



Bear Lodge Critical Rare Earth Project

Developing a Secure, Domestic Supply of Critical Rare Earth Minerals for Defense and High-Tech Applications



Annual General Meeting

August 2023

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.

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Company Value Drivers

Emerging REE Mineral Development Company with Proprietary Technology for Recovery & Separation

A well-defined resource with excellent concentrations of rare earth elements (REEs) essential to magnet material technology

World-class, technology-leading General Atomics (“GA”) collaborating on advancing proprietary REE recovery/separation process

Strong Federal and State support, including over \$26M in funding for demonstration plant

Market fundamentals improving for producers as America and allied countries look for secure, domestic, responsibly sourced REE supply

Experienced team continues de-risking project by scaling up technology

Developing the Cornerstone to a Secure, Domestic REE Supply Chain to Support Critical, High-Tech Applications

Vision:

To become a long-term, secure, reliable and sustainable domestic source of separated REE minerals

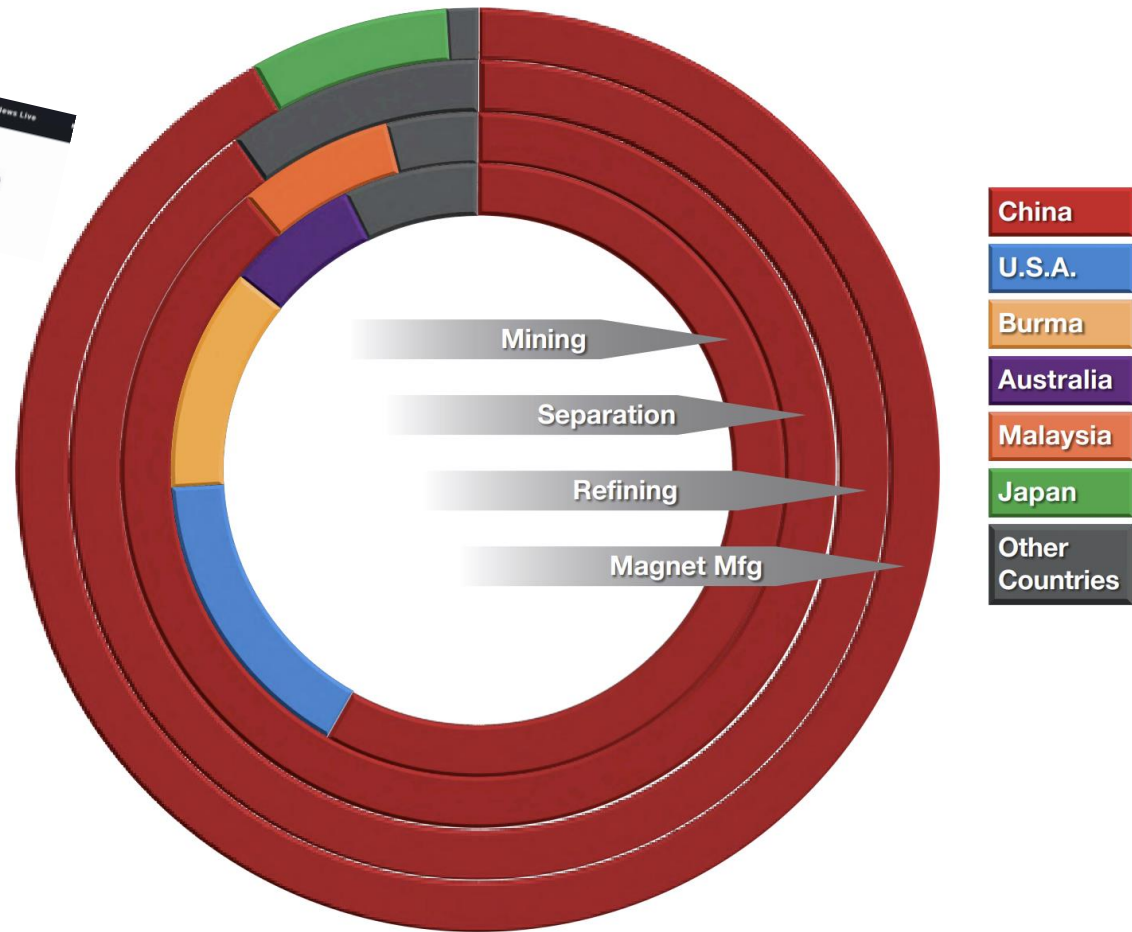
Near-Term Objective:

