# Idaho Strategic Resources

"We Live Here"



Gold Production
Rare Earth Elements
Thorium

NYSE: **IDR** Dec. 5<sup>th</sup>, 2022

## Forward Looking Statements

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CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS: Forward Looking Statements contained herein that are not based upon current or historical fact are forward-looking in nature and constitute forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. Such forward looking statements reflect the Company's strategy, plans, and future financial or operating performance. These statements include but are not limited to: statements relating to forecasted gold production, projected net income cash costs, and all-in costs (AISC), future optimization and resource expansion and potential resource upgrade or extending the Golden Chest Mine life-ofmine, mineral resource estimates. When used herein, the words "anticipate," "believe," "estimate," "upcoming," "plan," "target", "intend" and "expect" and similar expressions, as they relate to Idaho Strategic Resources, its subsidiaries, joint venture partners or its management, are intended to identify such forward looking statements. These forward-looking statements are based on the opinions, assumptions and estimates of management considered reasonable at the date the statements are made and are inherently subject to a variety of risks and uncertainties and other known and unknown factors that could cause actual events or results to differ materially from those projected in the forward-looking statements. Factors that could cause or contribute to such differences include, the impact of COVID-19, project financing and credit availability, fluctuating gold metal prices, interest rates, possible variations in ore grade or recovery rates, changes in the Company's hedging program, changes in project parameters as plans continue to be refined, changes in project development, construction, production and commissioning time frames, risks associated with infectious diseases, risks related to joint venture operations, the possibility of project cost overruns or unanticipated costs and expenses, higher prices for fuel, steel, power, labor and other consumables contributing to higher costs and general risks of the mining industry, including but not limited to, failure of plant, equipment or processes to operate as anticipated, unexpected changes in mine life, final pricing for concentrate sales, unanticipated results of future studies, seasonality and unanticipated weather changes, costs and timing of the development of new deposits, success of exploration activities, permitting timelines, environmental risks, unanticipated reclamation expenses, limitations on insurance coverage, as well as those risk factors discussed or referred to herein and in the Company's Annual Report on Form 10-K for the year ended December 31, 2021. Except as required by Federal Securities law, the Company does not undertake any obligation to release publicly any revisions to any forward-looking statements.

Cautionary Note Regarding Estimates of Measured, Indicated and Inferred Resources. The United States Securities and Exchange Commission (SEC) permits mining companies, in their filings with the SEC, to disclose only reserves, which are those mineral deposits that a company can economically and legally extract or produce. We use certain terms in this presentation, such as "resource," "measured resources," "indicated resources," and "inferred resources" that are recognized by Canadian regulations, but that SEC guidelines generally prohibit U.S. registered companies from including in their filings with the SEC, except in certain circumstances. U.S. investors are urged to consider closely the disclosure in our most recent Form10-K and Form10-Q. You can review and obtain copies of these filings from the SEC's web site at www.sec.gov.

Qualified Persons: Scientific and technical information contained in this presentation has been reviewed and approved by Robert John Morgan, PG, PLS. Robert John Morgan (Vice President Exploration) is an employee of Idaho Strategic Resources, Inc. and a "Qualified person" as such term is defined in National Instrument 43-101.

This presentation includes market and industry data which was obtained from various publicly available sources and other sources believed by the Company to be true. Although the Company believes it to be reliable, the Company has not independently verified any of the data from third party sources referred to in this presentation or analyzed or verified the underlying reports relied upon or referred to by such sources, or ascertained the underlying assumptions relied upon by such sources. The Company does not make any representation as to the accuracy of such information.

\*Anticipated production, improved grades and decreased production costs are contingent upon successful project financing and development of the Paymaster, Klondike and Skookum Ore Shoots. Actual results and developments could be affected by development risks and production delays, rising cost of labor and or materials.

