

# Bear Lodge Advanced Magnet Rare Earth Project

*The Cornerstone of the  
Domestic Rare Earth  
Supply Chain*



Energy Council: Grand Forks, North Dakota  
June 2024

# Disclaimer



Rare Element Resources  
OTCQB: REEMF

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 on the Bear Lodge Project dated 2/29/24.



- ◆ “The Middle East has oil. China has rare earths.”  
- Deng Xiaoping, CCP Leader, 1978-1989
- ◆ In 2023, China controlled ~60% of the global REE mineral supply;
- ◆ Refined ~85% of global REE supply; and
- ◆ Manufactured ~95% of the magnet material.
- ◆ 1960s to 1980s – U.S. was global leader of REE mining & production.
- ◆ 99% world’s HREEs were byproduct of US mining operations for titanium, zircon, and phosphate.
- ◆ 1980 U.S.-led NRC & IAEA regulations on radioactive “source materials.”



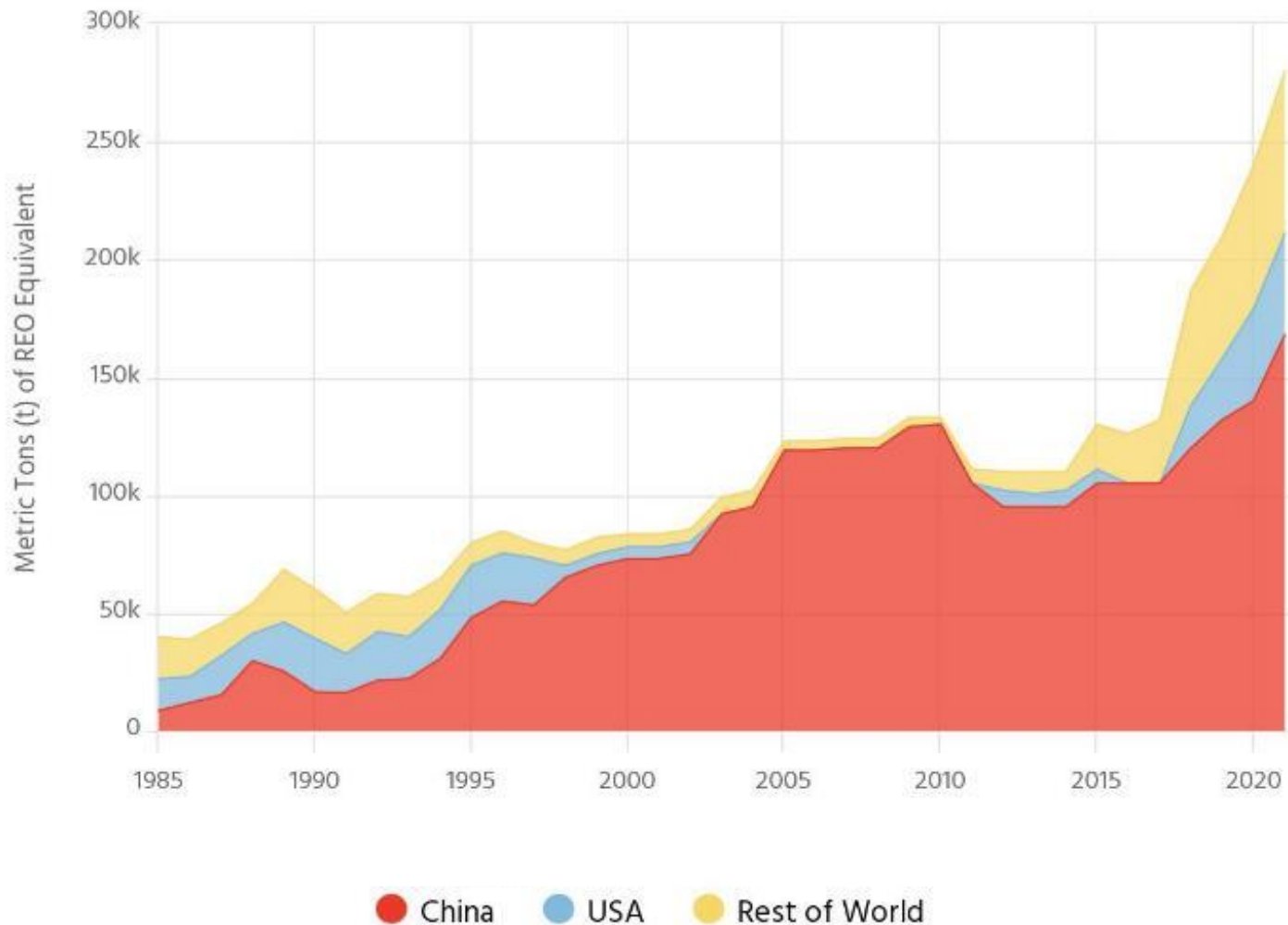
- ◆ China capitalized on the U.S. self-imposed regulatory handicap and cornered the REE market.
  - ◆ New extensive licensing, regulatory, disposal, and liability rules.
  - ◆ Production & refining terminated in U.S. and allied countries.
- 
- ◆ 1980 U.S. restored China's trading status of "most favored nation."
  - ◆ "Perfect Storm" of self-regulation and legislative openness.
  - ◆ U.S. and allies voluntarily sold and transferred REE expertise, factories, and IP to China.
  - ◆ China: low cost of production, cheap labor, loose environmental & health regulations, and government subsidies.

