

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-K**

- ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the fiscal year ended December 31, 2022
OR
 TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____

Commission file number: 001-34852



RARE ELEMENT RESOURCES LTD.

(Exact Name of Registrant as Specified in its Charter)

British Columbia

(State or other jurisdiction of incorporation or organization)

N/A

(I.R.S. Employer Identification No.)

**P.O. Box 271049
Littleton, Colorado**

(Address of Principal Executive Offices)

80127

(Zip Code)

(720) 278-2460

(Registrant's Telephone Number, including Area Code)

SECURITIES REGISTERED PURSUANT TO SECTION 12(b) OF THE ACT: **None**

SECURITIES REGISTERED PURSUANT TO SECTION 12(g) OF THE ACT:

Common Shares, No Par Value

Title of Each Class

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 229.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large Accelerated Filer Accelerated Filer Non-Accelerated Filer Smaller Reporting Company Emerging Growth Company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262 (b)) by the registered public accounting firm that prepared or issued its audit report.

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements.

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b).

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes No

As of June 30, 2022, the aggregate market value of the registrant's voting common shares held by non-affiliates of the registrant was approximately \$56,600,000 based upon the closing sale price of the common shares as reported by the OTCQB Venture Marketplace.

The number of the registrant's common shares outstanding as of March 24, 2023 was 212,515,951.

TABLE OF CONTENTS

| | |
|--|-----------|
| PRELIMINARY NOTES | 2 |
| CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS | 2 |
| GLOSSARY OF TERMS | 4 |
| PART I | 7 |
| ITEM 1. BUSINESS | 7 |
| ITEM 1A. RISK FACTORS | 13 |
| ITEM 1B. UNRESOLVED STAFF COMMENTS | 28 |
| ITEM 2. PROPERTIES | 28 |
| ITEM 3. LEGAL PROCEEDINGS | 34 |
| ITEM 4. MINE SAFETY DISCLOSURES | 34 |
| PART II | 35 |
| ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES | 35 |
| ITEM 6. [RESERVED] | 40 |
| ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS | 40 |
| ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK | 45 |
| ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA | 45 |
| ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE | 68 |
| ITEM 9A. CONTROLS AND PROCEDURES | 68 |
| ITEM 9B. OTHER INFORMATION | 69 |
| ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS | 69 |
| PART III | 69 |
| ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE | 69 |
| ITEM 11. EXECUTIVE COMPENSATION | 75 |
| ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS | 85 |
| ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS; AND DIRECTOR INDEPENDENCE | 87 |
| ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES | 89 |
| PART IV | 90 |
| ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES | 90 |
| ITEM 16. FORM 10-K SUMMARY | 90 |
| SIGNATURES | 93 |

PRELIMINARY NOTES

As used in this Annual Report on Form 10-K (“Annual Report”), references to “Rare Element,” the “Company,” “we,” “our,” or “us” mean Rare Element Resources Ltd., our predecessors, and consolidated subsidiaries, or any one or more of them, as the context requires.

Rare Element is focused on advancing our Bear Lodge rare earth elements project (the “Bear Lodge REE Project”) including demonstrating the technical and economic feasibility of our proprietary rare earth elements recovery and separation technology through the permitting and licensing, construction, and operation of a planned demonstration scale recovery and separation plant (“Demonstration Plant”), while postponing further exploration of its Sundance gold project (the “Sundance Gold Project”, together with the Bear Lodge REE Project the “Projects”). Both Projects are located primarily on the Bear Lodge property, near the town of Sundance in the state of Wyoming (the “Bear Lodge Property”). See “Part I, Item 1. Business.”

Financial information in this Annual Report is presented in accordance with generally accepted accounting principles (“GAAP”) in the United States (“U.S.”) and, unless otherwise specified, all dollar amounts are expressed in thousands of U.S. dollars (“\$” or “US\$”).

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report contains “forward-looking statements” within the meaning of the Securities Act of 1933, as amended (the “Securities Act”), the Securities Exchange Act of 1934, as amended (the “Exchange Act”), and “forward-looking information” within the meaning of Canadian securities laws (collectively, “forward-looking statements”). Any statements that express or involve discussions with respect to business prospects, predictions, expectations, beliefs, plans, intentions, projections, objectives, strategies, assumptions, future events, performance or exploration and development efforts using words or phrases (including negative and grammatical variations) such as, but not limited to, “expects,” “anticipates,” “plans,” “estimates,” “intends,” “forecasts,” “likely,” “projects,” “believes,” “seeks,” or stating that certain actions, events or results “may,” “could,” “would,” “should,” “might” or “will” be taken, occur or be achieved, are not statements of historical fact and may be forward-looking statements. Although we believe that our plans, intentions, and expectations reflected in these forward-looking statements are reasonable, we cannot be certain that these plans, intentions, and expectations will be achieved. Actual results, performance or achievements could differ materially from those contemplated, expressed or implied by the forward-looking statements contained in this Annual Report. Forward-looking statements in this Annual Report include, but are not limited to, statements regarding the following:

- our business, prospects, and our overall strategy;
- planned or estimated expenses and capital expenditures;
- availability of liquidity and capital resources;
- our ability to obtain additional financing arrangements or strategic alternatives;
- our ability to finalize and receive the Wyoming Energy Authority grant for the Demonstration Plant;
- progress in developing our Demonstration Plant, the timing of that progress, and prospects for completing and operating the Demonstration Plant;
- our ability to achieve the full amount of funding support from the Department of Energy (“DoE”) through the remainder of the Demonstration Plant project;
- our ability to complete and operate the Demonstration Plant within the approved budget;
- the source, quality, costs, and timing of materials, equipment, supplies and resources, including human resources, for the construction and operation of the Demonstration Plant;
- the attributes of plans for our Projects or other interests, operations, or rights;
- plans and strategies following the completion of operations of the Demonstration Plant; and
- government regulations, including our ability to obtain, and the timing of, necessary governmental permits and approvals.

Forward-looking statements are based on our current expectations and assumptions that are subject to a variety of known and unknown risks, uncertainties and other factors that could cause actual events or results to differ materially from those expressed or implied by the forward-looking statements, including, without limitation, risks associated with:

- the significant influence of our majority shareholder, Synchron, on our major corporate decisions;
- our ability to protect our intellectual property rights;
- the ability of our Demonstration Plant to successfully operate and produce information that would support a decision by the Company to proceed with a potential commercial-scale production facility;
- the uncertain nature of demand and supply and their effect on prices for rare earth products;
- technological advancements, substitutes, and the establishment of new uses and markets for rare earth products;
- development risks, operational hazards, and regulatory approvals;
- our reliance on the skill and expertise of third-party service providers;
- the ability of third-party service providers to meet their contractual obligations, including those caused by supply chain disruptions and the effects those disruptions could have on our timelines and costs;
- changes in legislation and regulations relating to the mining and rare earth industries, including environmental laws and regulations that impose material compliance costs and liabilities;
- governmental interventions in the mining and rare earth industries, including increases in barriers to international trade;
- uncertainties regarding our ability to maintain sufficient liquidity and attract sufficient capital resources to implement our Projects and strategies;
- our ability to attract and retain key personnel;
- inflation affecting our business including the costs of implementing our Projects;
- impact of external financial sector factors including the security of our bank and investment account deposits;
- risks and uncertainties inherent in management estimates of future operating results;
- changes in competitive factors, including the development or expansion of other projects that are competitive with ours;
- our ability to complete planned financing and other transactions;
- risks related to pandemics or disease outbreaks, including the impact of COVID-19 on supply chains and the resulting disease containment measures implemented by various governments;
- risks relating to the availability and costs of goods and services we need to achieve our plans and goals resulting from military conflicts such as the Russia/Ukraine war;
- information technology system disruptions, damage or failures, or cyber-attacks;
- risks and uncertainties associated with litigation matters and opposition to our plans and operations by third parties;
- share price volatility;
- whether we deregister our common shares under the Exchange Act and/or list our common shares on another securities exchange;
- the OTCQB Venture Marketplace standards and the “penny stock” rules and the impact on trading volume and liquidity due to our trading on the OTCQB Venture Marketplace;
- risk factors discussed in this Annual Report; and
- other factors, many of which are beyond our control.

This list is not exhaustive of the factors that may affect our forward-looking statements. Some of the important risks and uncertainties that could affect forward-looking statements are described further under the section headings “Item 1. Business,” “Item 1A. Risk Factors” and elsewhere in this Annual Report. Although we have attempted to identify important factors that could cause actual results, performance, or achievements to differ materially from those described in forward-looking statements, there may be other factors that cause results, performance, or achievements not to be as anticipated, estimated, or intended. Should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, actual results, performance, or achievements may vary, possibly materially, from those anticipated, estimated, or expected. We caution readers not to place undue reliance on any such forward-looking statements, which speak only as of the date made. Except as required by law, we disclaim any obligation to revise or update any forward-looking statements to reflect events or circumstances after the date of such statements or to reflect the occurrence of anticipated or unanticipated events. We qualify all of the forward-looking statements contained in this

Annual Report by the foregoing cautionary statements. We advise you to carefully review the reports and documents we file from time to time with the U.S. Securities and Exchange Commission (the “SEC”). The reports and documents filed by us with the SEC are available at www.sec.gov.

GLOSSARY OF TERMS

Conversion Factors and Abbreviations

All units in this Annual Report are stated in metric measurements unless otherwise noted. For ease of reference, the following conversion factors are provided:

| To Convert Imperial Measurement Units | To Metric Measurement Units | Multiply by |
|---------------------------------------|-----------------------------|-------------|
| Acres | Hectares | 0.4047 |
| Feet | Meters | 0.3048 |
| Miles | Kilometers | 1.6093 |
| Tons (short) | Tonnes | 0.9071 |

Definitions

bastnasite – a mixed lanthanide fluoro-carbonate mineral (LaCO_3F) that currently provides the bulk of the world’s supply of the LREEs. Bastnasite and monazite are the two most common sources of cerium and other REEs. Bastnasite is found in carbonatites, carbonate rocks of igneous derivation.

beneficiation – operations that concentrate and separate mineral values in ore from waste material, and typically include, but are not limited to, crushing, grinding, washing, filtration, and leaching.

cerium (“Ce”) – a soft, silvery, ductile metallic element that easily oxidizes in air. Ce is the most abundant of the REEs and is found in a number of minerals, including monazite and bastnasite. Ce has two relatively stable oxidation states (Ce^{3+} and Ce^{4+}), enabling both the storage of oxygen and its widespread use in catalytic converters. Ce is also widely used in glass polishing.

concentrate – a mineral beneficiation product that generally describes the material that is produced after crushing and grinding ore, effecting significant separation of gangue (waste) minerals from the desired metal and/or metallic minerals, and discarding the waste minerals. The resulting “concentrate” of minerals typically has an order of magnitude higher content of minerals than does the beginning ore material.