### An Idaho-Based Approach

Idaho: Globally 1st in Mining Policy **GOLD** & 7<sup>th</sup> Best Mining Jurisdiction **PRODUCTION** North Idaho **Golden Chest Mine New Jersey GOLD EXPLORATION Diamond** Creek **Roberts Lemhi Pass** Central Idaho **RARE EARTH ELEMENTS THORIUM IDAHO** 

### **Corporate Overview**

Listed on the NYSE: IDR

Headquartered in North Idaho

Domiciled in Idaho

### **Operational Overview**

### Rare Earth Elements/Thorium

- Diamond Creek
- Roberts
- Lemhi Pass

#### #1 Thorium Resource in the U.S.

Lemhi Pass

#### **Gold Production**

- Golden Chest Mine
- New Jersey Mill

Potential to address <u>19 of the 50 Strategic Critical</u>
Minerals outlined by the United States Geological
Survey (USGS) and the Idaho Geological Survey (IGS)<sup>1</sup>

- 3 of the top 10 domestic Rare Earth Elements Projects<sup>2</sup>
- 2<sup>nd</sup> largest Rare Earth element landholder in the U.S.<sup>3</sup>
- The largest Thorium resource in the United States<sup>4</sup>
- Producing gold mine in a friendly jurisdiction Source of cash flow
- Potential high value by-product minerals include Niobium,
   Yttrium, Manganese, Titanium, and others
- Proven ability to bring projects into production with 55 team members experienced in mining, milling, drilling, exploration, and project financing

USGS List of Critical Minerals		
Aluminum	Hafnium	Samarium
Antimony	Holmium	Scandium
Arsenic	Indium	Tantalum
Barite	Iridium	Tellurium
Beryllium	Lanthanum	Terbium
Bismuth	Lithium	Thulium
Cerium	Lutetium	Tin
Cesium	Magnesium	Titanium
Chromium	Manganese	Tungsten
Cobalt	Neodymium	Vanadium
Dysprosium	Nickel	Ytterbium
Erbium	Niobium	Yttrium
Europium	Palladium	Zinc
Fluorspar	Platinum	Zirconium
Gadolinium	Praseodymium	
Gallium	Rhodium	
Germanium	Rubidium	
Graphite	Ruthenium	

### Idaho's REE - Thorium Belt

Runs parallel to the Idaho Cobalt Belt

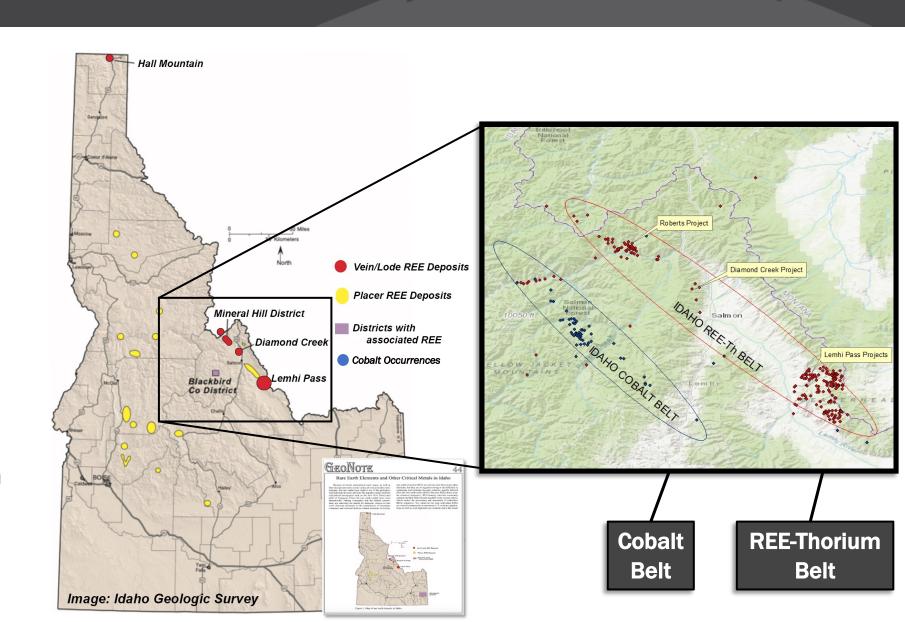
Abundance of Technology and Energy Metals

Nationally recognized REE Deposits

- Diamond Creek
- Roberts
- Lemhi Pass

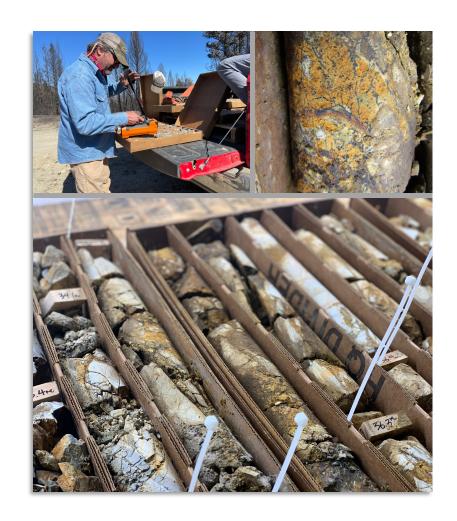
Recognized as the #1 Thorium prospect in the U.S.