# Global REE Mining Production



Rare Element Resources  
OTCQB: REEMF

## World Rare Earth Mining Production





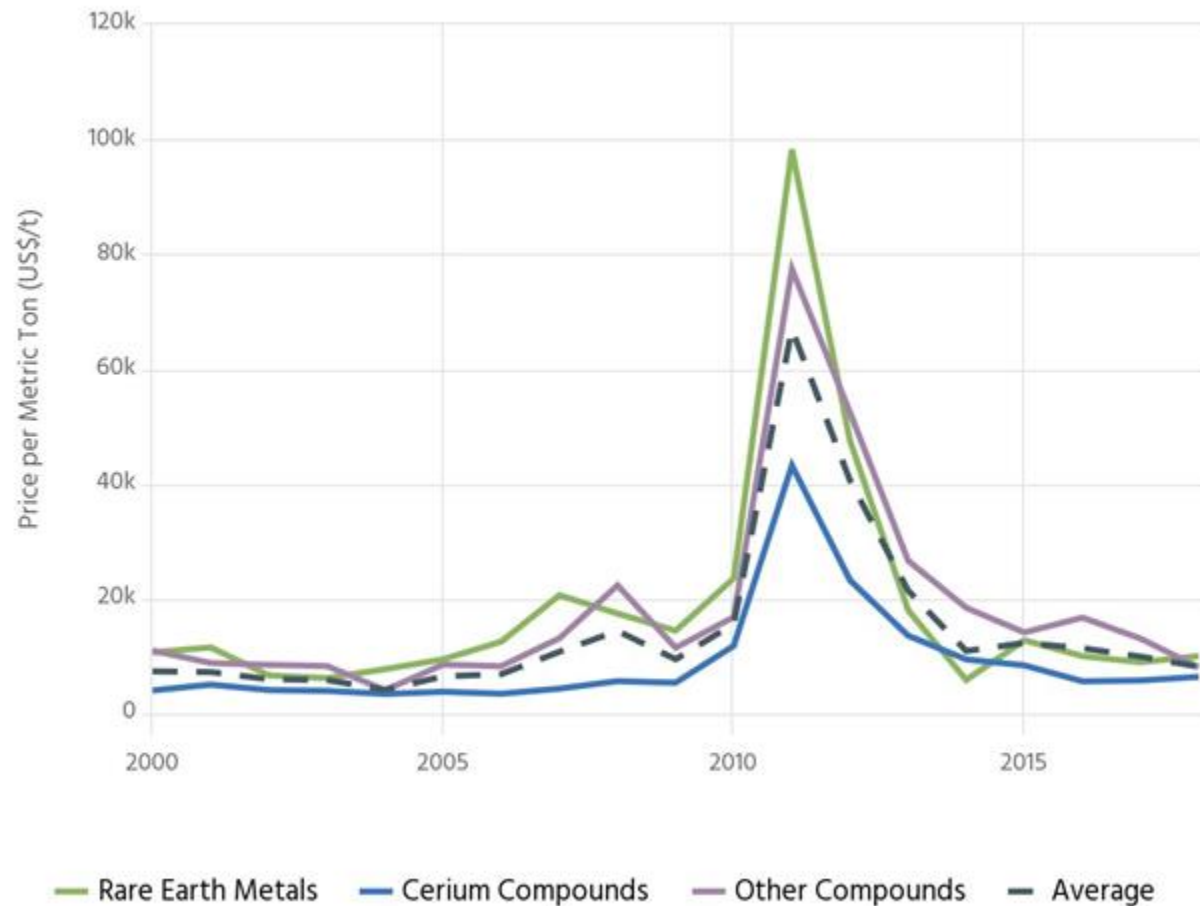
# Why a Secure Domestic Primary Source Matters