Develop REE processing and separation demonstration plant, utilizing proprietary technology, while advancing the Bear Lodge Project as a world-class, domestic source of strategic REE minerals

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*

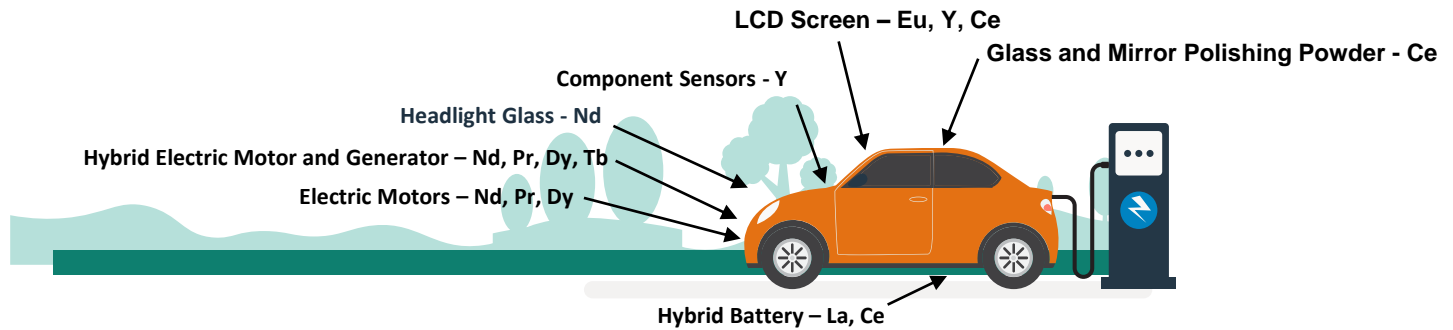
* US DOE Report, "Rare Earth Permanent Magnets: Supply Chain Deep Dive Assessment" 2/24/22

Green Tech Driving Demand

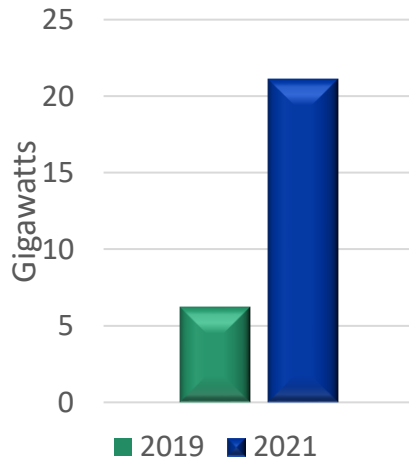
Rare Earth Elements are Essential to Hybrid-Electric and Electric Vehicle Technology*

REEs

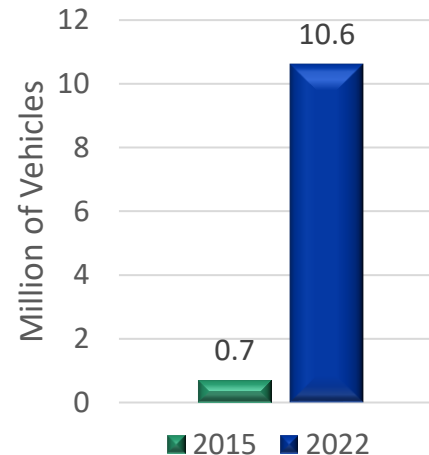
- Nd – Neodymium
- Eu – Europium
- Dy – Dysprosium
- Tb – Terbium
- Y – Yttrium
- Pr – Praseodymium
- Ce – Cerium
- La – Lanthanum



