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Rare Element Resources

Wyoming's Advanced Rare Earth Project

Company and Demonstration
Plant Project Update



Annual General Meeting of Shareholders
and Community Update

August 2024

Disclaimer

This presentation contains forward-looking statements and forward-looking information (collectively, the “forward-looking statements”) within the meaning of securities legislation in the United States and Canada. Except for statements of historical fact, certain information contained herein constitutes forward-looking statements. Forward-looking statements are usually identified by our use of certain terminology, including "will", "believes", "may", "expects", "should", "seeks", "anticipates", "plans", "has potential to", or "intends" (including negative or grammatical variations thereof) or by discussions of strategy or intentions. Such forward-looking statements include statements regarding our vision and strategic near-term and longer term objectives, the likelihood of the continuation of the financial award from the U.S. Department of Energy or grant from the Wyoming Energy Authority/State of Wyoming and ability to progress through go/no-go decision points, the planned demonstration plant timing, cost and expected outcomes, plans to advance toward full-scale production, current and future demand and supply affecting the rare earth element markets, and other aspects of our business and our prospects as well as those of industry participants.

Our forward-looking statements are based on assumptions and analyses made by us in light of our experience and our perception of historical trends, current conditions, expected future developments, and other factors that we believe are appropriate under the circumstances. Such forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause our actual results or achievements to be materially different from any future results or achievements expressed or implied by such forward-looking statements. These statements are subject to numerous known and unknown risks and uncertainties that may cause actual results to be materially different from any future results or performance expressed or implied by the forward-looking statements. These risks and uncertainties include those described in the “Risk Factors” section of our Annual Report on Form 10-K for the fiscal year ended December 31, 2023, and our quarterly and other filings with the Securities and Exchange Commission, which are incorporated by reference in this presentation. Many of the forward-looking statements in this presentation relate to events or developments anticipated to occur numerous years in the future, which increases the likelihood that actual results will differ materially from those indicated in such forward-looking statements. The forward-looking statements made in or in connection with this presentation speak only as of the date hereof. Except as required by law, we disclaim any obligation subsequently to revise any forward-looking statements to reflect events or circumstances after the date of such statement or to reflect the occurrence of anticipated or unanticipated events. Certain information contained in this presentation has been obtained by the Company from its own records and from other sources deemed reliable, however no representation or warranty is made as to its accuracy or completeness. Mineral asset information is derived from the Technical Report Summary (TRS) filed on sec.gov dated 2/29/24 and a NI 43-101 Technical Report filed on sedarplus.ca dated 4/12/24 on the Bear Lodge Project.

To Develop the Cornerstone to a Secure, US-Based Rare Earth Supply Chain Supporting Critical, High-tech Applications

Vision:

Working with industry leading General Atomic (GA) to become a long-term, secure, reliable and sustainable domestic source of separated rare earth minerals, focusing on those minerals essential for advanced magnet technology

Near-Term Objective:

Construct and operate a demonstration plant that further refines the Company's proprietary processing and separation technology while generating the data necessary to support commercialization and development of the Bear Lodge Rare Earth deposit (WY)



Building Toward Construction

Secured permits & licenses necessary for construction and operation of demonstration plant, including NRC source material license

Completed National Environmental Policy Act (NEPA) review
Received a Finding of No Significant Impact (FONSI)

Ordered long-lead time equipment

Received plant construction-phase budget approval from Department of Energy (DOE), who awarded a 50% cost-share financial contribution on original budget

Finalized \$4.4M Wyoming Energy Authority grant

Engaged and mobilized general construction contractor to site and began preconstruction activities in December

Construction Progress

Progressed to near completion the building exterior upgrades including utilities, sediment controls, construction of catchment facilities and exterior structure improvements

Raised \$35.8M in shareholder rights offering

Installed and began operating physical upgrade plant (crusher), which is in the first stage in operations

Constructed and tested equipment skids offsite to expedite assembly – all of skids have been delivered to site and are being integrated

Hired Plant Operations Manager and selected Wyoming-based contractor for plant operations staffing

Completed revised resource evaluation on Bear Lodge mineralization, with focus on key magnet materials

Demonstration Plant – We've Come a Long Way



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Original site after initial cleanup