Rare Element Resources  
OTCQB: REEMF

- ◆ The Japan-China “fishing boat incident” of 2010
  - China reduced exports by 40%
  - Global REE prices jumped from 2,000% to 6,000%
  - Billions of dollars invested

## Average Price of Global Rare Earth Imports



CSIS China Power Project | Source: UN Comtrade Database



- ◆ China manipulates pricing
  - Floods or restricts market via production quotas
  - 2013 – 2015 China floods market, sending ~400 REE companies into bankruptcy
- ◆ China swoops in to buy bankrupt RE companies – largest US REE mine purchased at auction in 2017 for only \$20.5 million
- ◆ 2020 same company goes public on NYSE in \$1.47B deal. Today market cap of is ~\$3B.
- ◆ Company is partially owned by China (7.7%) who then buys 100% of mine offtake

# What About Rare Element Resources?



Rare Element Resources  
OTCQB: REEMF

## *Rare Earth Company with Proprietary Technology for Recovery & Separation*

Bear Lodge: World-class mineral asset with excellent (4%+ TREO) concentration of rare earth magnet elements in natural resource friendly Wyoming

World-class, technology-leader General Atomics (“GA”) partnering with RER to advance proprietary rare earth recovery/separation process

\$140M+ invested on Bear Lodge & tech. Strong Federal and State support, including over \$26M in funding for demonstration plant (DOE & WEA)

Demo Plant provides link to achieve domestic REE supply chain;  
Confirms scalability & provides the design/economic data for commercialization;  
Operations start summer 2024