Lemhi Pass



### Diamond Creek Rare Earth Project





USGS Recognized Resource included in our National REE Inventory

Top 5 REE prospect in the U.S.

Land package - 1,040 acres unpatented claims

Project contains 1979 USGS estimated Total Rare-Earth Oxides (TREO) ore resource:

• **70,000+ metric tonnes of REEs**, with grade of 1.22 %

REE veins occur along a trend 2.5 miles long and 0.5 mile wide

Ongoing Programs:

- IDR Drill Program XRF Results greater than 2% TREO
- Idaho Global Entrepreneurial Mission
- Earth MRI

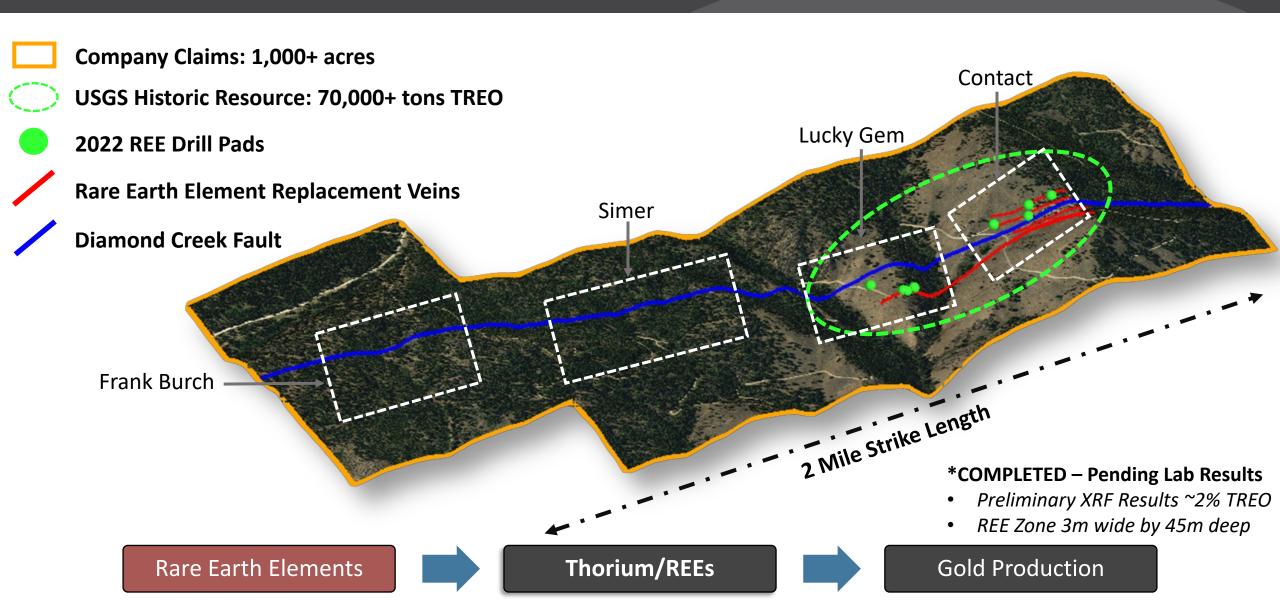




## Diamond Creek 2022 Drill Program

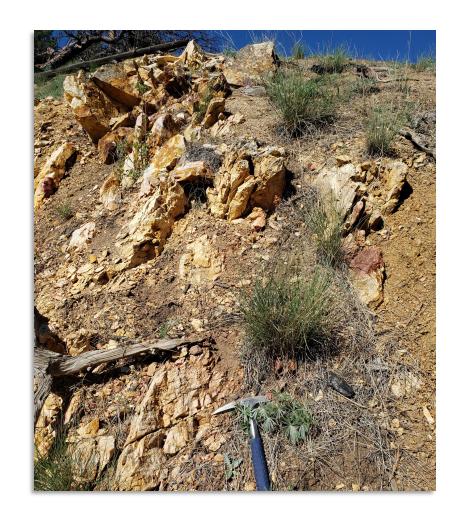
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### Roberts Rare Earth Project

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USGS Recognized Resource included in our National REE Inventory

Top 10 REE prospect in the U.S.