REE – critical rare earth elements – Nd, Eu, Dy, Tb and Y were identified by the DoE as “critical” in its 2011 Critical Materials Strategy Report. REEs are those projected by the DoE to have the greatest economic importance for clean energy development and the highest risk of supply disruption. The Company includes Pr as a REE because of its use in conjunction with Nd in didymium as a raw material for high-intensity permanent magnets.

didymium – a mixture of the elements Pr and Nd. Didymium is used as a raw material for the manufacture of high-intensity permanent magnets. It is used in safety glasses for glassblowing and blacksmithing, especially when a gas (propane) powered forge is used, where it provides a filter which selectively blocks the yellowish light at 589 nm emitted by the hot sodium in the glass, without having a detrimental effect on general vision, unlike dark welder’s glasses.

Dy – dysprosium (a soft metallic element of the lanthanide series, mainly used in high-performance, permanent magnets). Dy has a high melting point and absorbs neutrons well. It is therefore also used in nuclear control rods to help control nuclear reactions. Dy is also used in laser generating materials.

Eu – europium (a very rare metallic element that is the softest member of the lanthanide series). It is used in making color television tubes and lasers and as a neutron absorber in nuclear research. It is desirable due to its photon emission. Excitation of the Eu atom, by absorption of electrons or by UV radiation, results in changes in energy levels that create a visible emission. Almost all practical uses of Eu utilize this luminescent behavior.

fault – a surface or zone of rock fracture along which there has been displacement.

Feasibility Study (“FS”) – a comprehensive study of a mineral deposit in which all geological, engineering, legal, operating, economic, social, environmental, and other relevant factors are considered in sufficient detail that it could reasonably serve as the basis for a final decision to develop the deposit for mineral production.

FMR – mineralization that includes iron oxide, manganese oxide and REE.

Gd – gadolinium (a malleable, ductile metallic element of the lanthanide series that has seven natural isotopes and 11 artificial isotopes). Two of the natural isotopes, Gd 155 and Gd 157, are the best-known neutron absorbers. Gd is used to improve the heat and corrosion resistance of iron, chromium, and various alloys in medicine as a contrast medium for magnetic resonance imaging and as a radioisotope in bone mineral analysis.

geochemical – related to the distribution and amounts of the chemical elements in minerals, ores, rocks, solids, water and the atmosphere.

geophysical – related to the mechanical, electrical, gravitational, and magnetic properties of the earth’s crust.

GHG – greenhouse gases

grade – quantity of metal per unit weight of host material.

HREEs – heavy rare earth elements – defined as the elements Tb, Dy, Ho, Er, Tm, Yb, Lu and Y.

La – lanthanum (the first metallic element of the lanthanide series). La is a strategically important rare earth element due to its use in fluid cracking catalysts (“FCC”), which are used in the production of transportation and aircraft fuel. La is also used in fuel cells and batteries.

LREEs – light rare earth elements, defined as the elements La, Ce, Pr, Nd, Pm, Sm, Eu and Gd.

mineral – a naturally occurring, inorganic crystalline material having a definite chemical composition.

mineralization – a natural accumulation or concentration of one or more potentially economic minerals in rocks or soil. Also, the process by which minerals are introduced or concentrated in rocks or soil.

monazite – a reddish-brown rare earth phosphate mineral. Monazite-group minerals are typically accompanied by elevated concentrations of uranium and thorium. This has historically limited the processing of monazite. However, this mineral is becoming more attractive because it typically has elevated concentrations of HREEs.

Nd – neodymium (a metallic element of the lanthanide series, occurring principally in REE fluorocarbonate and monazite minerals). Nd is a key constituent of Neodymium-Iron-Boron (“NdFeB”) permanent magnets and an additive to capacitor dielectrics. NdFeB magnets maximize the power/weight ratio and are found in a large variety of motors, generators, sensors, and hard disk drives. Capacitors containing Nd are found in cellular telephones, computers and nearly all other electronic devices. A minor application of Nd is for lasers.

NdFeB – Neodymium-Iron-Boron compound used to manufacture permanent rare earth magnets.

NI 43-101 – National Instrument 43-101 – Standards of Disclosure for Mineral Projects of the Canadian Securities Administrators.

open pit – surface mining in which the ore is extracted from a pit or quarry. The geometry of the pit will vary with the characteristics of the ore body.

ore – mineral-bearing rock.

ore body – a mostly solid and fairly continuous mass of mineralization.

oxide – for purposes of the deposits found at the Bear Lodge Property, rare earth bearing mineralized material that results from the complete oxidation by natural processes of sulfide-bearing material.

PFS – preliminary feasibility study or pre-feasibility study. Each mean a comprehensive study of the viability of a mineral project that has advanced to a stage where the mining method, in the case of underground mining, or the pit configuration, in the case of an open pit, has been established and an effective method of mineral processing and/or beneficiation has been determined. It includes a financial analysis based on reasonable assumptions of technical, engineering, legal, operating, economic, social, and environmental factors and the evaluation of other relevant factors that are sufficient for a Qualified Person, acting reasonably, to determine if all or part of any mineral resource may be classified as a Mineral Reserve under NI 43-101 standards.

Pr – praseodymium (a metallic element that constitutes about 4% of the lanthanide content of bastnasite and has a few specific applications, based mainly on its optical properties). It is a common coloring pigment, and is used in photographic filters, airport signal lenses, and welder’s glasses. Because it chemically and magnetically is so similar to its periodic chart neighbors Nd and La, Pr is typically found in small amounts in applications where Nd and La are important, such as NdFeB magnets and catalysts. These latter applications are actually the largest uses for Pr because the magnet and catalyst markets are so large. Thus, Pr plays an important role in extending the availability of the more widely used Nd and La.

RC (reverse circulation) drilling – a rotary drilling method using either a hammer or a tri-cone bit to produce rock cuttings that are forced upward from the bottom of the drill hole to the surface through an outer tube, using liquid and/or air pressure moving downward through an inner tube.

recovery – the percentage of contained metal actually extracted from ore in the course of processing and/or beneficiating such ore.

REEs – rare earth elements. a group of metallic elements with unique chemical, catalytic, magnetic, metallurgical, and phosphorescent properties.

REO – rare earth oxide, the oxide form of REE.

Sm – samarium (a metallic element of the lanthanide series predominantly used to produce Sm cobalt magnets). Although these magnets are slightly less powerful than NdFeB magnets at room temperature, Sm cobalt magnets can be used over a wider range of temperatures and are less susceptible to corrosion.

stockwork – complex system of structurally controlled or randomly oriented veins that can be standalone ore bodies or occur on the periphery of larger veins. They are also referred to as “stringer zones.”

strike – the direction or trend that a structural surface (e.g., an ore bedding or fault plane) takes as it intersects the horizontal.

sulfide – a mineral combining sulfur and base metals, such as iron and less commonly copper, lead, zinc and/or molybdenum; metallic sulfur bearing mineral associated with primary REE mineralization.

Tb – Terbium is a rare earth metal used in solid state devices as well as magnets in loudspeakers.

Technical Report – the Company’s historical technical report for the Bear Lodge REE Project dated October 9, 2014 titled “Rare Element Resources, Inc. Bear Lodge Project Canadian National Instrument 43-101: Pre-Feasibility Study Report on the Mineral Reserves and Resources and Development of the Bull Hill Deposit” which is available under our profile at www.sedar.com.

vein – a sheet like body of mineralized rock. On many properties, veins may consist largely of quartz gangue. However, on the Bear Lodge Property, veins can contain a variable assemblage that includes, but is not limited to, gangue minerals like iron and manganese oxides, quartz, calcite, clay, apatite and/or potassium feldspar with or without ore minerals.

Y – Yttrium is primarily recovered from monazite resources and is used with iron in the manufacture of microwave communication equipment.

PART I

ITEM 1. BUSINESS

Rare Element was incorporated under the laws of the Province of British Columbia, Canada on June 3, 1999 as Spartacus Capital Inc. We are currently governed under the Business Corporations Act (British Columbia) (the “BCBCA”). Our executive office address is P.O. Box 271049, Littleton, Colorado 80127. The telephone number for our executive office is (720) 278-2460. We maintain a corporate website at www.rareelementresources.com.

Originally organized as a “capital pool” company whose activities were focused on the identification and completion of a qualifying transaction as required by the rules of the TSX Venture Exchange (“TSX-V”), we transitioned to a “venture company” on July 25, 2003, coincident with (1) the completion of a reverse takeover acquisition of Rare Element Holdings Ltd. (the qualifying transaction), (2) a name change of “Spartacus Capital Inc.” to Rare Element Resources Ltd., and (3) the completion of a private placement. The Company’s main assets include its proprietary rare earth processing and/or beneficiation and separation technology and its 100% interest in a group of unpatented mining claims and repurchase rights to adjacent private property, together known as the Bear Lodge Property, owned through a wholly owned subsidiary, Rare Element Resources, Inc., a Wyoming corporation.

SUBSIDIARIES

We have one direct wholly owned subsidiary, incorporated under the laws of British Columbia, Canada in 1996 under the name Rare Element Holdings Ltd. That subsidiary has one direct wholly owned subsidiary, Rare Element Resources, Inc., incorporated in 1997 in the state of Wyoming, USA, formerly known as Paso Rico (USA), Inc. (“Paso Rico”).

DESCRIPTION OF BUSINESS

We are focused on demonstrating the technical and economic feasibility of our proprietary recovery and separation technology through the permitting and licensing, construction, and operation of a planned Demonstration Plant and advancing the Bear Lodge REE Project located near the town of Sundance in northeast Wyoming. The Bear Lodge REE Project consists of several large, disseminated REE deposits and a planned hydrometallurgical plant to be located near Upton, Wyoming. The Bear Lodge REE Project is one of the highest-grade REE deposits identified in North America containing a favorable distribution of CREE.

In its development efforts for the Bear Lodge REE Project, the Company has done extensive laboratory bench-scale and pilot plant testing on metallurgical processes to recover saleable rare earth products and has been granted two patents on its metallurgical processing innovations. Among them, the Company has pilot tested and received patent protection on a rare earth separation technique that modifies conventional solvent extraction methods for rare earth separation expected to be more cost efficient and environmentally sound, involving minimal waste effluents discharged from the process.

Our near-term focus is on the progression of the Demonstration Plant as further described below. Assuming the Demonstration Plant operation is successful, the Company plans to evaluate the feasibility of processing and separating REEs from the Bear Lodge REE Project as well as other sources at commercial scale.