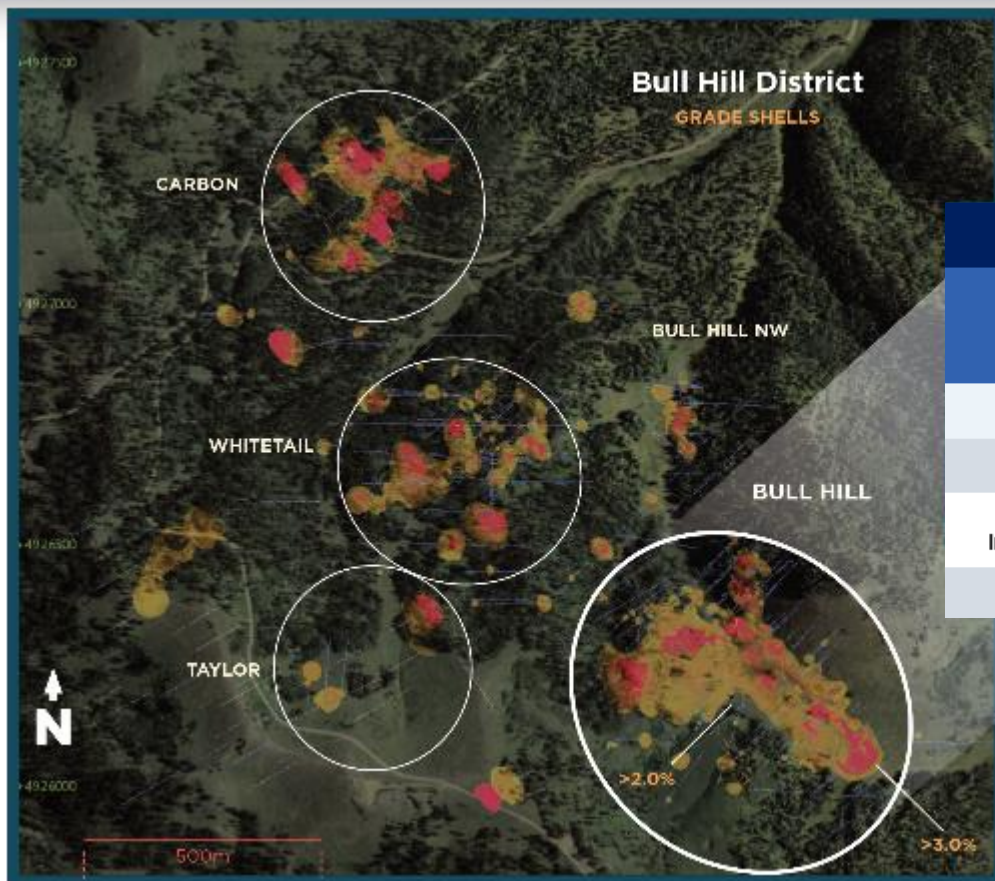


# Nd/Pr Focused Resource Update (March 2024)



Rare Element Resources

OTCQB: REEMF



## 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
<b>Measured &amp; Indicated (MI)</b>	<b>6.02</b>	<b>4.08</b>	<b>245.5</b>	<b>49.7</b>
Inferred	1.90	3.61	68.5	14.4

- ◆ As envisioned, Nd/Pr production could meet 15 to 20% of U.S. projected demand in 2030<sup>1</sup>
- ◆ 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%.

<sup>(1)</sup> Wood Mackenzie, Global Demand (2023) Report

# World-Class Technology Leader: General Atomics



Rare Element Resources  
OTCQB: REEMF



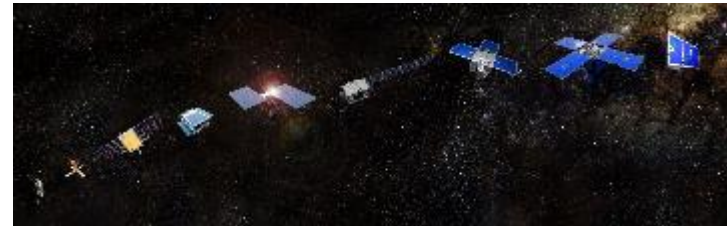
**GENERAL ATOMICS**

*A global leader in the research, design and manufacturing of first-of-a-kind technology innovations*

- ◆ Majority shareholder is GA affiliate
- ◆ Vision to secure a domestic REE supply
- ◆ Dedicated project team
- ◆ GA designed and engineered demonstration plant based on successful pilot plant testing
- ◆ Essential in securing \$26M+ in financial participation from DOE and WY