Annual Installation of Direct Drive Wind Turbines**



EV Sales**



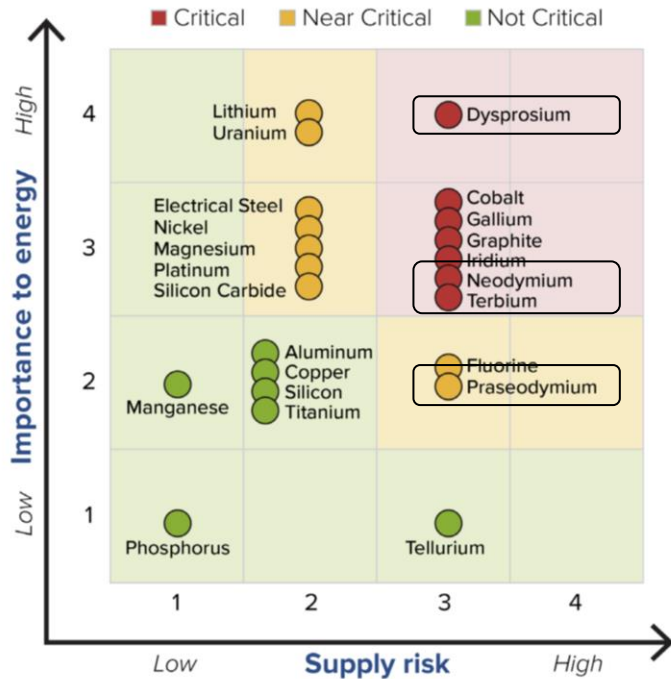
*S&P Global Mobility

** U.S. DOE, Critical Materials Assessment 2023, July 2023

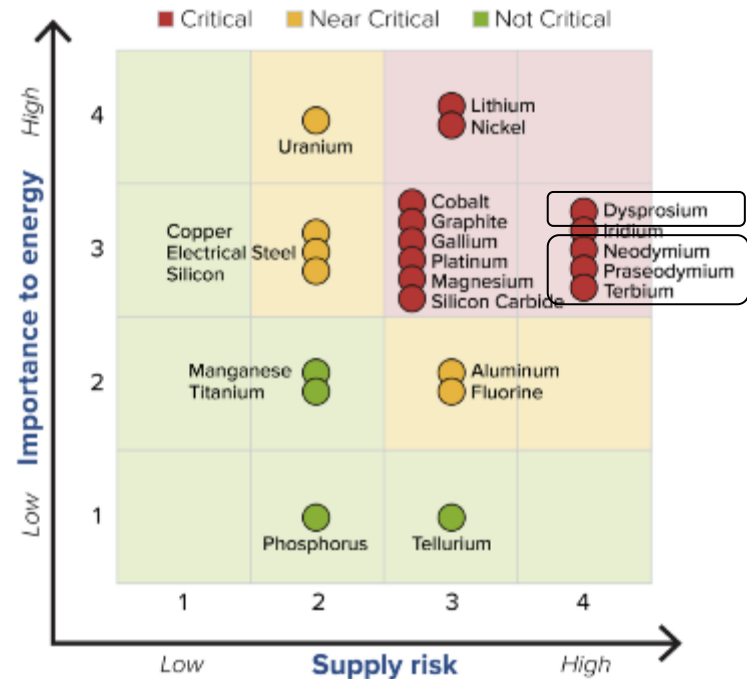
Essential for Carbon Reduction Goals

DOE Criticality Matrix*

SHORT TERM 2020-2025



MEDIUM TERM 2025-2035

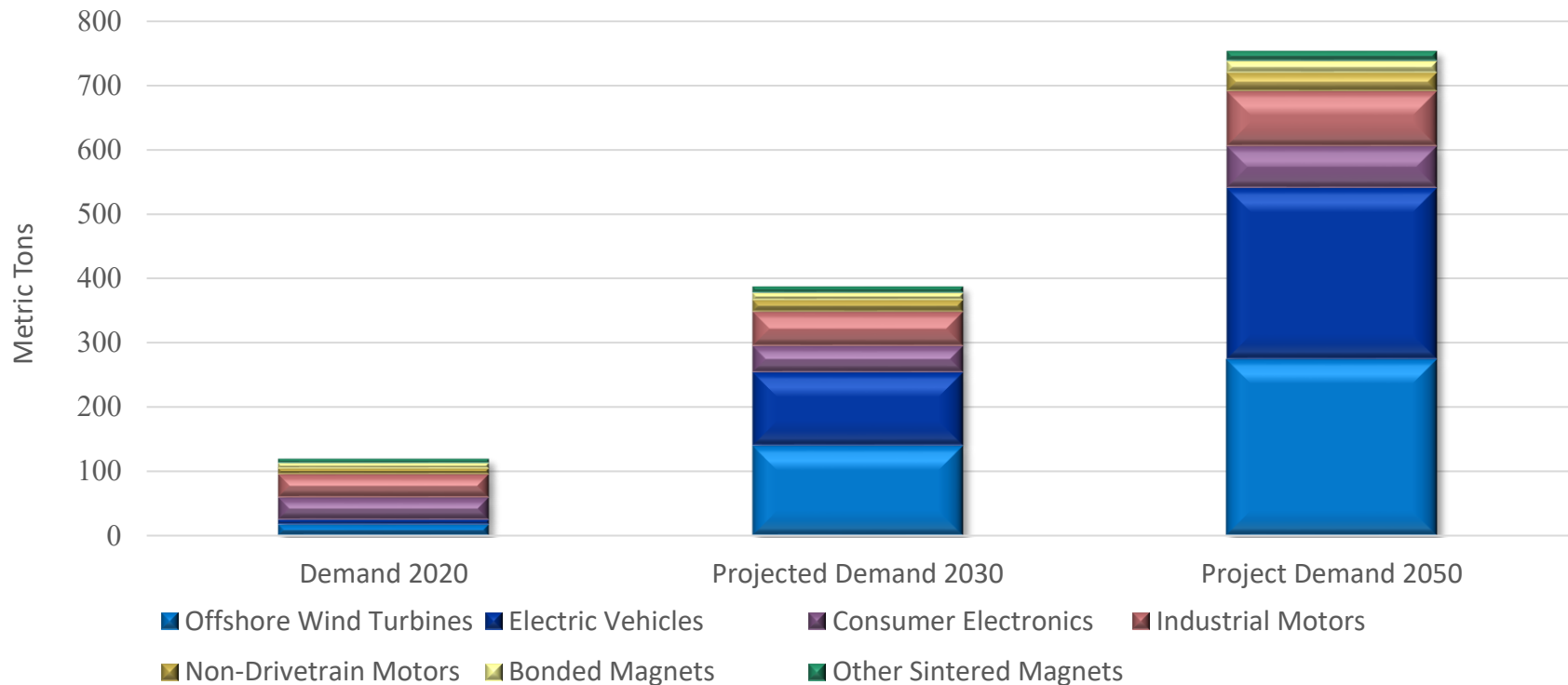


Report focused only on those materials critical to clean energy technologies

* U.S. DOE, Critical Materials Assessment 2023, July 2023

Decarbonization Goals to Drive Global Demand

Projected Global Demand Growth for Magnet Materials Under Aggressive Decarbonization Goals*



Green Technologies Dependent on REE Magnet Materials Expected to Drive Significant Demand Growth

* US DoE Report, "Rare Earth Permanent Magnets: Supply Chain Deep Dive Assessment," 2/24/22. Based on NdFeB demand

Stock Price Performance



Rare Element Resources

OTCQB: REEMF

- REEMF experienced a significant uptick in stock price following recently announced Chinese export restrictions on critical minerals gallium and germanium.