During the first quarter of 2016, we placed the Bear Lodge REE Project under care-and-maintenance, and all permitting and licensing activities were suspended at that time. Based on current permitting and licensing timetables and other factors, we anticipate that we could receive all permits and licenses for the Bear Lodge REE Project approximately 18 to 30 months

after resuming permitting and licensing efforts, which efforts may be dependent upon our Demonstration Plant's operating results.

Once the decision to resume the Bear Lodge REE Project development activities is made, our plan is to advance engineering in preparation for the FS, including an evaluation of a potential modular approach to development beginning with a smaller initial production facility utilizing high-grade material which could then be scaled up. Our ability to begin construction activities on the Bear Lodge REE Project may be subject to various factors including: (i) the availability of adequate capital, (ii) positive results from the Demonstration Plant's operations, (iii) an affirmative FS, (iv) securing off-take agreements with customers at adequate prices, (v) obtaining necessary permits and licenses, and (vi) approval from the Company's board of directors (the "Board of Directors" or the "Board").

The Bear Lodge REE Project deposit is located near excellent mining infrastructure, including good road access and power lines within two kilometers of the property. Geographically, it is 100 kilometers east of Gillette, Wyoming, a major infrastructure, support, and logistics center for coal mines in the Powder River Basin that should provide for ready access to many of the required production supplies and materials as well as skilled labor. Additionally, the deposit is situated only 64 kilometers from the nearest railhead at Upton, Wyoming, where the Demonstration Plant and the proposed hydrometallurgical plant are planned to be sited, allowing access to major distribution channels via the adjacent railhead as well as convenient access to utilities and other infrastructure.

Additional information regarding the Bear Lodge REE Project and the Bear Lodge Property is included under the section heading "Item 2. Properties" in this Annual Report.

RECENT CORPORATE DEVELOPMENTS

Rare Earth Demonstration Plant Project

Department of Energy Financial Award

In January 2021, a consortium of companies, of which the Company is a part, received notice from the DoE that the consortium had been selected for negotiation of a potential financial award for the engineering, construction and operation of a rare earth separation and processing Demonstration Plant. The consortium of companies is led by General Atomics, an affiliate of Synchron, the Company's majority shareholder, and includes certain of General Atomics' affiliates, and LNV, an Ardurra Group, Inc. company, as engineering and construction subcontractor. A formal proposal was submitted by the consortium in response to a published Funding Opportunity Announcement in mid-2020 for the construction and operation of a rare earth separation and processing plant utilizing proprietary technology to produce commercial-grade products. The DoE finalized the award, and an agreement was executed by the DoE's grants/agreement officer on September 27, 2021, with an effective date of October 1, 2021. The Company, as a subrecipient of the award, along with the other consortium members, commenced work on the planning and design of the Demonstration Plant project in November 2021, with the Company's contractual arrangement with General Atomics finalized in December 2021. The DoE funding is in the amount of \$21,900 and represents approximately one-half of the total estimated costs for the Plant. The Demonstration Plant will process already stockpiled high-grade sample materials from the Bear Lodge REE Project.

To address the Company's funding needs, during December 2021, the Company completed a rights offering for gross proceeds of approximately \$25,400. The Company is using the net proceeds from the rights offering for the permitting, licensing, engineering, construction, and operation of the Demonstration Plant. The previously noted \$21,900 financial award from the DoE is expected to fund approximately one-half of the projected total cost of the Demonstration Plant, with the balance of the required funding being provided by the Company utilizing the proceeds of the rights offering and other funding sources.

During 2022, the Company, along with the other consortium members, progressed their work on the Demonstration Plant, and this work is expected to continue through the Plant's anticipated completion date of operations in the early part of 2025. Through December 31, 2022, the Company had paid to General Atomics, as leader of the consortium, a total of \$6,700 toward its share of the expected cost of the Demonstration Plant (see Note 4 to the Consolidated Financial Statements for a more complete discussion).

In December 2022, the Demonstration Plant achieved its final engineering design milestone marking the completion of the DoE's first go/no-go decision point. The completion of this milestone was a gating event for the DoE's continued funding of the Demonstration Plant as provided for in the 2021 award grant. Future gating milestones include the expected completion of the Nuclear Regulatory Commission (the "NRC") licensing and DoE National Environmental Policy Act of 1969 ("NEPA") review in the second half of 2023 and the completion of the Plant's construction in the second half of 2024. Operations to process and separate the REE from the stockpiled sample materials are expected to follow the completion of the Plant's construction for an additional eight-to-10-month period.

Wyoming Energy Authority Financial Award

In November 2022, the Company received notice that it had been awarded a \$4,400 grant from the Wyoming Energy Authority ("WEA") to be used toward the advancement of the Demonstration Plant. The WEA grant is a cost-reimbursement award that will be available to the Company for future Demonstration Plant expenses. At December 31, 2022, the terms of this grant were still being finalized and no amount of the \$4,400 award had been received by the Company. Depending on the award's final terms and conditions, the Company may be able to claim a portion of the \$4,400 grant during 2023. No amounts related to this grant have been included in the Company's December 31, 2022 financial statements.

Future Funding Needs

Even with the completion of the 2021 rights offering and expected receipt of the WEA grant, the Company will not have sufficient funds to progress its longer-term activities beyond the Demonstration Plant's operational period, including feasibility studies, permitting, licensing, and development and construction related to the Bear Lodge REE Project. Therefore, the achievement of these longer-term activities will be dependent upon the receipt of additional funds through financings, off-take agreements, joint ventures, strategic transactions, or sales of various assets. There is no assurance, however, that the Company will be successful in completing such other financings or transactions. Ultimately, in the event that the Company cannot secure additional financial resources, or complete a strategic transaction in the longer term, it may need to suspend its operational plans or even have to liquidate its business interests, and investors may lose all or part of their investment.

Current External Factors Impacting our Business

Throughout 2022, we continued to monitor the general U.S. political climate and actions taken by the U.S. government to secure a domestic, rare earth supply chain. The U.S. federal government issued two Presidential Executive Orders in 2017 to encourage and support the establishment of a domestic rare earth supply chain and to strengthen the defense industrial base with respect to critical minerals including rare earths. In June 2019, the Department of Commerce released its report entitled "Federal strategy to ensure secure and reliable supplies of critical minerals." This was followed by five U.S. Presidential Determinations on July 22, 2019, directed to the Secretary of Defense. One Presidential Determination declared that "the domestic production capability for Rare Earth Metals and Alloys is essential to the national defense." These initiatives have increased the federal government's level of interest in the rare earth industry and our potential rare earth products as a critical upstream segment of the supply chain, particularly considering China's dominance in the global rare earth market.

In addition, the impacts of the COVID-19 pandemic and other external influences (such as the Russia/Ukraine war) have further focused the U.S. government on the importance of implementing secure domestic supply chains, including for rare earths, leading to a further Presidential Executive Order issued in February 2021 calling for an expedited 100-day review to address the strengthening of America's supply chains, specifically requiring the Department of Defense to (i) submit a report identifying "risks in the supply chain of critical minerals and other strategic materials including rare earth elements" and (ii) make policy recommendations to address the risks. The 100-day review led to another Executive Order on June 8, 2021, calling for an investment in sustainable domestic and international production and processing of critical minerals, including a recommendation that Congress take actions to recapitalize and restore the National Defense Stockpile of critical minerals and materials. The Company monitors and participates in these initiatives as they are critical to the production of rare earth magnets used in the United States to support the manufacturing of, among other things, defense technologies, electric vehicles, wind turbines, consumer electronics, and oil refining equipment.

TRENDS AND DESCRIPTION OF THE REE MARKET

Uses for REE Products

Due to variations in physical, chemical, molecular and application characteristics, different rare earth metals possess their own market uses, drivers and challenges. REEs are used in computers, cellular telephones, television screens, wind turbines, fuel cells, automobiles, magnetic refrigeration, energy-efficient lighting, petroleum-refining catalysts, and numerous other modern specialty technologies including military applications. Lately, the major driver for the rare earth metals market has been the increasing consumption in the manufacture of permanent NdFeB rare earth magnets, in which rare earth metals such as Nd, Pr, Tb, and Dy are used. Specifically, these REEs are used in hybrid and electric vehicle motors as well as in wind turbines. Ce, La, and other REE are widely used in applications such as metallurgy, catalysts, glass, ceramics, optical instruments, and polishing.

Trends Affecting REE Supply, Demand and Prices

In 2022, rare earth mine production increased by approximately 17% to 312,000 tonnes REO relative to 2021 with refined production estimated to be 205,000 tonnes REO, a 13% increase from 2021. Production from China accounted for most of the increase. China dominates the global supply of rare earths at both the mined and refined stages, accounting for 65% of global mine production and 87% of refined production in 2022. China's share of global mine production is partly influenced by U.S. production of concentrates which are sent to China for downstream refining.

In the rest of the world, specifically in the U.S. and Australia, certain competitors constitute the second tier of rare earth concentrate producing companies, with 42,000 tonnes REO mine production from the U.S. and approximately 36,000 tonnes REO mine production from Australia. A facility in Malaysia produces separated rare earths from REO mine production in Australia.

The rapid growth in demand for certain REE, specifically Nd and Pr used in permanent magnets for motors and generators, is expected to continue as these magnets give improved performance compared with other magnets. Increased focus on clean energy is pushing the demand for wind turbines and electric vehicles, which in turn will drive the demand for rare earth magnets in electric motor and generator applications. Magnet demand now accounts for more than 40% of total rare earth demand and greater than 80% of REE market value.

The research and advisory firm, Wood Mackenzie Limited ("Wood Mackenzie"), is forecasting that magnet applications, particularly automotive motors, and wind energy generation, will continue to increase their share of overall demand for rare earth magnets rising from 45% in 2022 to 54% in 2032. This increase in demand for magnet rare earths, namely Nd-Pr, Dy and Tb oxides, is expected to drive future growth above other rare earth compounds and support higher prices. Growth in the automotive sector is expected to be led by battery electric vehicles (BEV) with a 16.0% compound annual growth rate ("CAGR") and 12,700 tonnes REO consumption in 2023 with growth in the energy generation sector coming from an increase in the installed capacity of wind turbines averaging a CAGR of 9.6% from 2022 to 2032. During 2022, the annual global demand for rare earth oxides for use in permanent magnets reached 76,400 tonnes REO, representing 44% of total REE demand.