Aircraft Launch & Recovery



Space Systems & Technology



Missile Defense & Advanced Weapons Systems

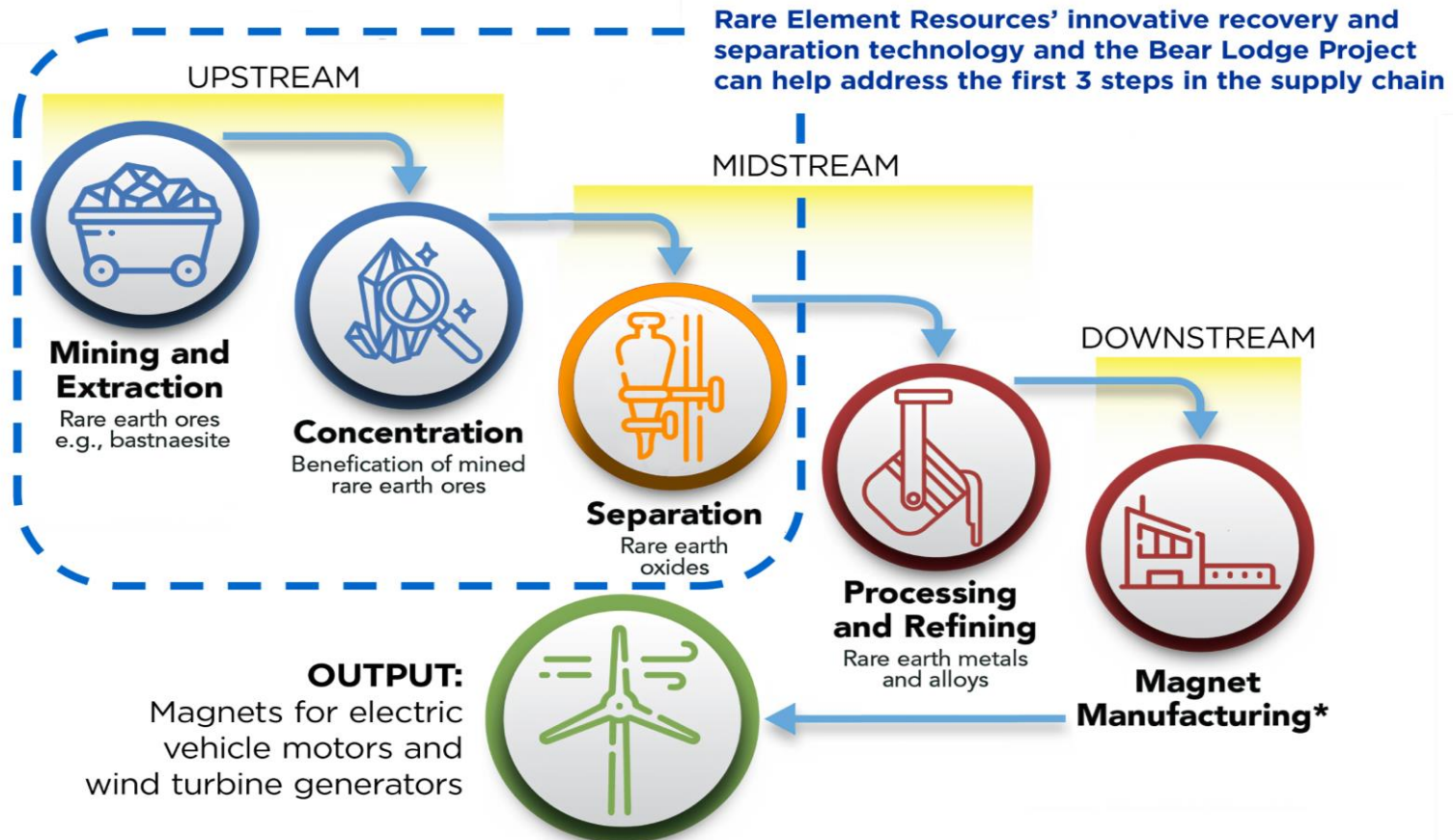
# Rare Element Resources: Key to a Secure Supply Chain