- ◆ Excellent location with access to infrastructure and ready work force
- ◆ Strong state support – Governor Gordon visited site in May

Site Development: Exterior Work



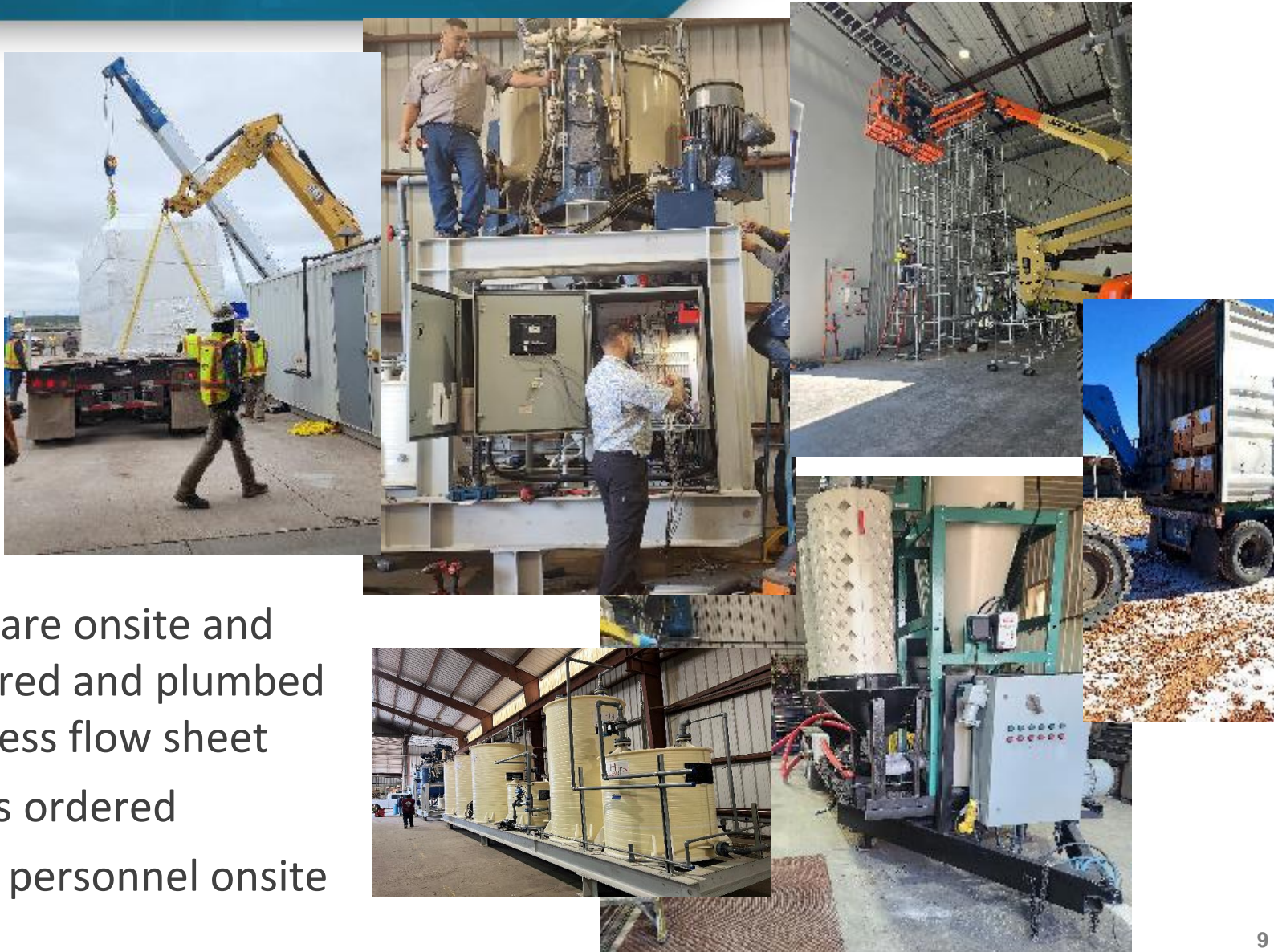
- ◆ Mobilized Construction Contractor
- ◆ Installed catchment facilities and sediment controls
- ◆ Upgraded utilities and perimeter fencing
- ◆ Constructed cooling towers
- ◆ Refurbished and expanded exiting facility