Land package – 2,800 acres unpatented claims

REE mineralization associated with high-grade carbonatites

Idaho Geological Survey sampling has total REE grades up to 21.5%

IDR samples assay up to 1.67% Neodymium

**Neodymium**, **Praseodymium** and **Samarium** occur on the property in abundance

Alkaline intrusive bodies significantly boosts the potential for REE deposits to be found at depth





#### Idaho Stakeholders Involved

- Idaho Strategic Resources
- University of Idaho
- Idaho National Labs
- Idaho Geological Survey
- Center for Advanced Energy Studies
- Idaho Department of Commerce

REE Project to research environmentally friendly separation technology for rare earth elements (Funded by the Idaho Dept. of Commerce)<sup>5</sup>

Using the REEs from Diamond Creek

### **IGEM Project**

### Development of Idaho-Sourced Rare Earth Elements Drilling and Extraction

Amin Mirkouei, Assistant Professor, University of Idaho, ID (Principal Investigator) John Swallow and Robert Morgan, Idaho Strategic Resources, ID (Industry Partner)

Indrajit Charit, Professor, Department Chair, University of Idaho, ID Lee Ostrom, Professor, Idaho Falls Center Executive Officer, University of Idaho, ID John Russell, Research Professor, CAES Associate Director, University of Idaho, ID Claudio Berti, Director and State Geologist, Idaho Geological Survey, ID Virginia Gillerman, Economic and Mining Geologist, Idaho Geological Survey, ID Daniel Ginosar, Deputy Focus Area Lead, Idaho National Laboratory, ID















## **Lemhi Pass Thorium – REE Project**

USGS recognized as the #1 Thorium prospect in the U.S.

Top 10 REE Deposit in the U.S.

Thorium has the potential to be the safer more environmentally friendly alternative to Uranium

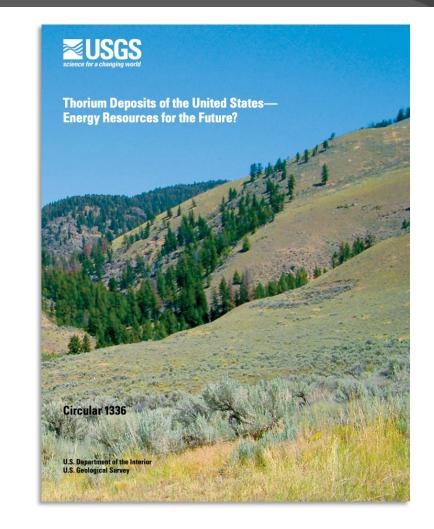
Land Package ~ 8,200 acres unpatented claims

REEs occur in abundance - produced as a by-product

The Thorium-REE veins at Lemhi Pass are generally broad with widths up to 40 feet and can have strike lengths greater than 4,000 feet

"According to Staatz (1972), Hedrick (2007), and Gosen (2009), the Lemhi Pass district is estimated to potentially hold 133,400 tons of thorium oxide."6

The REE resources of the of the Lemhi Pass District are approximately equal to its Thorium resource







#### **Gold Production: Golden Chest Mine**

Located in the Murray Gold Belt

Current Production: Skookum Shoot

Plan to Expand into Klondike & Paymaster

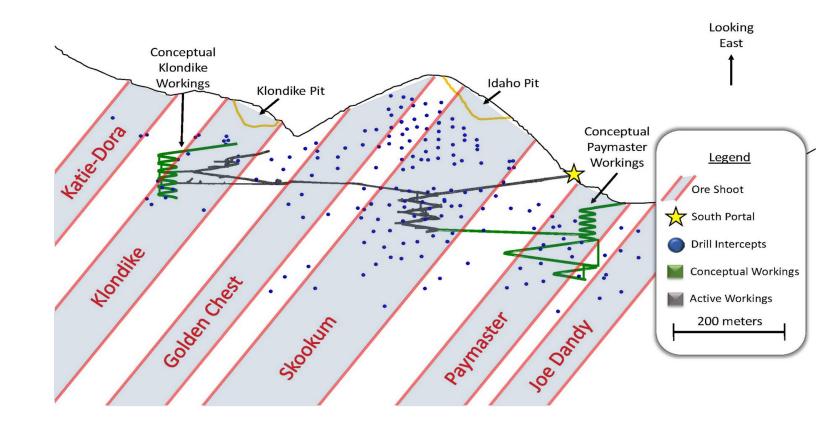
Estimate 5-7k oz/yr production from each of the Skookum, Klondike, & Paymaster Shoots

