek deposit**
- The Halleck Creek resource is poised to significantly grow beyond current estimates
  - Additional exploration potential at the Bluegrass area
  - In addition to surface area expansion, the Halleck Creek deposit remains open at depth – pointing to further expansion potential

Halleck Creek Resource Areas



1. 2025 Halleck Creek Updated Scoping Study Technical Report. See ASX release dated January 29, 2025 and February 24, 2025 for more details.

Note: TREO = Total Rare Earth Oxides, LREO = Light Rare Earth Oxides, HREO = Heavy Rare Earth Oxides, MREO = Magnet Rare Earth Oxides

Halleck Creek Development & CSM Study Economics

- **The Halleck Creek project to be developed in 2 separate and independent phases:**
  - **Phase 1**: The Cowboy State Mine, which is located on 100% Wyoming state land minerals – a strategic advantage for the project given the state's streamlined permitting process
  - **Phase 2**: Potential development of Halleck Creek portion located on federal land and minerals can support generations of additional production beyond current scoping study estimates

Updated CSM Scoping Study Summary – 2025

- Study envisions scalable open pit mining operation
- Robust project economics on the back of a large scalable resource, a low-strip ratio and competitive C1 cash costs
- Project can be scaled to meet increased future market demand

Description	Units	3 Mtpa Base Case
Mine Life	*(years)*	20
Resource Size[3]	*(mt)*	543
TREO Grade	*(ppm)*	3,438
LOM Strip Ratio	*(bcm/t)*	0.38
Processing Rate	*(mtpa)*	3.0
Overall Recovery of REO Material	*(%)*	67%
NdPr Eq. LOM Avg. Annual Production[1]	*(kt)*	2.79
NdPr Eq. LOM Production	*(kt)*	57.92
NdPr Eq. LOM C1 Cash Cost[1]	*(US$/kg)*	$35.58
Initial Capex[2]	*(US$ mm)*	$456
Post-Tax $NPV_{10\%}$	*(US$ mm)*	$558
Post-Tax IRR	*(%)*	24.0%

Source: 2025 Halleck Creek Updated Scoping Study Technical Report (ASX release February 24, 2025)

Note: Study assumes US$91.0/kg NdPr, US$2.0/kg La, US$10.0/kg SEG , US$1,500.0/kg Tb and US$400.0/kg Dy.

1. Excludes ramp-up year.
2. Includes 20% contingency.
3. Resource size and grade based only on CSM, a subset of the overall Halleck Creek Project. CSM accounts for ~20% of the overall Halleck Creek deposit.

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Halleck Creek Operating and Financial Profile