Site Development: Interior Work

- ◆ Completed interior finish and installed modular offices
- ◆ Installed PUG system (crusher) and received NRC license to operate
- ◆ Creating full interior structural support system
- ◆ Upgraded fire suppression system



Equipment and Supplies Received and Being Installed



- ◆ All skids are onsite and being wired and plumbed per process flow sheet
- ◆ Reagents ordered
- ◆ Controls personnel onsite

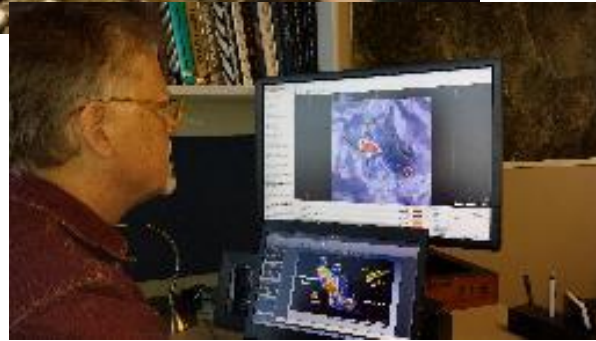
- ◆ Continue equipment skid integration and testing
- ◆ Complete final site upgrades and construction activities
- ◆ Install and test control system
- ◆ Inspection by NRC and WDEQ and issuance of final license to operate
- ◆ Receive DOE approval of operations phase budget
- ◆ Commence staff training by contractor starting in late September
 - Approximately 20 full time employees for up to 12-month operating period
- ◆ Begin phased plant start up – expected to commence Sept/Oct 2024

- ◆ Extraordinary inflation experienced for equipment and supplies resulted in a significant increase over original 2021 \$44M budget
 - Increases seen in labor, equipment and consumables
 - Other factors include additional engineering optimization
 - Company seeking DOE participation for their share of the increase
- ◆ Delays on certain equipment skids
- ◆ DOE next phase budget approval for operations is pending