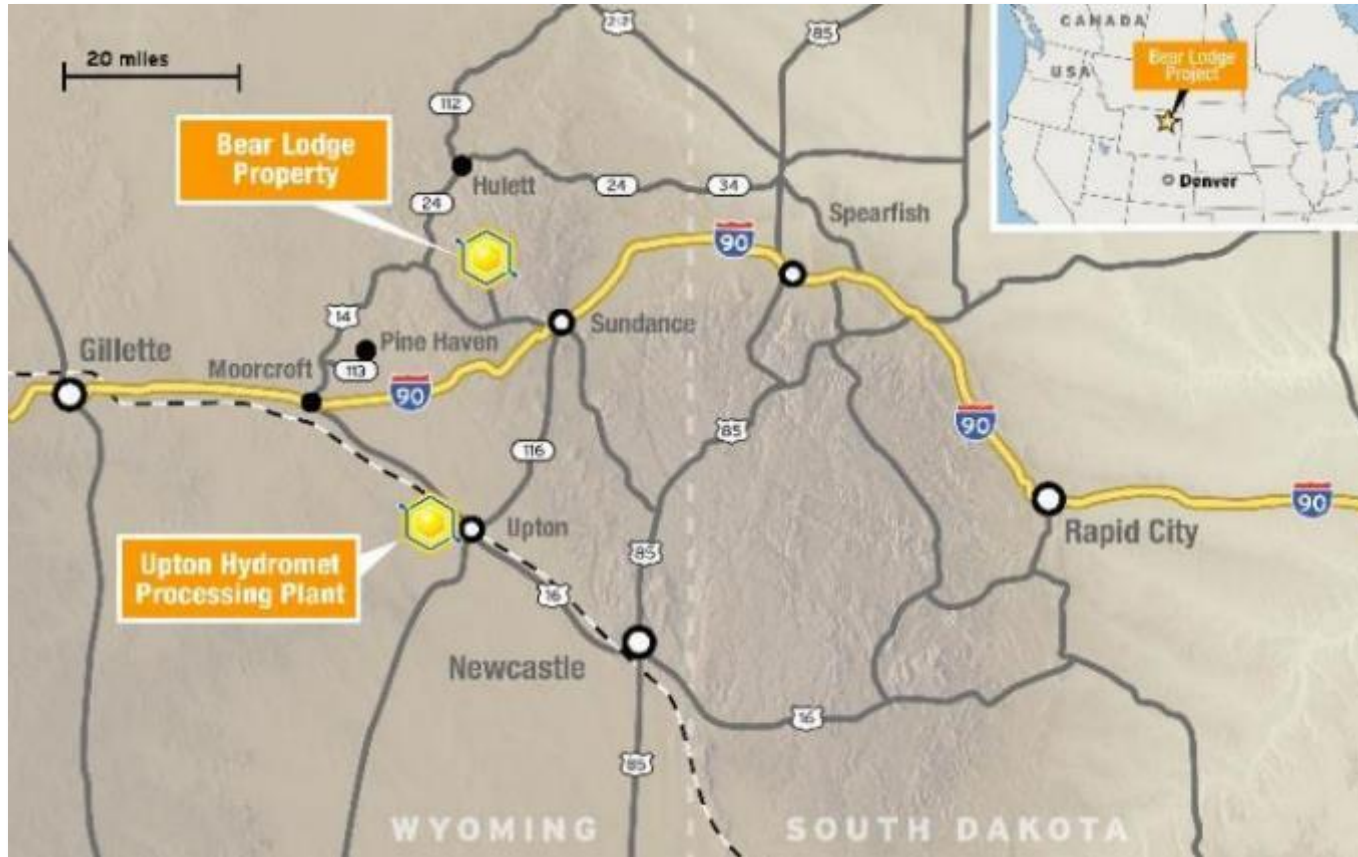


As of 8/17/2023:

- Market Cap: \$129.8M
- Average Volume: 187,632
- 52 Week High: \$0.99 (7/11/2023)
- 52 Week Low: \$0.24 (4/24/2023)
- Shares Outstanding: 212.7M

Premier Wyoming Location

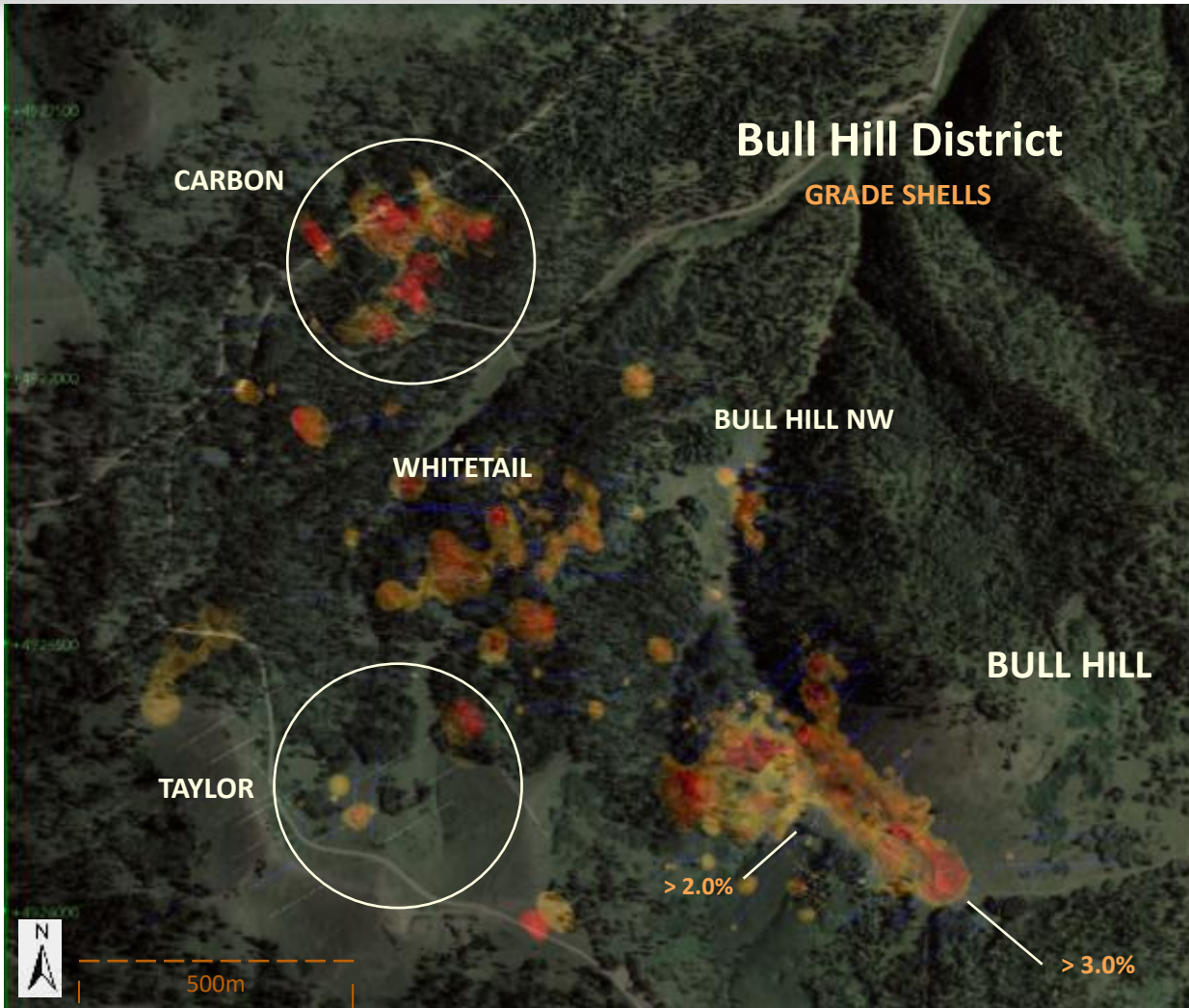
Mining-friendly State / Good infrastructure
Low-cost power / Ready workforce