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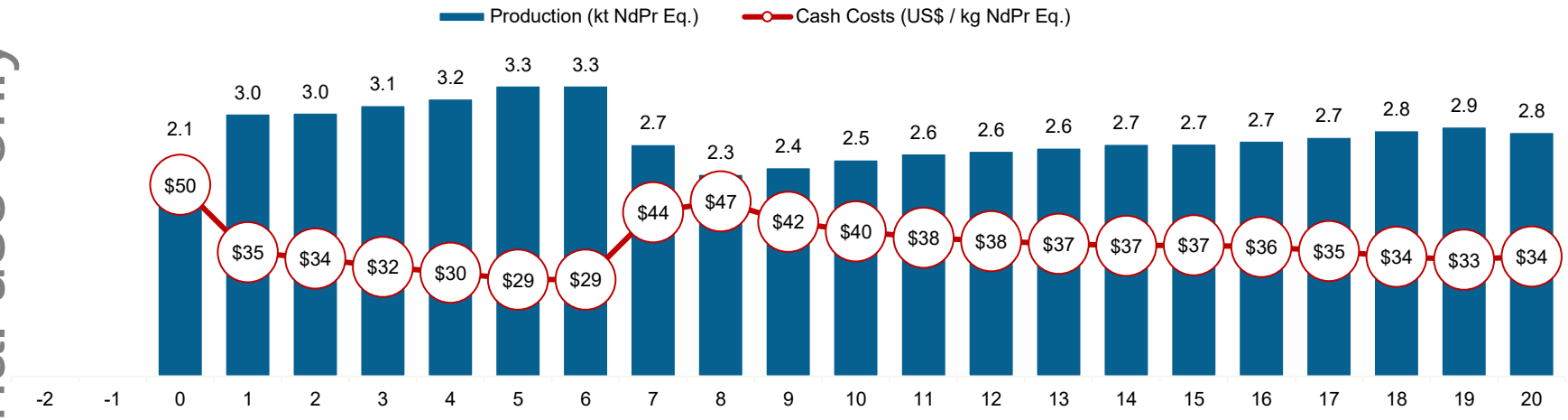
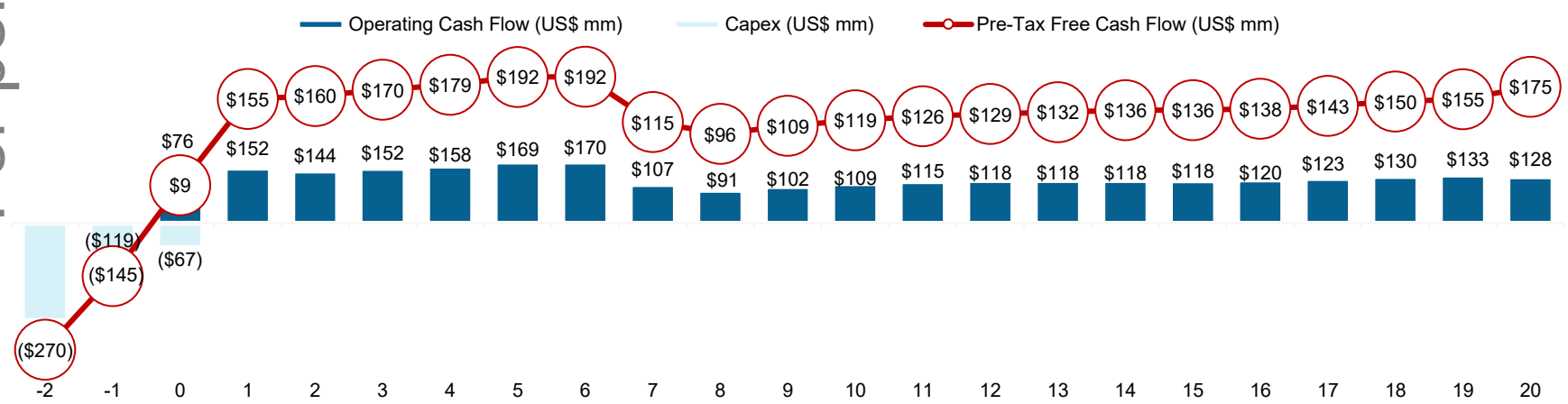
CSM Operating Profile (3Mtpa Base Case)



CSM Financial Profile (3Mtpa Base Case)



Source: Halleck Creek 2025 Scoping Study (ASX release February 24, 2025)

American Rare Earths / Wyoming Rare USA

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100% Ownership

Richard Hudson
Board Chair, ARR

- +40 years of experience in corporate governance & capital markets
- Previously served as the Chairman of an international manufacturing company

Melissa Sanderson
Non-Ex. Director, ARR & WRI

- +30 yeas of experience in international diplomacy and mining
- Worked at Freeport-McMoRan & the U.S. Department of State

Brian Arkell
Non-Ex. Director, ARR

- +35 years of global experience in mineral exploration, mine development, and operations, with a track record advancing world-class gold and copper-gold projects.

Sten L. Gustafson
Non-Ex. Director & V. Chair, ARR & WRI

- +25 years of experience in energy services and investment banking
- Currently CEO of Pyrophyte Acquisition Corp

Hugh Keller
Non-Ex. Director, ARR

- +34 years of experience in legal affairs
- Currently Chairman of Cobalt Blue Holdings
- Previous partner at Ashurst and Director at Thakral Holdings Ltd.

Megan McPherson
CFO, ARR

- Seasoned finance and governance professional with +23 years of experience, including senior leadership roles at several ASX-listed mining companies.

Joe Evers
President, WRI

- +10 years experience in both natural resources and regulatory sector in the U.S.
- Served various management position in both Occidental and Westmoreland Coal

Dwight Kinnes
Chief Technical Officer, WRI

- +40 years of mining experience Professional Geologist & JORC Competent Person
- Previously President of Highland GeoComputing for 17 years

John Mansanti
Senior Advisor, WRI

- +35 years of experience in the metals & mining industry
- Held various senior positions in leading mining companies such as Barrick Gold and Newmont

Tommy von Finckenstein
Director of Strategy & Corp Dev., WRI

- +4 years of financial services and mining experience in investment banking and research
- Mining Engineering degree from McGill University

WYOMING RARE USA

US Subsidiary ("WRI") which owns and oversees the development of Halleck Creek