Supply and demand factors for REE products that could positively impact future REE prices include the following, among other factors:

- the use of Nd, Pr, Tb and Dy in high-strength magnets that are critical to multiple defense applications, hybrid and electric vehicles and wind power generation facilities, particularly large off-shore installations;
- the use of high-strength NdFeB magnets in the miniaturization of electronic products;
- the use of La in FCCs by refineries processing lower quality crude oil that consumes greater quantities of the catalysts;
- the increased use of REEs in the drive to reduce GHGs by the U.S., China, and the European Union;
- China consolidating its REE industry and closing small, inefficient, and polluting REE producers;
- the capping of production, tightening of export volumes and imports by China;

- changes in trade policies, including changes in taxes or import/export duties for REE materials by the U.S. government and/or China;
- the use of Ce in glass, ceramics, glass polishing, and advanced water filtration applications;
- the continued research and commercialization of new applications for REE products; and
- the rising costs in China due to stricter environmental controls and rising wages.

Supply and demand factors for REE products that could negatively impact future REE prices include the following, among other factors:

- the potential for oversupply of certain REEs due to new production inside and outside of China and/or increased exports from China;
- development or enhancements of alternative electric motor or generator technologies that may use less of no REE magnet materials;
- strong demand for selected REEs like magnet materials, driving overproduction of other co-product REEs and creating oversupply conditions for non-magnet REEs;
- the potential substitution of other materials for higher-priced REEs;
- economization by intermediate and end-users to reduce the usage of REEs in end-products;
- the potential for increased recycling of higher-priced REEs;
- fluctuating oil, gas and coal prices that could reduce the demand for technologies using REEs;
- static or lower global economic growth, reducing overall demand growth for REEs; and
- potential by-product production of REEs that may increase supply irrespective of the economics of REE production from primary mines.

The feasibility of the Bear Lodge REE Project and our ability to raise additional funds to develop the Bear Lodge REE Project may be impacted by global supply and demand and future prices of REEs.

SEASONALITY

At this stage, seasonality in the state of Wyoming is not a material factor to any future exploration, development, and operating activities on the Bear Lodge Property. Snowfall in the winter may temporarily limit our access to the Bear Lodge Property and our ability to explore, operate, or transport sample materials to Upton, Wyoming for use in the Demonstration Plant or a future commercial-scale processing facility from approximately November through June.

COMPETITION

The industry in which we operate is highly competitive. We compete with other mining and exploration companies, both within the U.S. and internationally, for the exploration and development of mineral properties and production of REEs as well as funding for projects. There is competition for the limited number of opportunities, some involving companies having substantially greater financial resources, staff, and facilities than we do, and some with rare earth operational experience. We also compete with other mining and exploration companies in our efforts to hire and retain experienced professionals. As a result, we may have difficulty attracting or retaining key personnel or securing outside technical resources.

In 2022, China accounted for an estimated 65% of global REE mine production and 87% of refined production. Wood McKenzie has forecasted that China will remain the primary source of mine supply over the next decade, accounting for 58% by 2032. China will remain the largest contributor of refined supply, projected to produce 65% (218.5 kt REO) in 2032. In similar fashion, the distribution of demand will remain Asia focused with China maintaining a dominant position, accounting for 48% of total rare earth demand in 2032. This gives the Chinese producers a competitive advantage in controlling the supply and processing of REEs and an opportunity to influence prices to discourage competition. Any increase in the amount of REEs exported from other nations increases supply and may result in price reductions, reduced margins and loss of potential market share, any of which could materially adversely affect our business. As a result of

these factors, the Company may not be able to compete effectively against current and future competitors. See “Item 1A. Risk Factors” of this Annual Report.

PATENTS, TRADEMARKS AND LICENSES

We rely on a combination of trade secret protection, nondisclosure agreements, trademarks, and patents to establish and protect our proprietary intellectual property rights in our rare earth technology.

As of December 31, 2022, we had filed U.S. provisional patent applications relating to processing methods, including (1) selective recovery of REEs from mixed chloride leach solutions using oxalic acid, and (2) separation of thorium from bulk REEs in a solvent extraction (“SX”) process. These provisional applications provided the basis for the current patent portfolio, which includes two issued U.S. patents and one pending U.S. divisional patent, one pending foreign application, and fourteen issued foreign patents across thirteen foreign jurisdictions. The issued U.S. patents have a term of 20 years measured from the filing date of the utility patent applications. We licensed our intellectual property, including patents and related technical information to Synchron in October 2017, in which the license became exclusive to Synchron and its affiliates in October 2019. The Company retains a limited use right to use its intellectual property and any enhancements thereto. See “Item 1A. Risk Factors” of this Annual Report. Several of these technologies have potential value for application in other industries.

ENVIRONMENTAL REGULATION

Our exploration and planned development, mining and processing activities are subject to extensive and demanding environmental laws and regulations under various federal, state, county and local laws relating to the protection of the environment, which generally includes air and water quality, hazardous waste management, radionuclide handling and reclamation. Failure to comply with these requirements can result in civil and/or criminal liability for non-compliance, fines and penalties, clean-up costs and other environmental damages. Also, unanticipated developments or changes in the law could require us to make environmental expenditures significantly greater than those we currently expect. Environmental laws historically have evolved in a manner that requires stricter standards and enforcement, increased fines and penalties for non-compliance, more stringent environmental assessments of proposed projects and a heightened degree of responsibility for companies and their officers, directors, and employees. Current and future laws, regulations and permits will impose significant costs, liabilities or obligations or could limit or prevent our ability to continue operations or undertake new operations. A future change in the U.S. presidential administration or in the composition of the Congress could result in more stringent environmental regulation of our operations. Environmental hazards may exist on the properties in which we hold interests that are unknown to us at present and that have been caused by previous owners of the properties.

Our Bear Lodge Property in Wyoming is subject to federal and state environmental laws, regulations, and permits. The federal agency with primary regulatory jurisdiction is the U.S. Forest Service (the “USFS”), Bear lodge Ranger District, Sundance, Wyoming. The state agency with regulatory jurisdiction is the Wyoming Department of Environmental Quality. We operate under approvals and permits granted by these two agencies and have established a surety bond to ensure environmental reclamation of areas disturbed. As of December 31, 2022, the Company holds a surety bond with the state of Wyoming of \$132. Prior to operating, we will require several other permits and licenses including those issued by the NRC, U.S. Army Corps of Engineers, and others.

MINERALS EXPLORATION REGULATION

Mining operations and exploration and development activities are subject to various national, state, county and local laws and regulations in the U.S. that govern prospecting, exploration, development, mining, production, processing, exports, taxes, labor standards, occupational health, waste disposal, protection of the environment, mine safety, hazardous substances, and other matters. The Company believes that it is in compliance in all material respects with applicable mining, health, safety and environmental statutes and regulations. There are no current orders or notices of violations relating to the Company under applicable laws and regulations.

Compliance with these laws and regulations may impose substantial costs on the Company and could subject it to significant potential liabilities. Changes in these laws or regulations could require us to expend significant resources to comply with new laws or regulations, or changes to current requirements, and could have a material adverse effect on our business operations.

MINE SAFETY AND HEALTH REGULATIONS

Pursuant to Section 1503(a) of the Dodd–Frank Wall Street Reform and Consumer Protection Act (the “Dodd–Frank Act”), issuers that are operators, or that have a subsidiary that is an operator, of a coal or other mine in the U.S. are required to disclose in their periodic reports filed with the SEC information regarding specified health and safety violations, orders and citations, related assessments and legal actions, and mining-related fatalities. During the year ended December 31, 2022, our Bear Lodge Property was not subject to regulation by the federal Mine Safety and Health Administration under the Federal Mine Safety and Health Act of 1977.

EMPLOYEES

At December 31, 2022, we had two full-time employees and no part-time employees. Our employees are not covered by any collective bargaining agreements. When required, our employees will engage the services of third parties under consulting or service agreements.

AVAILABLE INFORMATION

We make available, free of charge, on or through our Internet website, at www.rareelementresources.com, our annual reports on Form 10-K, our quarterly reports on Form 10-Q and our current reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act. Our website and the information contained therein or connected thereto are not intended to be, and are not, incorporated into this Annual Report.

Our reports and other information can be inspected on the SEC’s website at www.sec.gov. The Company also files reports under Canadian regulatory requirements on the System for Electronic Document Analysis and Retrieval (“SEDAR”). The Company’s reports which are filed on SEDAR can be found under the Company’s SEDAR profile at www.sedar.com.

ITEM 1A. RISK FACTORS

The following sets forth certain risks and uncertainties that could have a material adverse effect on our business, financial condition and/or results of operations and the trading price of our common shares, which may decline, and investors may lose all or part of their investment. Additional risks and uncertainties that we do not presently know or that we currently deem immaterial also may impair our business operations. We cannot assure you that we will successfully address these risks. Our risk factors are grouped into the following categories:

- Risks Related to Our Business;
- Risks Related to the Mineral Exploration, Development, Mining and Processing Industries;
- Risks Related to Our Common Stock; and
- General Risk Factors.

Risks Related to Our Business

We may not be able to successfully secure licenses or permits for, or complete, our Demonstration Plant project.

The Demonstration Plant is expected to be completed within 40 months from the project’s inception. The Demonstration Plant requires permits and licenses in order to construct and operate the plant. We may not be able to timely secure those permits and licenses to ensure that the project is able to progress. Further, the approved DoE schedule has two go/no-go decision points during the term. Should the project team and/or the DoE determine not to proceed with the project, funding

would be halted, and the project would be terminated or delayed, which could have a material adverse effect on our development plans.

Current inflationary conditions may adversely impact the ability to complete the Demonstration Plant construction and operations.

We are subject to the impact of inflation on wages, capital equipment, general supplies and reagents in the construction and operation of our Demonstration Plant that may require supplemental funding or a change in scope of the planned operation. If such funding cannot be secured, the Demonstration Plant may not be able to be completed, or the scope could be reduced, either of which could adversely impact the intended results.

We have no revenues from operations and expect to incur losses for a significant period of time. Any future revenues and profits are uncertain.

We incurred net losses of \$9,426 and \$5,402 during the fiscal years ended December 31, 2022 and 2021, respectively. Our accumulated deficit at December 31, 2022 was \$148,644. As of December 31, 2022, we had cash and cash equivalents of \$15,523 and working capital of \$17,628.

Even with the completion of the rights offering and the expected receipt of the \$4,400 from the WEA grant, the Company will not have sufficient funds to progress with longer term activities beyond the Demonstration Plant project, including with respect to feasibility studies, permitting, licensing, and development and construction related to the Bear Lodge REE Project. Therefore, the achievement of these longer-term activities will be dependent upon receipt of additional funds through financings, off-take agreements, joint ventures, strategic transactions, or sales of various assets. There is no assurance, however, that the Company will be successful in completing other financings or transactions. Ultimately, in the event that the Company cannot secure additional financial resources, or complete a strategic transaction in the longer term, it may need to suspend its operational plans or even have to liquidate its business interests, and investors may lose all or part of their investment.