Support from State and Local Leaders

Bear Lodge – A World-Class Resource

- ◆ Well-outlined resource
- ◆ One of the highest-grade Nd/Pr oxide deposits in the world
- ◆ Targets identified for potential expansion
- ◆ Bulk sample, with 10% REE oxide content, for demo plant
- ◆ High-grade zone to be mined in early years



LeapFrog image showing the distribution of the +2.0% (orange) and +3.0% Total Rare Earth Oxides (TREO) (red) grade shells at the Bear Lodge Project. White circles indicate targets.

Bear Lodge Distribution – Magnet Materials Drive Value

In 2023, the U.S. DOE, using a global perspective, identified magnet materials as critical to clean energy technologies*

The report assessed current sources, risks and anticipated demand growth*

Bear Lodge Project Mineralized Material Projected Distribution by Weight**

Rare Earth Elements	Distribution by Wt
Neodymium (Nd)*	17.9%
Praseodymium (Pr)*	4.9%
Dysprosium (Dy)*	0.5%
Terbium (Tb)*	0.1%
Samarium (Sm)	<u>3.0%</u>
Magnet Materials	26.4%
Europium (Eu)	0.7%
Yttrium (Y)	1.3%
Cerium (Ce)	43.0%
Lanthanum (La)	26.8%
Gadolinium (Gd)	1.6%
Other REEs***	0.2%
Total Rare Earth Oxides	100.0%

*U.S. DOE, Critical Materials Assessment 2023, July 2023. Sm included because of its use in samarium/cobalt magnets.

**Allocation based on RER's historical technical report prepared and filed pursuant to National Instrument 43-101 - Standards for Disclosure of Mineral Properties ("NI 43-101") and other publicly available information regarding the Company, including the Company's technical report entitled, "Pre-Feasibility Study Report on the Reserves and Development of the Bull Hill Mine, Wyoming," filed on October 10, 2014, available on the Company's website and under its profile at www.sedar.com ("SEDAR"). The historical technical information must be updated and should not be deemed current or reliable.

***Other REEs include Holmium, Erbium, Thulium, Lutetium, Scandium and Ytterbium

Bear Lodge – Project History

2012 - 2016

- PFS Completed & Plan of Ops submitted to USFS
- Bench recovery test work successfully completed
- Drilling defines high-grade zone, mineralization revised
- Pilot plant testing of recovery technology completed
- Draft EIS received

2017

- Synchron, an affiliate of General Atomics, takes 34% interest in Company and ultimately increases their holdings to over 54%

2017 – Today

- German pilot plant testing validates technology
- Nd/Pr successfully produced
- Process optimization reduces step & improves economics
- Patents obtained
- GA-led team secures DOE grant of \$21.9M
- RER secures WEA funding of \$4.4M
- Engineering & design of demo plant completed

Cornerstone Project for Building U.S. Rare Earth Supply Chain

- ◆ World-class, long-life ore body fully outlined
- ◆ Ideal location in mining-friendly Wyoming with extensive infrastructure and skilled labor in close proximity
- ◆ Exploiting higher-grade material in early years expected to accelerate payback
- ◆ Rich in magnet materials
- ◆ Known targets represent opportunity for resource growth
- ◆ Site permitting efforts expected to resume in 2023/2024
- ◆ Resource reevaluation underway