Rare Element Resources

OTCQB: REEMF

## Cornerstone of a Secure, Domestic Supply Chain Mines to Magnets



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

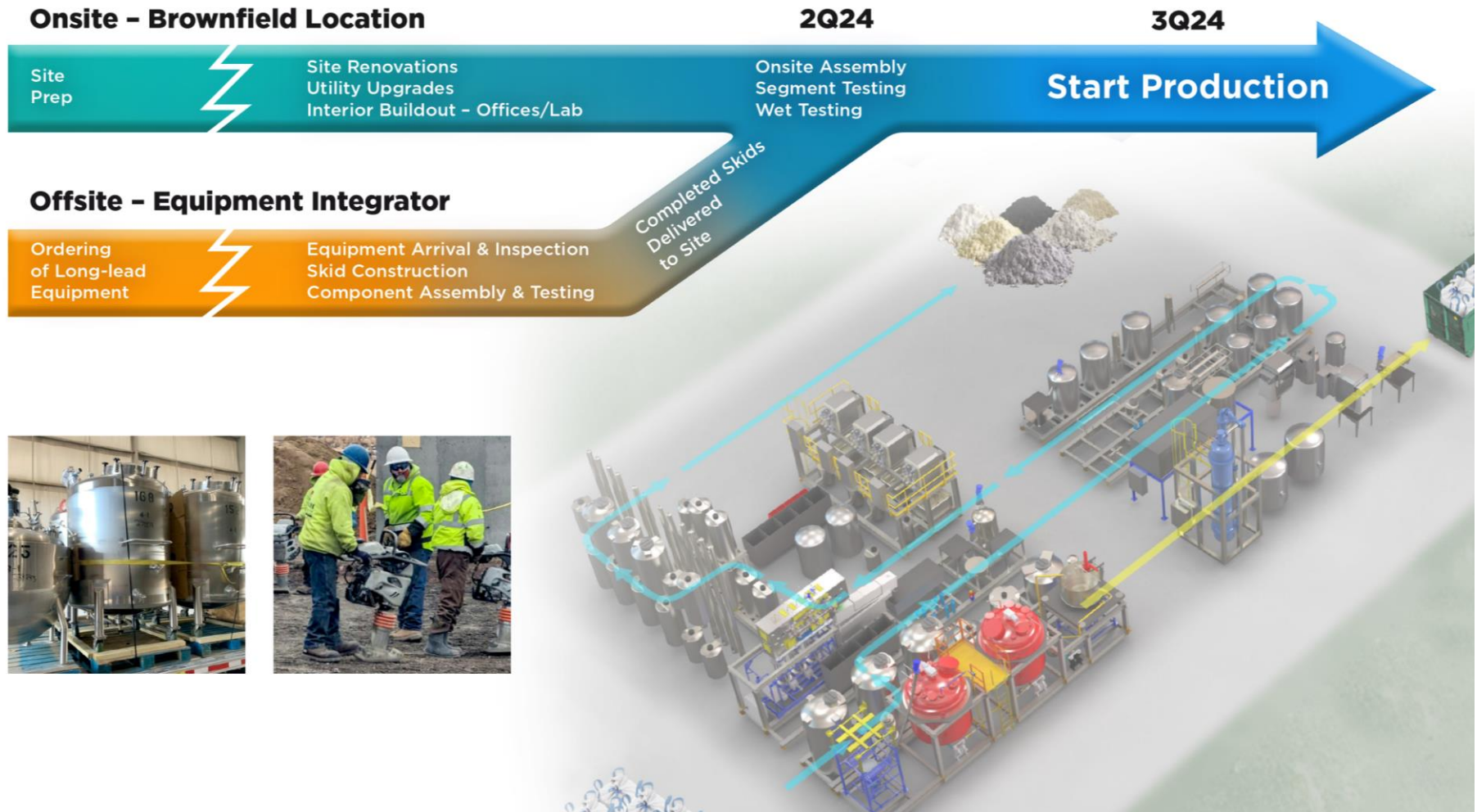


# Demonstration Project Under Construction



Rare Element Resources  
OTCQB: REEMF

## Reducing Development Time with Two Track Approach



# Innovative Recovery Technology

- ◆ Expecting major economic & environmental improvement over traditional recovery methods
  - Closed system - significantly lower water and reagent use
  - First-of-a-kind, real-time control software for process optimization
  - 100% separation of radionuclides early in process (Th and U)
  - Produced >99.5% pure Nd/Pr in pilot-plant testing
- ◆ Demonstration plant start up in 3Q 24 will generate key operating and economic data for commercialization
  - Brownfield site utilities upgraded and exterior work nearly complete
  - First skid arrived on site in early May



# Rare Element Resources & Bear Lodge: The Advantages



Rare Element Resources  
OTCQB: REEMF

- ◆ Premier North American deposit, well advanced with good concentrations of critical magnet REs
- ◆ GA relationship advancing technology while raising awareness and providing access to federal and state financial participation
- ◆ Advantageous Wyoming location with strong all-level statewide support
  - Highly skilled and willing mining and process workforce
- ◆ Demo plant operations to begin in 3Q 2024 will generate key data for commercialization decision
- ◆ Bear Lodge can meet 15-20% of U.S. REE magnet demand of oxides

**Bear Lodge can be the cornerstone for a secure, domestic supply chain of REEs used in tech, medical, energy, and defense applications.**



# Questions?