Our largest shareholder beneficially owns a majority of our common shares, has significant influence on our major corporate decisions, including veto power over some matters, and could take actions that may not be viewed favorably by certain other shareholders, any of which actions could adversely affect the market price of our common shares.

Synchron currently owns approximately 54.8% of the issued and outstanding common shares of the Company. Additionally, Synchron has approval rights for certain corporate actions and the right to nominate three of seven directors to the Company's Board.

As a result of the foregoing, Synchron has significant influence on our major corporate decisions and matters requiring shareholder approval, including the election of directors, mergers, consolidations and acquisitions, the sale of all or substantially all of our assets and other decisions affecting our capital structure, the amendment of our certificate of incorporation and articles, and our winding up and dissolution. These rights, along with the concentration of ownership and voting power with Synchron, (i) may make it more difficult for any other holder or group of holders of our common shares to significantly influence the way we are managed or the direction of our business and (ii) may make it more difficult for another company to acquire us and for shareholders to receive any related takeover premium unless Synchron approves the acquisition. The interests of Synchron with respect to matters potentially or actually involving or affecting us, such as future acquisitions, financings, and other corporate opportunities, and attempts to acquire us, may conflict with the interests of our other shareholders. The ability of Synchron to influence certain of our major corporate decisions may affect the market price of our common shares by delaying, deferring, or preventing transactions that are or are perceived to be in the best interest of other shareholders or by discouraging third-party investors.

By granting a license in our intellectual property rights, we may be limited in our ability to protect our intellectual property rights, which could adversely impact our competitive position or results of operations.

On October 2, 2017, we entered into an Intellectual Property Rights Agreement with Synchron pursuant to which Synchron and its affiliates were granted certain perpetual rights to the intellectual property of the Company relating to its rare earths'

patents and related technical information. Upon the exercise of its option on October 16, 2019, Synchron and its affiliates' intellectual property rights became exclusive, subject to the Company's ownership and limited use rights in the intellectual property and any improvements made thereon. As a result of the Intellectual Property Rights Agreement, we may be forced to enforce or defend our intellectual property rights against infringement and unauthorized use, and to protect our trade secrets. Further, by granting a license to use our intellectual property, we may be limited in our ability to protect our intellectual property rights by legal recourse or otherwise. In defending our intellectual property rights, we may place our intellectual property at risk of being invalidated, held unenforceable, narrowed in scope, or otherwise limited, any of which could have a material adverse effect on our business and financial condition. Our inability to preserve or maintain an interest in certain intellectual property rights could adversely impact our competitive position or results of operations.

We have suspended our federal and state licensing, permitting progression for our Bear Lodge REE Project, and there is a risk to the resumption of those efforts in a timely and cost-effective manner.

During the first quarter of 2016, we placed the Bear Lodge REE Project under care-and-maintenance, and all licensing and permitting activities were suspended, including the environmental impact statement ("EIS") process, state permitting, and the NRC licensing process. The Company continued the 2016 implemented cost-conservation measures through 2022. Given the completion of the transactions with Synchron on October 2, 2017 and October 16, 2019 (as discussed in "Item 7 Management Discussion and Analysis, Financial Liquidity and Capital Resources"), the Company is focused on continuing the confirmation and enhancement of our proprietary technology for rare earth processing and separation through the Demonstration Plant. The Company will also continue with certain limited exploration-related reclamation activities in 2023 as required and appropriate. However, our ability to obtain further financing to fund the completion of the Bear Lodge REE Project licensing and permitting once resumed is uncertain. If we are unable to timely progress our licensing and permitting while the information is still deemed adequate by the applicable regulatory agencies, we may have to restart these processes, or take extra steps to ameliorate or reinstate the processes, which would impact the cost and timing of licensing and permitting.

Our ability and timing to exercise our right to purchase certain non-mineral lands for stockpile storage and processing operations is uncertain.

Our current plan of operations for the Bear Lodge REE Project includes a waste rock storage site located on private property adjacent to the planned mine. This private property consists of 640 acres and was sold to a third party on October 26, 2016. Although we hold a repurchase option on the property until October 2024 (subject to our payment of annual option extension fees), our ability and the timing of our exercise of the repurchase option is uncertain. If we were unable to repurchase the property, we would have to update our planned operations to identify an alternative waste rock storage area. Additionally, we hold a land purchase option on private property located in Upton, Wyoming, which is the location for our planned processing operations. If we are unable to maintain the purchase option, which is renewed annually in October each year, we would have to locate and secure another site as a suitable rare earth processing location.

We have no history of producing mineral products from our properties.

We have no history of mining, recovering, or refining any mineral products, and our Bear Lodge REE Project is not in development or production. There can be no assurance that the Bear Lodge REE Project will be successfully developed and placed into production, produce minerals in commercial quantities or otherwise generate operating earnings. Advancing properties from the exploration stage into development and commercial production requires significant capital and time and will be subject to further feasibility studies, permitting and licensing requirements and construction of the mine, processing plants, roads and related works and infrastructure. We will continue to incur losses until such time, if ever, when our mining activities successfully reach commercial production levels and generate sufficient revenue to fund continuing operations. There is no certainty that we will produce revenue from any source, operate profitably, or provide a return on investment in the future. If we are unable to generate revenues or profits, our shareholders might not be able to realize returns on their investment in our common shares.

The planned development of our Bear Lodge REE Project involves numerous uncertainties that could affect the feasibility or profitability of the project.

Mine development projects typically require a number of years and significant expenditures during the exploration and development phases before production is possible. The economic feasibility of exploration and development projects is based on many factors, such as the following:

- completion of feasibility studies to evaluate mineral resources and mineral reserves and commercial viability;
- the timing and cost, which can be considerable, of further exploration, licensing, permitting and construction of infrastructure, mining, processing and/or beneficiation facilities;
- our ability to utilize our proprietary process technologies, which could encounter problems or unexpected costs in scale-up;
- securing commercially viable sales outlets for our REE products;
- the potential need to enter into joint venture or other partnership arrangements to develop the Projects;
- the availability and costs of equipment and skilled labor, as required;
- the availability and cost of appropriate processing and/or refining arrangements, if required;
- compliance with environmental and other governmental approval and permit requirements;
- the availability of funds to finance exploration, development, and construction activities, as warranted;
- future prices for rare earth minerals;
- potential opposition from non-governmental organizations, environmental, indigenous, or local groups or inhabitants that may delay or prevent development activities;
- potential increases in exploration, construction, and operating costs due to changes in the cost of fuel, power, materials, or supplies;
- potential shortages of mineral processing and/or beneficiation, construction or other facilities-related equipment or supplies; and
- the ability to attract and retain talent for development and operation of the Projects.

It is common in exploration programs and in development, construction, and mine start-ups to experience unplanned problems and delays. Accordingly, our activities may not result in profitable mining operations, and we may not succeed in establishing mining operations or profitably producing minerals from our Projects at all or in a reasonable timeframe.

Joint ventures and other partnerships may expose us to risks.

We will require additional capital through investment, joint ventures and/or other partnership arrangements with current investors or other parties for the development of our Projects. Although such arrangements may lessen our financial burden in exploring and developing the Projects, they will likely also dilute our interest therein or affect our ability to control development of any of the Projects. Our ability to attract additional capital may be impeded by our majority shareholder Synchron, as it holds certain contractual approval rights, and its approval may be required. In addition, Synchron has significant influence on our major corporate decisions and matters requiring shareholder approval. Any failure of a joint venture partner or other partner to meet its obligations to us or to third parties, or any disputes with respect to the parties' respective rights and obligations, could have a material adverse effect on the joint venture or other partnership arrangement and, in turn, on our business performance and on our ability to develop the Projects.

Subject to further financing, and progression and outcome of the Demonstration Plant, we may commence a FS on our Bear Lodge REE Project, and the results of this FS are uncertain.

In October 2014, we completed a PFS for our Bear Lodge REE Project that updated our mineral resource estimate and refined plans for our process technology. Subject to further financing and the results of the Demonstration Plant, we may resume work on an FS. Whether the Company undertakes a FS in the future and, if so, the results of any such study, are uncertain and may indicate project economics that are more or less favorable than those previously reported. As our project optimization efforts continue, we cannot ensure that the FS will be based upon all of the same inputs used in the PFS. As a result, we may need to update our processing and/or beneficiation technology, and/or project development plans to enhance economics or further study aspects of the Bear Lodge REE Project. This could result in significant additional

delays and expenses or could make financing efforts with respect to such efforts more difficult or not possible. In addition, there is a risk that the Company may not resume work on a FS.

Our viability as a rare earth company depends, in large part, on the financing, licensing, and permitting, development and operation of our Bear Lodge REE Project, which is our only rare earth project.

Our only rare earth project at this time is the Bear Lodge REE Project. Our continued viability is based, in large part, on successfully implementing our strategy, including completion of a FS, licensing, permitting and construction of a mine and processing and/or beneficiation facilities in a reasonable timeframe. If we are unable to secure additional capital or enter into a strategic transaction and implement our strategy, or in the event of the imposition of significant additional regulatory burdens or delays or a significant deterioration of the market for rare earth products, our ability to develop a sustainable or profitable business would be materially adversely affected. If the Bear Lodge REE Project does not proceed, then the viability of the Company may depend upon the ability to process REE from sources other than our Bear Lodge REE Project using our proprietary technology assuming the technology is successfully proven through the operation of the Demonstration Plant.

Increased costs could affect our ability to bring the Bear Lodge REE Project into production and, once in production, to be profitable.

We estimated the initial capital costs required to bring the Bear Lodge REE Project into commercial production in our historical PFS, dated October 9, 2014, at approximately \$290,000. Our FS, if and when completed, could suggest that our estimated costs may be materially higher than those we previously anticipated, which could make it more difficult to finance the Bear Lodge REE Project or to successfully establish mining operations.

We anticipate that our future operating costs at the Bear Lodge REE Project will vary from year to year due to a number of factors, such as changing grade, metallurgy, and revisions to mine plans in response to the physical shape and location of the ore body. In addition, costs are affected by the price of commodities such as oil, gas, reagents/chemicals, steel, rubber, and electricity. Such commodities are at times subject to volatile price movements, including increases that could make production less profitable or not profitable at all. A material increase in costs could also impact our ability to commence or maintain future development or mining operations.

The COVID-19 pandemic may have an adverse impact on our business.