Bear Lodge Project: Poised for Progression



Over 500 holes drilled
resulting in over
285,000' of core

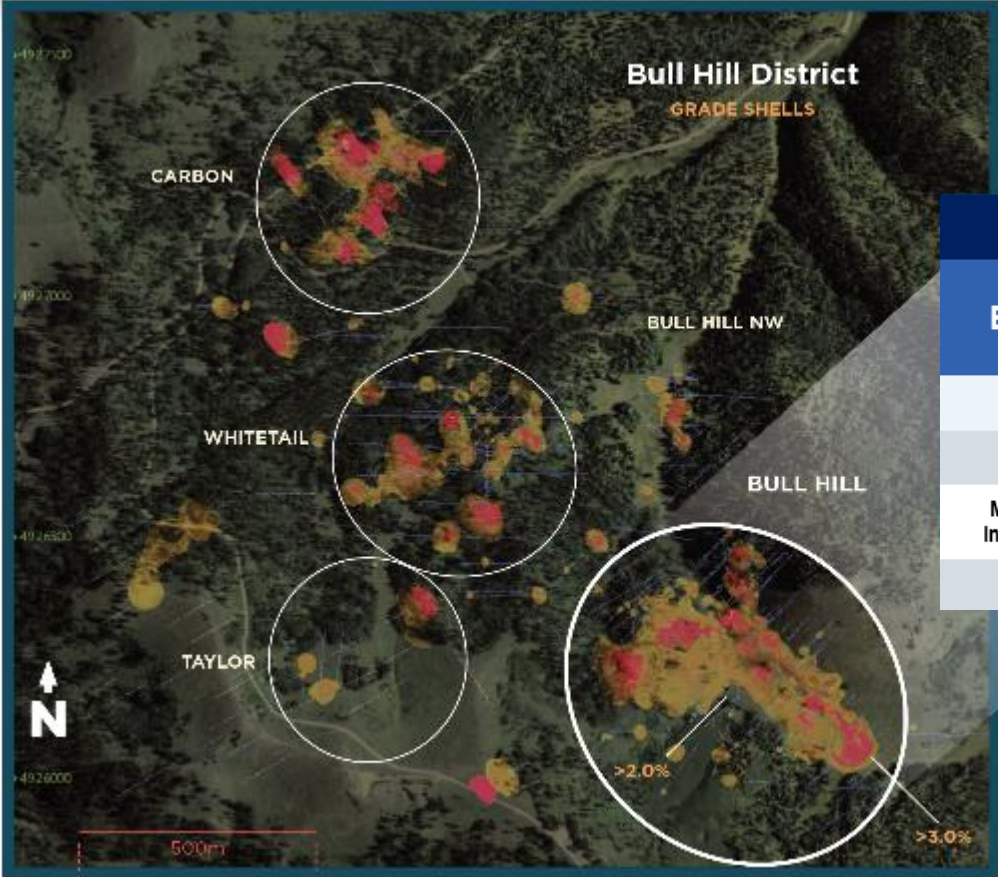


Extensive geologic and
geophysical analysis complete
resulting in a well mapped
resource



Extensive baseline
data has been
collected to support
permitting activities

Bear Lodge: 2024 Updated Nd/Pr Focused Resource



Focused on Maximizing Value from Magnet Materials

Measured and Indicated Resource @ 2.18% Cutoff Grade				
Bull Hill	Metric Tonnes	%TREO	Contained TREO Metric Tonnes	Recovered NdPr Metric Tonnes
	(millions)		(1000's)	(1000's)
Measured	2.04	4.53	92.4	18.4
Indicated	3.98	3.85	153.1	31.3
Measured & Indicated (MI)	6.02	4.08	245.5	49.7
Inferred	1.90	3.61	68.5	14.4

- ◆ Nd/Pr production could meet 15 to 20% of U.S. projected demand in 2030¹
- ◆ Resource update based on development of Bull Hill only
- ◆ Upside in 3 targets identified by geophysical and geological mapping

- Mineral resources do not have demonstrated economic viability. There is no guarantee that any part of the mineral resource will be converted to mineral reserves in the future. All figures are rounded to reflect the accuracy of the grade and tonnage estimates.
- This mineral resource estimate is reported in accordance with Regulation S-K (CFR Title 17 Part 229 Items 1300-1305) at a cut-off grade of 2.18% TREO.
- Only certain rare earth minerals (La, Nd, Pr, Dy, and a heavy rare earth mixed oxide including Yb, Tm, Tb, Er, Ho, Lu) are considered payable for pit optimization purposes. Commodity price assumptions used in the preparation of the mineral resource estimate are set forth in the Technical Report Summary.
- The estimated overall NdPr process recovery is 90%.

