

# Bear Lodge Critical Rare Earth Project Wyoming, USA

# Diversifying a Secure Rare Earth Supply Chain

#### OTCQB: REEMF

Corporate Presentation

June 2025

#### Disclaimer

#### RARE ELEMENT RESOURCES

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### **Company and Project Profile**

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- Founded in 1999. Vision to develop a domestic source of critical minerals for America's defense and high-tech industries
  - Focused on the Bear Lodge Rare Earth (RE) deposit in Northeast Wyoming; \$170M+ invested to-date
  - RER is a public company. Majority shareholder is a General Atomics affiliate. (OTCQB: REEMF): ~\$440M market cap (as of 5/7/25)
- Bear Lodge mineral resource fully delineated; rich in key magnet materials in USGS recognized world-class resource
- Permitted and constructed proprietary RE processing & separation technology in commercialscale demonstration plant project in Upton, Wyo.
  - RER providing ~2/3 of funding for ~\$66M demonstration plant with funds provided by U.S. Dept. of Energy (DOE) & Wyoming Energy Authority (WEA)
- Decades of studies, prior permitting progression and small footprint project supports timely NEPA and State Permitting reviews
- Experienced Management Team:

**Chief Executive Officer**: Ken Mushinski. 30+ years executive in corporate development and program management with General Atomics, in the resource sector. Production experience from permitting to decommissioning, regulatory affairs, and financial planning.

### **Rare Earth Element (REE) Supply Chain**

- REEs are critical minerals used in renewable energy, EVs, tech, & defense applications.
- RER recycles chemicals, minimizes waste, & reduces processing steps, lowering costs & environmental impact – making RER's Nd/Pr oxide an ideal choice for precision manufacturing and technology sectors.



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# Bear Lodge Critical Rare Earth Project: Mine + Processing Plant

- The Bear Lodge Project in Crook/Weston Counties, Wyo., includes a small footprint open-pit mine at Bull Hill (Black Hills National Forest), support facilities on private land, and a hydrometallurgical plant on private land near Upton, Wyo.
- Deposit located in exceptional location with existing infrastructure, availability of highly skilled workforce and ongoing federal, local, and state support
- Processing/Separation Demonstration Plant (and potential Commercial Plant Location) in nearby Upton, Wyo.
- U.S. domestic production with certainty & reliability; not reliant on Chinese influence or technology; meets federal Administrations priorities





# A National Priority: Secure a Domestic Rare Earth Supply

- In Jan. 2025, a U.S. Presidential Executive Order emphasized America's leadership in rare earth production and in March 2025, President Trump addressed Congress saying "...historic action to dramatically expand production of critical minerals & rare earths..."
- RER Received non-binding Letter of Interest from the Export-Import Bank of the United States ("**EXIM**") to debt financing up to \$553M with commitment for some export to allied nations.
- March 2025 Executive Order "Immediate Measures to Increase American Mineral Production" directs U.S. government to unlock permitting, funding & offtake agreements for critical minerals. Actions to fast-track permits, mobilize capital for mineral producers, and create offtake agreements for strategic stockpiling for minerals critical to defense, technology, & energy.
- Bear Lodge Production of high-purity Nd/Pr oxide available for strategic offtake or investment once in operations with target Production of 2,000 tonnes / year of Nd/Pr oxide by 2030.

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A State Priority: RER setting the cornerstone for a Wyoming RE Industry

# **Strong State Support for Bear Lodge Project & the Upton Demo Plant**

- WEA Grant for demonstration plant project \$4.4M
- Rare Earths now represented with WY Mining Assoc.
- General Atomics' long-standing investment in the State
- Governor Gordon visited demonstration plant on two occasions; expressing his strong support



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#### **Bear Lodge Project Summary**

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- Revised Mine Plan (Bull Hill): Efficient and small footprint (approx. 260 acres surface disturbance on public lands), remainder of project on private land. An approx. 60% footprint reduction / surface disturbance on NFS lands from prior Draft EIS.
- Location:
  - Mine site located 11 miles north of Sundance, WY (Bearlodge District, Black Hills National Forest)
  - Waste rock facility and support infrastructure on RER-owned private land
  - Hydrometallurgical plant near Upton, WY (~40 miles south)
- Site Access: Utilizes existing, improved public roads
- Project Development: Open-pit mining planned at Bull Hill deposit
- 2024 Technical Report Resource Estimate (Bull Hill): Approx. 30 yr. Life of Mine
  - Measured & Indicated (M&I): 6.63 million tons @ 4.08% TREO (2.18% Cutoff Grade)

## **Bear Lodge Project: Mineralized Material**

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- Maximizing value of magnetic materials: Neodymium & Praseodymium (NdPr) oxide
- Bear Lodge resource also holds heavy REEs: Dy & Tb
- Bull Hill area in resource table; additional mineralization targets

Measured and Indicated Resource @ 2.18% Cutoff Grade Contained Recovered Metric TREO Metric NdPr Metric Bull Hill Tonnes %TREO Tonnes Tonnes (millions) (1000's) (1000's) Measured 2.04 4.53 92.4 184 Indicated 3.98 3.85 153.1 31.3 Measured & 245.5 49.7 6.02 4.08 Indicated (MI)



## Bear Lodge Deposit: Rich in Key Magnet Materials

### **Bear Lodge 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)	3.0%
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%

 Over 500 holes drilled – 285,000 ft of core evaluated

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- High-grade Nd/Pr oxide deposit
- High-grade zone will boost returns in early years
- Initial 30-year mine life; additional targets identified for potential expansion

#### **Bear Lodge Mine Area**

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- Total Pit area: 183.5 acres
- Waste Rock Facility and low-grade stockpile– Section 16, 405 acres
- Mine Shops and PUG on private land (Sec16): 176 acres
- Other facilities, water production wells & pipelines, sediment ponds, access routes, haul roads : 47.5 acres
- Misc. topsoil stockpiles, etc.: 29 acres
- Total estimated surface disturbance: 841 acres (260 acres of NFS)

# Innovative Technology Creates Pathway to Downstream Magnet Applications



RER constructed a 500+ tpy, ~\$66M Demonstration Plant in industry friendly U.S. location (Upton, Wyo.)

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- Feed is previously excavated sample material from Bear Lodge
- Demo Plant expected to produce 9-12 tonnes separated Nd/Pr oxide for REE magnets.
  - Innovative & proprietary processing /
    - separation tech & controls system proven at pilot scale
- Leverage tech & economic results from Demo Plant to construct commercial facility to supply a domestic supply of REs
- Cutting-Edge Technology for High-Purity Nd/Pr Oxide.

### Patented & Proprietary REE Technology

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RER's demonstration project is expected to produce separated high-purity Nd/Pr oxide and provide performance metrics for extrapolation to full-scale commercial operations

## Demonstration Plant: Path to Commercialization





- Demonstration Plant estimated to yield up to 9-12 tonnes of NdPr oxide & up to 240 kg of Heavy REE concentrate
- Operations up to 12 months & NRC license valid through mid-2027
- Construction completed; undergoing final as-built review/optimization; operations commencement expected late 2025
- The results from the Demo Plant operation will yield the economic and technical data necessary for scale-up and commercialization
- Seeking follow-on projects / advancements to leverage & expand significant capabilities and investment in demonstration plant
- Prepare for full scale commercial facility design and evaluation and mine to separated rare earth oxide feasibility studies

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