The COVID-19 pandemic and its ongoing variants, and similar public health issues in the future could have a material adverse effect on our ability to raise capital, construct or operate our Demonstration Plant, mine, or production facility, or execute our business plans. In addition, preventive measures we may voluntarily put in place may have a material adverse effect on our business for an indefinite period of time, such as decreased employee or contractor availability, unavailability of needed products or services, or disruptions to the businesses of our contracted service providers and others. Our suppliers may also face these and other challenges, which could lead to a disruption or delay in their services. The pandemic and resulting economic slowdown may also impact the supply and demand for rare earths domestically and globally. Although these disruptions may continue to occur, the long-term economic impact and near-term financial impacts of the COVID-19 pandemic, its ongoing variants, and other possible public health threats cannot be reasonably estimated at this time due to the uncertainty of future developments.

We expect to rely on our proprietary technology and processes to further our Bear Lodge REE Project.

We rely on a combination of trade secret protection, nondisclosure agreements, trademarks, and patents to establish and protect our proprietary intellectual property rights in our rare earth technology.

As of December 31, 2022, we had filed U.S. provisional patent applications relating to processing methods, including (1) selective recovery of REEs from mixed chloride leach solutions using oxalic acid, and (2) separation of thorium from bulk REEs in a solvent extraction (“SX”) process. These provisional applications provided the basis for the current patent portfolio, which includes two issued U.S. patents and one pending U.S. divisional patent application, one pending foreign application, and fourteen issued foreign patents across thirteen separate foreign jurisdictions. The issued patents have a

term of 20 years measured from the filing date of the utility patent applications. We licensed our intellectual property, including our patents and related technical information to Synchron in October 2017, which license became exclusive to Synchron and its affiliates in October 2019. See “Item 1A. Risk Factors” of this Annual Report. Several of these technologies have potential value for application in other industries, and the Company is evaluating this potential.

The success of our business depends, in part, on our ability to utilize our proprietary process technologies, and we could encounter unforeseen problems or costs, or both, in scaling up our technologies to commercial applications.

The historical mineral resource estimates for our Projects are not considered current, need to be updated, and should not be relied upon.

The historical mineral resource estimates for our Projects have not been updated and, as such, should not be relied upon as they may be updated prior to further feasibility work. Accordingly, previous mineral resource estimates from 2014 and 2011 for the Bear Lodge REE Project and the Sundance Gold Project, respectively, will require confirmation or adjustments. The Bear Lodge REE Project has been under care-and-maintenance since 2016, and the Sundance Gold Project is in the early exploration stage and has been on hold since 2014. Additionally, it is too early to estimate resources or the gold production potential of the Sundance Gold Project. We have not done sufficient work to classify the historical mineral estimates for our Projects as current estimates of mineral resources or exploration results, and we are not treating the estimates as current estimates of mineral resources of exploration results.

We depend on key personnel, and the absence of any of these individuals could adversely affect our business.

Our success is currently largely dependent on the performance, retention and abilities of our directors, President and Chief Executive Officer (“CEO”), Chief Financial Officer (“CFO”) and certain consultants. The loss of the services of these persons could have a material adverse effect on our business and prospects. There is no assurance that we can maintain the services of our directors, CEO, CFO, or other qualified personnel and consultants required to operate our business. Failure to do so could have a material adverse effect on us and our prospects. We do not maintain life insurance policies on our employees, directors, or consultants.

U.S. investors may not be able to enforce their civil liabilities against us or our directors, controlling persons and officers.

It may be difficult to bring and enforce suits against us. We are incorporated in the province of British Columbia, Canada under the BCBCA. Some of our directors may be residents of Canada, and a substantial portion of their assets are located outside of the U.S. As a result, it may be difficult for U.S. holders of our common shares to effect service of process on these persons within the U.S. or to recover in the U.S. on judgments rendered against them. In addition, a shareholder should not assume that the courts of Canada (i) would enforce judgments of U.S. courts obtained in actions against us or such persons predicated upon the civil liability provisions of the U.S. federal securities laws or other laws of the U.S., or (ii) would enforce, in original actions, liabilities against us or such persons predicated upon the U.S. federal securities laws or other laws of the U.S.

We believe that we were a “passive foreign investment company” (“PFIC”) for the year ended December 31, 2022, and could be a PFIC in subsequent years, which could have adverse U.S. federal income tax consequences for U.S. shareholders.

An investor in our common shares that is a U.S. taxpayer (referred to as a U.S. shareholder) should be aware that we believe that we were a PFIC for the year ended December 31, 2022. We also expect that we will be a PFIC for the year ending December 31, 2023, and that we may be a PFIC in subsequent years. The tests for determining PFIC status are dependent upon a number of factors, some of which are beyond our control and can be subject to uncertainties. Accordingly, we cannot provide certainty that we were or were not a PFIC for the year ended December 31, 2022, or that we will or will not be a PFIC for the year ending December 31, 2023, or for any future year. We will use commercially reasonable efforts to provide information regarding our status as a PFIC, and the PFIC status of any subsidiary in which the Company owns more than 50% of such subsidiary’s total aggregate voting power, to U.S. shareholders who make a written request for such information. Adverse rules apply to U.S. shareholders who own our common shares if we are a

PFIC and have a non-U.S. subsidiary that is itself a PFIC, as may be the case with our wholly owned subsidiary, Rare Element Holdings Ltd., a British Columbia, Canada corporation. Each U.S. shareholder should consult its own tax advisor regarding the U.S. federal, U.S. federal alternative minimum, U.S. federal estate and gift, and U.S. state and local tax consequences of the PFIC rules and the acquisition, ownership, and disposition of our common shares if we are or become a PFIC. For additional information regarding PFIC tax consequences, see “Part II, Item 5. Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities—Certain U.S. Federal Income Tax Considerations—Passive Foreign Investment Company Rules.”

Risks Related to the Mineral Exploration, Development and Mining Industries

We may be adversely affected by fluctuations in demand for, and prices of, rare earth products.

Because our primary focus currently is the advancement and development of a Demonstration Plant and ultimately the Bear Lodge REE Project, changes in demand for, and the market price of, REE products could significantly affect our ability to develop or finance the Bear Lodge REE Project, and eventually attain commercial production or profitability. REE product prices may fluctuate and are affected by numerous factors beyond our control such as interest rates, exchange rates, inflation or deflation, fluctuation in the relative value of the U.S. dollar against foreign currencies on the world market, global and regional supply, and demand for REE products, and the political and economic conditions of countries that produce and use REEs.

Protracted periods of low prices for REE products could significantly reduce our ability to develop the Bear Lodge REE Project and, if we attain commercial production, to maintain profitable operations.

Demand for REE products is impacted by demand for downstream products incorporating rare earths, including hybrid and electric vehicles, wind power equipment and other clean technology products, as well as demand in the general automotive and electronics industries. Lack of growth in these markets could adversely affect the demand for REE products, which would have a material adverse effect on our Bear Lodge REE Project and our business. In contrast, periods of high REE prices are generally beneficial to us; however, strong REE prices, as well as real or perceived disruptions in the supply of REE, also create economic pressure to identify or create non-REE alternate technologies that ultimately could reduce future long-term demand for REE products, and at the same time, may incentivize development of otherwise marginal mining properties. For example, automobile manufacturers have announced plans to develop motors for electric and hybrid cars that do not require REE products due to concerns about the available supply of REEs. If the automobile industry or other industries reduce their reliance on rare earth products, the resulting change in demand could have a material adverse effect on our business. In particular, if prices or demand for REEs were to decline, our share price would likely decline, and this could also impair our ability to obtain the funding needed for our operations including the Demonstration Plant and the Bear Lodge REE Project, and our ability to find purchasers for our products at prices acceptable to us or at all.

An increase in the global supply of rare earth products, dumping and/or predatory pricing by our competitors may materially adversely affect our ability to raise capital, develop our Bear Lodge REE Project or operate profitably.

The pricing and demand for REE products is affected by a number of factors beyond our control, including growth of economic development and the global supply and demand for REE products. REE supply markets continue to be dominated by production from China, which produced an estimated 65% of the global REE mine production and 87% of refined product in 2022. China also dominates the manufacture of metals, NdFeB magnets and other products from REE. The threat of increased competition may lead our competitors to engage in predatory pricing behavior or manipulation of the available supply of REEs. Advanced technology in recycling REEs may also impact supply and prices. Any increase in the amount of REE products exported from other nations and increased competition may result in price reductions, reduced margins or loss of potential market share, any of which could materially adversely affect our business. As a result of these factors, we may not be able to compete effectively against our future competitors.

The success of our business may depend, in part, on the establishment of new uses and markets for rare earth products.

The success of our business may depend, in part, on the establishment of new markets by us or third parties for certain rare earth products. Although we plan to produce rare earth products for use in end-products such as NdFeB magnets, which are used in critical existing and emerging technologies (hybrid and electric vehicles, wind power turbines, oil refining catalysts and compact fluorescent lighting), the success of our business may depend on the creation of new markets in addition to the successful commercialization of REE products in existing and emerging markets. Any unexpected costs or delays in the commercialization of any of the foregoing products or applications could have a material adverse effect on our ability to develop our Bear Lodge REE Project or operate our business profitably.

We are subject to significant governmental regulations, including permitting, licensing and approval processes, that affect our operations and could impact the cost and timing of conducting our business.

Our current and future activities will be governed by laws and regulations, including the following, among others:

- laws and regulations governing mineral concession acquisition, prospecting, development, mining, processing, and production;
- laws and regulations related to exports, taxes, and fees;
- labor standards and regulations related to occupational health and mine safety;
- laws and regulations relating to environmental protection concerning, among other things, waste management, transportation, and disposal of toxic and radioactive substances, land use, water, air, and the protection of threatened and endangered species.

We believe that we hold, or are in the process of obtaining, all licenses and permits necessary to carry on the activities that we currently are conducting or propose to conduct in the near term under applicable laws and regulations. Such licenses and permits are subject to changes in regulations and changes in various operating circumstances. There can be no guarantee that we will be able to obtain all necessary licenses and permits that may be required to maintain the current or planned exploration, development and mining activities, including constructing mines and/or processing and/or beneficiation facilities, and commencing operations at the Bear Lodge REE Project. In addition, if we proceed to production on the Bear Lodge REE Project, we will be required to obtain and comply with permits and licenses that may contain specific operating or other conditions. There can be no assurance that we will be able to obtain such permits and licenses or that we will be able to comply with any such conditions. Our Sundance Gold Project, previously in the exploration stage, but on hold since 2014, does not have any of the permits or licenses that would be necessary to carry on further activities on the project. Costs related to applying for and obtaining permits and licenses may be prohibitive and could delay planned exploration and development activities. Failure to comply with applicable laws, regulations and permitting and licensing requirements may result in enforcement actions, including orders issued by regulatory or judicial authorities causing operations to cease or be curtailed, and may include corrective measures requiring capital expenditures, installation of additional equipment or remedial actions.