Next Step - Demonstration Plant Collaborative Effort

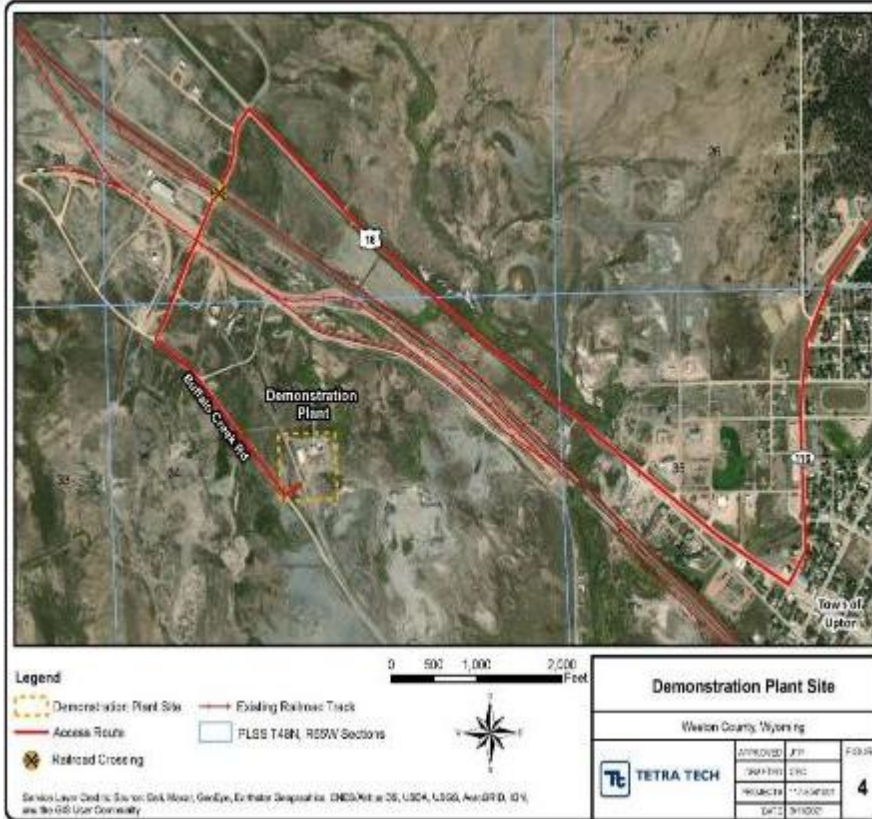
2023/2024 - Construct and Operate RE Demonstration Plant

Goal: Gather data and confirm process flow sheet for full-scale operations, including equipment sizing and reagent requirements

- ◆ Final Engineering and Design completed; DOE “go” decision received – 12/22
- ◆ NRC Material Source license received July 2023
 - DOE expected to complete NEPA review within one month
 - Remaining local permits being finalized
- ◆ Plant components arriving and being assembled on skids at offsite integrator
- ◆ Mineral sample to plant site late summer 2023
- ◆ Plant construction expected to take ~7 months
- ◆ Operations expected to run for 8 to 10 months



Demonstration Plant Location- Upton, Wyoming



- ◆ Upton Logistics Industrial Center - 8.2 Acre Brownfields Site
- ◆ ~15 demo plant employees expected to transition to commercial operations
- ◆ Commercial scale plant planned to be located on optioned land across the street

Demo Plant Timeline

Task	2021	2022				2023				2024				2025		
	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
REE Demonstration Plan	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Design & Engineering	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow										
Procurement					Pink	Pink	Pink	Pink	Light Green							
Construction							Yellow	Yellow	Yellow	Yellow						
Operations												8-10 months				
Decommissioning															Green	Green



Building the Cornerstone for a Secure, Domestic REE Supply Chain

- ◆ Advanced innovative REE recovery technology to be further refined through demo plant operations
- ◆ Technology partnership with global leader has advanced technology while providing access to federal agency participation
- ◆ Premier North American deposit, high in the REEs critical to addressing growing demand from green technologies
- ◆ Significant resource with upside in already identified targets
- ◆ Exceptional location with existing infrastructure, availability of highly skilled workforce and ongoing local and state support

Questions?