### **Targeted 3 Year Production Increase**

Gold Production: 15-25k oz/year

Assumed AISC: \$1,300 oz +/-

Est. Mine Life: 10 years





### The Murray Gold Belt Mill

### New Mill, Paste Backfill, and Tailings Facility

- 400 tonne per day (tpd) flotation mill and paste backfill plant to be built on-site
- Expansion potential up to 1,000 tpd
- Expected to serve the Golden Chest Mine and future deposits within the MGB

### New Mill - Estimated Savings

- Ore Haulage: \$650k \$1.3M/year (depending on # of headings)
- On-site Paste Backfill Plant: \$1.2M/year (\$10 per tonne mined)

#### **New Facilities - Estimated Cost**

Combined Cost: \$10M +/-





Idaho Department of Environmental Quality

Pollution Prevention Champion

New Jersey Mill Kellogg, Idaho 2014

\*Currently transport ore to New Jersey Mill (in N. Idaho)







### Murray Gold Belt Drilling

North Idaho:

Patented Land - 1,500 acres

Property Highlights:

Numerous Historic Gold Mines

No Exploration > 100 Years

Intrusive related Au

Mineralization

15 Sample Assays: 5-75 gpt



### **Eastern Star Drilling**

Central Idaho:

Patented Land - 220 acres

Property Highlights: Numerous Historic Gold Mines

No Exploration > 100 Years

Samples: 68.9 gpt, 53.8 gpt,

35.9 gpt, 5 samples > 17 gpt

**Rare Earth Elements** 







### Local Solutions to U.S.' Challenges

### Store of Value:

Gold - Store of Value for over 2,000 years and a hedge against inflation

### **Technology Metals:**

**REEs -** Required building blocks of a low-carbon future and restoring national security

### **Energy Metals:**

Thorium: Low-Carbon Energy, Low Weaponization, Less Waste



### Our Approach to Environmental, Social, and Governance (ESG)

"It is our belief that successful operations begin with the heightened responsibility that only local oversight and a community mindset can provide. That the established outsider approach toward offshoring environmental damage and irresponsible work conditions – in the name of saving the environment – has finally run its course."

#### NIMBY Has Failed (Not In My Back Yard)

Offshoring Mineral Production to Countries without Environmental/Humanitarian Regulations

- Amplifies pollution and environmental damages from mining
- Unintentionally supports slave/child labor
- Saying "No" to everything has consequences, even beyond our borders



**Community Revitalization** 



**Local Partnerships** 



Idaho DEQ Award



Responsible Development

## The Idaho Strategic Team



### Links/Sources

- 1. <a href="https://www.usgs.gov/news/national-news-release/us-geological-survey-releases-2022-list-critical-minerals">https://www.usgs.gov/news/national-news-release/us-geological-survey-releases-2022-list-critical-minerals</a>
- 2. <a href="https://pubs.usgs.gov/sir/2010/5220/">https://pubs.usgs.gov/sir/2010/5220/</a>
- 3. MP Materials: 17,222 acres Western Rare Earths: 9,820 acres UCore: 9,580 acres US Rare Earths: 9,345 Rare Element Resources: 9,000 acres
- 4. <a href="https://pubs.usgs.gov/circ/1336/pdf/C1336.pdf">https://pubs.usgs.gov/circ/1336/pdf/C1336.pdf</a>
- 5. <a href="https://caes.org/university-of-idaho-led-project-with-caes-ties-receives-igem-award/">https://caes.org/university-of-idaho-led-project-with-caes-ties-receives-igem-award/</a>
- 6. <a href="https://pubs.usgs.gov/circ/0805/pdf/circ805.pdf">https://pubs.usgs.gov/circ/0805/pdf/circ805.pdf</a>