⁽¹⁾ Wood Mackenzie, Global Demand (2023) Report

Rare Earths: The Seeds of Technology

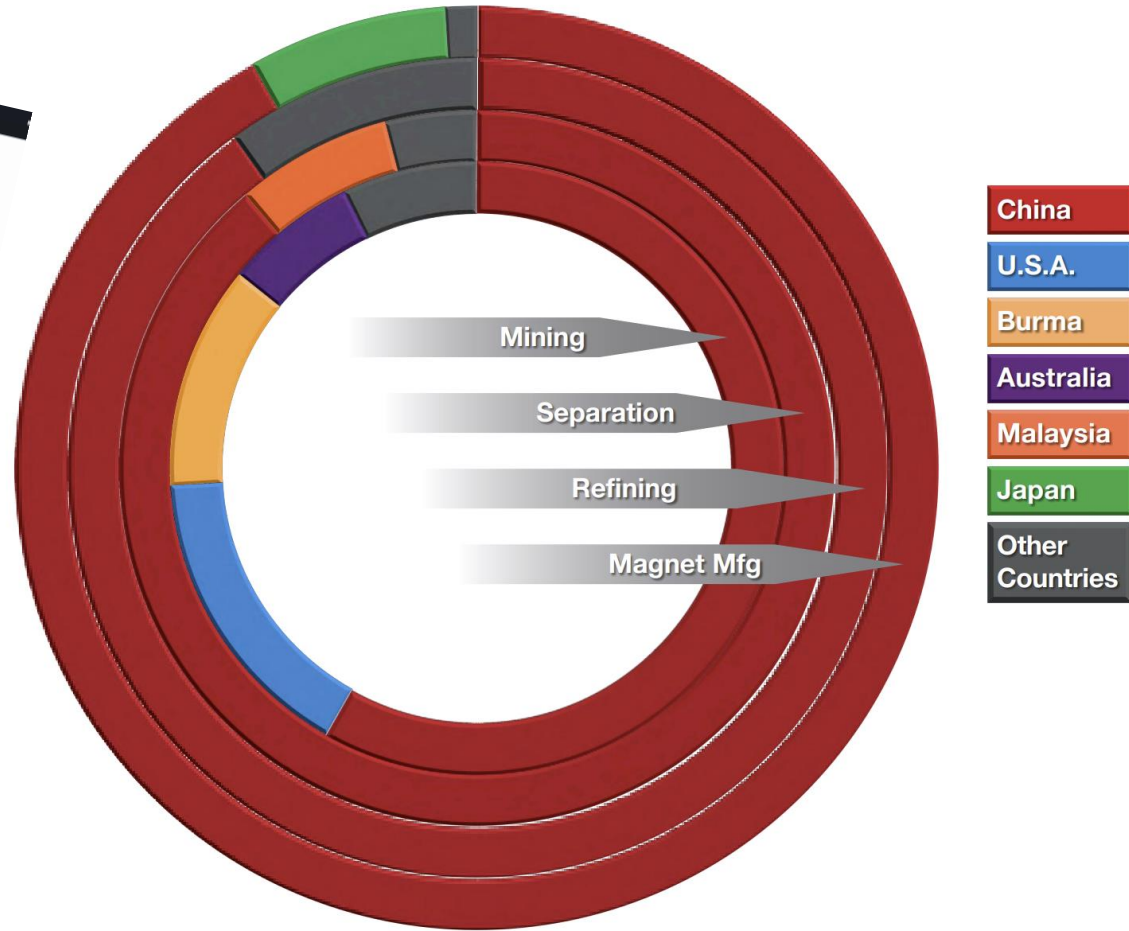


- ◆ Adding Nd/Pr to magnets make them stronger, corrosion free and less likely to demagnetize
- ◆ Nd/Pr demand expected to grow exponentially driven by world-wide technology advancements and green initiatives
- ◆ In 2022, over 90% of magnet manufacturing occurred in China

China Dominance Risk to Supply



- ◆ No U.S. source for separated or refined REEs
- ◆ Ongoing geopolitical/trade issues
- ◆ Lower environmental standards than in the U.S.