Parties engaged in mining operations may be required to compensate those suffering loss or damage relating to mining activities and may be subject to civil or criminal liability, fines or penalties imposed for violations of applicable laws or regulations. Amendments to current laws, regulations and permits governing operations and activities of mining companies, or more stringent implementation thereof, could have a material adverse impact on our operations, cause increases in capital expenditures or production costs, or require abandonment or delays in the exploration or the development of either of the Projects.

Our activities are subject to environmental risks and compliance with environmental laws and regulations that are increasing and costly.

Our business is subject to environmental regulation in the jurisdictions in which we operate. Environmental laws and regulations at the local, state, and federal level could evolve in a manner that may impose stricter standards and enforcement, increased fines and penalties for non-compliance, more stringent environmental assessments of proposed projects, and a heightened degree of responsibility for companies and their officers, directors, and employees. These laws address emissions into the air, discharges into water, management of waste and hazardous substances, protection of natural

resources, antiquities, endangered species, and reclamation of lands disturbed by mining operations. Compliance with environmental laws and regulations at the local, state, and federal level and future changes in these laws and regulations may require significant capital outlays and may cause material changes or delays in our current and planned operations and future activities. It is possible that future changes in these laws or regulations could have a significant adverse impact on our Projects or some portion of our business, causing us to reevaluate those activities at that time.

Examples of some of the current U.S. federal laws that may affect our business and planned operations include, but are not limited to, the following:

- NEPA requires federal agencies to integrate environmental considerations into their decision-making processes by evaluating the environmental impacts of proposed actions, including issuance of permits to mining facilities, and assessing alternatives to those actions. Under NEPA, a federal agency must prepare an EIS detailing the environmental impacts of “major federal actions significantly affecting the quality of the human environment.” The EPA will, and other federal agencies and any interested third parties can, review and comment on the scope of an EIS and the adequacy of and findings set forth in a draft and final EIS.
- As required, we began in 2012 to undertake the NEPA process for the Bear Lodge REE Project. However, we have since placed the Bear Lodge REE Project under care-and-maintenance, and all permitting and licensing activities have been suspended, including the EIS process. The NEPA process can cause delays in issuance of required permits or result in changes to a project to mitigate potential environmental impacts, which in turn can impact the economic feasibility of a proposed project, including the ability to construct or operate the Bear Lodge REE Project or other projects entirely.
- The NRC, pursuant to its authority under the Atomic Energy Act of 1954, as amended (the “Atomic Energy Act”), oversees the regulatory framework governing the control of radioactive materials, including processing and/or beneficiation of REE that contain radioactive source materials such as uranium and thorium. The NRC is responsible for issuing licenses for source material involving concentrations of uranium or thorium that exceed 0.05% by weight. If a proposed action, including waste generation, results in materials with concentrations of uranium and thorium that equal or exceed 0.05% by weight, a license to receive title to, possess, use, transfer, or deliver source and byproduct materials may be required. As our operations are expected to exceed this concentration, we are required to follow the regulations pertaining to a license application for the demonstration project and the Bear Lodge REE Project. The licensing process, including NEPA review relating to the NRC licensing, may cause delays or result in changes to the Demonstration Plant and/or the Bear Lodge REE Project design to mitigate impacts as required under the license.
- Under the Comprehensive Environmental Response, Compensation, and Liability Act, as amended (“CERCLA”) and similar state laws, responsibility for the entire cost of cleanup of a contaminated site, as well as natural resource damages, can be imposed upon current or former site owners or operators, or upon any party who released one or more designated “hazardous substances” at the site, regardless of the lawfulness of the original activities that led to the contamination. CERCLA also authorizes the EPA and, in some cases, third parties to take actions in response to threats to public health or the environment and to seek to recover from the potentially responsible parties the costs of such actions. We may also be an owner or operator of facilities at which hazardous substances have been released by previous owners or operators. We may be responsible under CERCLA for all or part of the costs of cleaning up facilities at which such substances have been released and for natural resource damages. We have not, to our knowledge, been identified as a potentially responsible party under CERCLA, nor are we aware of any prior owners or operators of our properties that have been so identified with respect to their ownership or operation of those properties.
- The Resource Conservation and Recovery Act, as amended (“RCRA”), and comparable state statutes, regulate the generation, transportation, treatment, storage, and disposal of “solid” and “hazardous” waste and authorize the imposition of substantial fines and penalties for noncompliance, as well as requirements for corrective actions. Although certain mining, mineral processing and/or beneficiation wastes currently are exempt from regulation as hazardous wastes under RCRA, the EPA has limited the disposal options for certain wastes designated as hazardous wastes under RCRA. It is possible that certain wastes generated by our potential future operations that currently are exempt from regulation as hazardous wastes may in the future be designated as hazardous wastes and may therefore become subject to more rigorous and costly management, disposal, and clean-up requirements.
- The Clean Air Act, as amended (“CAA”), and comparable state statutes, restricts the emission of air pollutants from many stationary and mobile sources, including mining, processing and/or beneficiation activities. Our

planned mining operations may produce air emissions, including fugitive dust and other air pollutants, from stationary equipment, storage facilities, and the use of mobile sources such as trucks and heavy construction equipment that are subject to review, monitoring, control requirements and emission limits under the CAA and state air quality laws. New facilities may be required to obtain permits before work can begin, and existing facilities may be required to incur capital costs to remain in compliance. In addition, permitting and licensing rules and issued permits may impose limitations on production levels or result in additional capital expenditures to comply with such rules or permits. In certain circumstances, private citizens may also sue sources of pollutants for alleged violations of the CAA.

- The Clean Water Act, as amended (“CWA”), and comparable state statutes impose restrictions and controls on the discharge of pollutants into waters of the U.S. The discharge of pollutants into regulated waters is prohibited, except in accordance with the terms of a permit issued by the EPA or an analogous state agency. These controls generally have become more stringent over time, and it is possible that additional restrictions will be imposed in the future. Violation of the CWA and similar state regulatory programs can result in civil, criminal, and administrative penalties for unauthorized discharges of hazardous substances and other pollutants. They also can impose substantial liability for the costs of removal or remediation associated with such discharges. The CWA also requires a discharge permit for certain activities and requires the implementation of a Pollution Prevention Plan establishing best management practices, training, periodic monitoring of covered activities, and monitoring and sampling of stormwater run-off. The CWA and regulations implemented thereunder also prohibit discharges of dredged and fill material in wetlands and other waters of the U.S. unless authorized by a permit issued by the U.S. Army Corps of Engineers.
- The Safe Drinking Water Act, as amended (“SDWA”), and the Underground Injection Control (“UIC”) program promulgated thereunder regulate the drilling and operation of subsurface injection wells. The program requires that a permit be obtained before drilling a disposal well. The EPA directly administers the UIC program in some states, and in others the responsibility for certain aspects of the program has been delegated to the state. Violation of these regulations and/or contamination of groundwater by mining related activities may result in fines, penalties, and/or remediation costs, among other sanctions and liabilities under the SDWA and state laws.
- The Endangered Species Act (“ESA”) regulates activities that could have an adverse effect on threatened and endangered species, including the habitat and ecosystems upon which they depend. The ESA protects threatened and endangered species primarily by prohibiting the unauthorized “taking” of listed species, which includes harassing or harming members of such species or significantly modifying their habitat. The ESA also requires consultation with other agencies in certain circumstances. Compliance with ESA requirements can significantly delay, limit, or even prevent the development of projects, including the development of mining claims, and can also result in increased development costs. In addition, the ESA authorized both civil and criminal penalties for ESA violations and authorizes citizen suits against any person alleged to be in violation of the ESA.

Regulations and pending legislation governing issues involving climate change could result in increased operating costs that could have a material adverse effect on our business.

A number of governments or governmental bodies have adopted or are contemplating regulatory changes in response to the potential impact of climate change. In the U.S., on December 15, 2009, the EPA published its findings that emissions of carbon dioxide, methane and other GHGs present an endangerment to public health and the environment because emissions of such gases are, according to the EPA, contributing to the warming of the earth’s atmosphere and other climate changes. Based on these findings, the EPA has developed and implemented regulations that restrict GHG emissions under existing provisions of the CAA, including one rule that limits GHG emissions from motor vehicles beginning with the 2012 model year. The EPA has asserted that these final motor vehicle GHG emission standards trigger the CAA construction and operating permit requirements for stationary sources, commencing when the motor vehicle standards took effect on January 2, 2011. On June 3, 2010, the EPA published its final rule to address the permitting of GHG emissions from stationary sources under the Prevention of Significant Deterioration (“PSD”) and Title V permitting programs. This rule “tailored” these permitting programs to apply to certain stationary sources of GHG emissions in a multi-step process, with the largest sources first subject to permitting. However, based on a decision of the U.S. Supreme Court, only facilities already required to obtain PSD permits for other criteria pollutants must also reduce GHG emissions that exceed certain thresholds consistent with guidance for determining “best available control technology” standards for GHG, which guidance was published by the EPA in November 2010.

In addition, both houses of Congress have considered legislation to reduce GHG emissions and many states have already taken legal measures to reduce GHG emissions, primarily through the development of GHG inventories, GHG permitting and/or regional GHG “cap and trade” programs. Most of these “cap and trade” programs work by requiring major sources of emissions to acquire and surrender emission allowances, with the number of allowances available for purchase reduced each year until the overall GHG emission-reduction goal is achieved. The new U.S. presidential administration has made climate change legislation and regulation a priority, which increases the likelihood of increased regulation of GHG emissions.

Although the U.S. had withdrawn from the Paris Agreement, the U.S. formally rejoined the Paris Agreement in February 2021, and, in April 2021, the Biden administration set an economy-wide target of reducing its net greenhouse gas emissions by 50-52% below 2005 levels in 2030. With the U.S. recommitting to the Paris Agreement, additional executive orders may be issued, or federal legislation or regulatory initiatives may be adopted to achieve the Paris Agreement’s goals.

Legislation and increased regulation regarding climate change could impose significant costs on us and/or our suppliers, including costs related to increased energy requirements, capital equipment, environmental monitoring, and reporting and/or other costs to comply with such regulations. Any adopted future climate change regulations could also negatively impact our ability to compete with companies situated in areas not subject to such regulations. Alternatively, climate change legislation could potentially benefit our business by driving demand for products utilizing rare earth containing products. We cannot predict how legislation and regulation will affect our financial condition, operating performance, or ability to compete.

Even without such regulation, increased awareness, or any adverse publicity in the global marketplace about the rare earth industry’s potential impacts on the environment could harm our reputation and business.

The potential physical impacts of climate change on our operations are highly uncertain and would be particular to the geographic circumstances in areas in which we operate. These may include changes in precipitation, storm patterns and intensities, water shortages and changing temperatures. These factors may have an adverse impact on the cost, production, or financial performance of our operations.