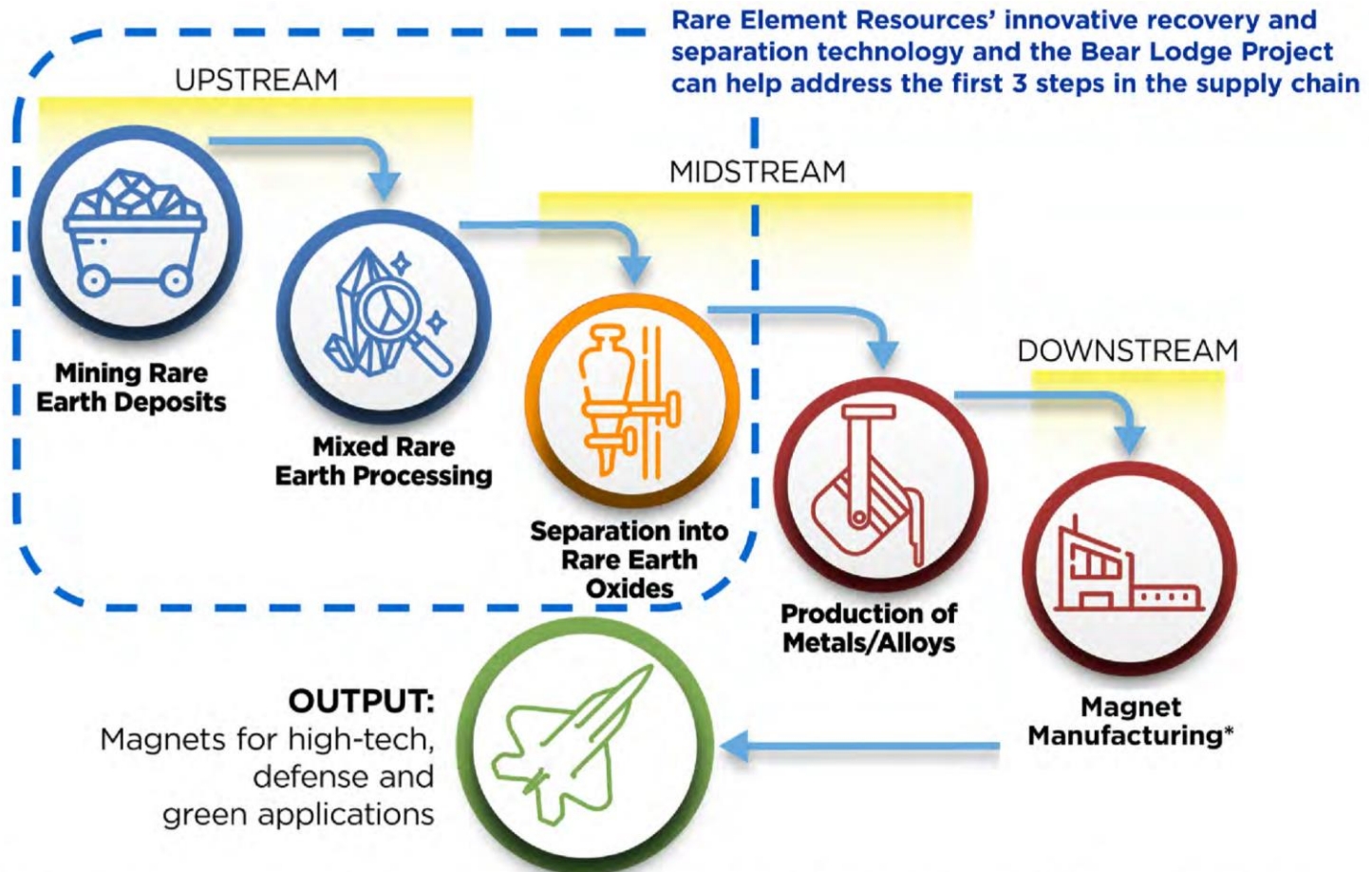


Geographical concentration of supply chain stages for sintered NdFeB magnets
From center: Rare Earth mining, oxide separation, metal refining, & magnet manufacturing*

* US DOE Report, "Rare Earth Permanent Magnets: Supply Chain Deep Dive Assessment" 2/24/22

Bear Lodge Project Important for Wyoming and US

Availability of High-Quality Raw Materials Should Attract Downstream Users



Source: DOE Advanced Manufacturing Office - Achieving American Leadership in Rare Earth Magnets Supply Chain, 2/24/22

Orange indicates U.S. commercial capacity currently under development
Red indicates no U.S. commercial capacity

* Indicates sintered NdFeB (neodymium iron boron) magnets

Rare Element Resources – In a Class of its Own



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- ◆ Advanced innovative REE recovery technology to be further refined through demo plant operations
 - Closed system with both environmental and economic advantages
- ◆ Technology partnership with GA ensures access to brightest scientific minds and awareness at highest federal levels
- ◆ Premier North American deposit – extensively explored, rich in magnet rare earths and with significant resource upside in already identified targets
- ◆ Exceptional location with existing infrastructure, availability of highly skilled workforce and ongoing local and state support

**Building the Cornerstone for a Secure,
Domestic REE Supply Chain**

Rare Element Resources Corporate Information

Stock Exchange Listings

OTCQB MKT: REEMF

(Amounts in USD and millions unless otherwise noted)

Cash at 6/30/24	\$30.6
Debt	None
Shares Outstanding (at 8/5/24)	511,111,557
Options (weighted average exercise price of \$1.24/sh)	4,405,000
Warrants	None
Beneficial Ownership by Officers and Directors (excludes shares held by Synchron totaling 70.58%) (at 6/28/24)	1.37%

Proven and Experienced Management Team

Ken Mushinski	President, CEO & Direct
Wayne Rich	CFO
Kelli Kast	VP, General Counsel & CAO
Jaye Pickarts	Consultant – Mining, Processing & Environmental
Paul Bonifas	Director – Business Development

**Developing the Foundation for a
Wyoming-based, Secure, Domestic
Rare Earth Supply Chain to Support the Growing
U.S. Demand For the Rare Earth Magnets
Essential for Many Critical
High-tech Applications**