A shortage of equipment and supplies could adversely affect our ability to operate our business.

We currently do and likely will depend on various supplies and equipment to carry out our activities, including those for the Demonstration Plant, and, if warranted, future exploration, development, mining, and processing operations. A shortage of such supplies, equipment or parts could have a material adverse effect on our ability to carry out our planned activities or increase our operating costs and expenses.

Mineral exploration and development and mining are potentially hazardous and subject to conditions or events beyond our control, which could have a material adverse effect on our business or plans.

Mineral exploration, development and mining involve various types of risks and hazards, including, but not limited to the following:

- environmental hazards;
- power outages;
- metallurgical and other processing problems;
- unusual or unexpected geological formations or conditions;
- personal injury, flooding, fire, explosions, cave-ins, earthquakes, landslides, and rock-bursts;
- mineral exploration, transportation, or mining accidents;
- concentrate losses;
- fluctuations in exploration, development, and production costs;
- labor disputes;
- supply interruptions;
- unanticipated variations in grade;

- mechanical equipment failure;
- periodic interruptions due to inclement or hazardous weather conditions; and
- regulatory delays, curtailments, or shutdowns.

These risks could result in damage to, or destruction of, mineral properties, production equipment, facilities or other properties, personal injury, environmental damage, delays in mining, increased production costs, monetary losses, or possible legal liability. We may not be able to obtain insurance to cover these risks at economically feasible premiums or at all. Insurance against certain environmental risks, including potential liability for pollution or other hazards resulting from the disposal of waste products from production, may be prohibitively expensive or not available. Any losses we incur related to any significant events that are not covered by insurance policies may have a material adverse effect on our business.

Mineral exploration and development is highly speculative, and certain inherent risks could have a negative effect on our business.

Our long-term success depends primarily on our ability to develop mineral deposits on existing properties that can be developed into commercially viable mining operations. Resource exploration is a highly speculative business, characterized by a number of significant risks, including, among other things, unprofitable efforts resulting not only from the failure to discover mineral deposits but from finding mineral deposits which, though present, are insufficient in quantity and quality to return a profit from production. Substantial expenditures are required to establish proven and probable mineral reserves through drilling and analysis, to develop metallurgical processes to extract metal, and to develop the mining, processing and/or beneficiation facilities and infrastructure at any site chosen for mining. The marketability of minerals discovered by us may be affected by numerous factors that are beyond our control and cannot be accurately predicted, such as market pricing fluctuations, the proximity and capacity of milling facilities, mineral markets demand, available supply and processing equipment, and other factors such as government regulations, including regulations relating to royalties, allowable production, importing and exporting of minerals, and environmental protection. Any one or a combination of these factors may result in a failure to receive an adequate return on our investment capital. The decision to abandon a project may have a material adverse effect on the market value of our common shares or our ability to complete future financings.

Title to our Bear Lodge Property may be subject to other claims, or we may lose our interest in our claims, which could affect our property rights and claims.

There are risks that title to our Bear Lodge Property may be challenged or impugned. Our Bear Lodge Property is located in the state of Wyoming and may be subject to prior unrecorded agreements, transfers or native land claims, and title may be affected by undetected defects. There may be valid challenges to the title of our Bear Lodge Property which, if successful, could impair or result in the cessation of development and/or operations.

The vast majority of the mineral rights to our Bear Lodge Property consist of “unpatented” mining claims created and maintained in accordance with the U.S. General Mining Act of 1872 (“U.S. General Mining Law”). Unpatented mining claims are unique property interests and are generally considered to be subject to greater title risk than are other real property interests because the validity of unpatented mining claims can be uncertain. This uncertainty arises, in part, out of the complex federal and state laws and regulations an owner of an unpatented mining claim must comply with to locate and maintain a valid claim. Also, unpatented mining claims are always subject to possible challenges by third parties or validity contests by the federal government. The validity of an unpatented mining claim, in terms of both its location and its maintenance, is dependent on strict compliance with not only a complex body of U.S. federal and state statutory law, but also administrative and judicial decisions interpreting those statutes and case law. In addition, there may be limitations as to the completeness of public records that determine prior claimants that could impact the validity or ownership of unpatented mining claims. The Company’s right to continue activities on the Bear Lodge Property is dependent upon our ability to pay annual claim maintenance fees.

Our operations are subject to significant uninsured risks that could negatively impact future profitability as we maintain limited insurance against our operations.

Any exploration of our Bear Lodge Property will entail certain risks including unexpected or unusual operating conditions, such as rockslides, cave-ins, flooding, fire, and earthquakes. It is not always possible to insure against these risks. Should events such as these arise, they could reduce or eliminate our assets and shareholder equity as well as result in increased costs and/or a decline in the value of our assets or common shares. We expect to maintain general liability, director and officer insurance, and some insurance against our assets but not with the expectation of full replacement value. We may decide to update or amend our insurance portfolio in the future if coverage is available at economically viable rates.

Increased competition could adversely affect our ability to attract necessary capital funding.

The mining industry is intensely competitive, and we must compete with other individuals and companies, many of which have greater financial resources, operational experience, and technical capabilities than we have. This competition from other mining companies could adversely impact our efforts to hire experienced mining professionals. Competition for resources at all levels can be very intense, particularly affecting the availability of manpower, drill rigs, mining equipment and production equipment. Increased competition could adversely affect our ability to attract necessary capital funding or attract or retain key personnel or outside technical resources.

Land reclamation requirements for our properties may be burdensome or expensive.

Although land reclamation requirements vary depending on the location and governing authority, such requirements generally are imposed on mineral exploration companies as well as companies with mining and processing operations to minimize long-term effects of land disturbance.

Reclamation requirements may include the following, among other things:

- control dispersion of potentially deleterious effluents;
- manage and control mine tailings and other processing wastes;
- reduce open pit mine slope angles;
- treat ground and surface water to drinking water standards; and
- reasonably re-establish pre-disturbance vegetation and land forms.

To carry out reclamation obligations imposed on us in connection with the potential future development activities at the Demonstration Plant and the Bear Lodge Property, we must allocate financial resources that might otherwise be spent on further exploration and future development programs. We have set up a provision for reclamation obligations as currently anticipated for exploration completed on the Bear Lodge Property, as appropriate, but this provision may not be adequate. If we are required to carry out unanticipated reclamation work, our financial position could be adversely affected.

Legislation and regulations have been proposed that would significantly affect the mining industry and our business.

The U.S. Congress from time to time has considered proposed revisions to the U.S. General Mining Law. If Congress again considers and enacts any such revisions, such legislation could change the cost of holding unpatented mining claims or significantly impact our ability to develop mineralized resources on unpatented mining claims. Changes in the U.S. presidential administration or changes in the composition of Congress from time to time may increase the likelihood that Congress considers such revisions at some point. Past bills have proposed, among other things, to (i) impose a federal royalty on production from unpatented mining claims, (ii) impose a fee on the amount of material displaced at a mine, (iii) impose time limits on the effectiveness of plans of operation that may not coincide with mine life, (iv) impose more stringent environmental compliance and reclamation requirements on activities on unpatented mining claims, (v) establish a mechanism that would allow states, localities and Native American tribes to petition for the withdrawal of identified tracts of federal land from the operation of the U.S. General Mining Law, (vi) replace the location of mining claims with federal leases for locatable minerals, and (vii) allow for administrative determinations that mining would not be allowed where undue degradation of the federal lands in question could not be prevented. Although we cannot predict what legislated royalties might be, the enactment of a federal royalty or other provisions contained in any such proposed bills

could adversely affect the potential for development of our unpatented mining claims, our ability to operate, or our financial performance. The effect of any proposed revision of the U.S. General Mining Law on operations cannot be determined until enactment. However, it is possible that revisions would materially increase the carrying and operating costs of mineral properties located on federal unpatented mining claims.

Risks Related to Our Common Stock

We may elect to deregister our common shares under the Exchange Act. Deregistration would result in less disclosure about us and may negatively affect the liquidity and trading prices of our common shares.

Due to the relatively high cost of being a public company in the U.S., our Board of Directors may elect to voluntarily deregister our common shares under the Exchange Act and suspend our reporting obligations in the U.S., possibly in combination with an effort to list our common shares on another securities exchange. No Board approval of deregistration has taken place, but in the future, the Board may authorize the Company to file with the SEC a Form 15 to voluntarily deregister our common shares under Section 12(g) of the Exchange Act and suspend our reporting obligations under Section 15(d) of the Exchange Act. If the Board approves such deregistration, we would file a Form 15 and our obligations to file periodic reports, such as annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K, would be suspended immediately upon the filing of the Form 15 with the SEC, and our proxy statement, Section 16 and other Section 12(g) reporting responsibilities would terminate effective 90 days after the filing of the Form 15. We believe that we are eligible to deregister under the Exchange Act. If we were to file a Form 15, we expect that our common shares, which currently trade on the OTCQB Venture Marketplace, would not continue to be quoted on the OTCQB Venture Marketplace. Following any deregistration, we would not expect to publish periodic financial information or furnish such information to our shareholders except as may be required by applicable laws or stock exchange rules. As a result of the foregoing factors, deregistration may result in less disclosure about us and may negatively affect the liquidity and trading prices of our common shares.

We do not currently intend to pay cash dividends.

We have not declared any dividends since our incorporation and do not anticipate that we will do so in the foreseeable future. Our present policy is to retain all available funds for use in our business development and operations. Payment of future cash dividends, if any, will be at the discretion of the Board of Directors and will depend on our financial condition, results of operations, contractual restrictions, capital requirements, business prospects and other factors that the Board of Directors considers relevant. In the absence of dividends, investors will only see a return on their investment if the value of our common shares appreciates.

Future sales of our securities in the public or private markets could adversely affect the trading price of our common shares or our ability to continue to raise funds in new equity offerings.

It is possible that we will sell common shares, or securities exercisable or convertible into common shares, in order to finance our planned development activities. Future sales of substantial amounts of our securities in the public or private markets would dilute our existing shareholders and potentially adversely affect the trading prices of our common shares or could impair our ability to raise capital through future offerings of securities. Alternatively, we may rely on debt financing and assume debt obligations that require us to make substantial interest and principal payments that could adversely affect our business or future growth potential.

Price volatility of our publicly traded securities could adversely affect investors' portfolios.

In recent years and months, the securities markets in the U.S. and Canada have experienced high levels of price and volume volatility, and the market prices of securities of many companies have experienced wide fluctuations that have not necessarily been related to the operating performance, underlying asset values or prospects of such companies. There can be no assurance that continual fluctuations in the market price of our common shares will not occur. It may be anticipated that any quoted market for the common shares will be subject to market trends and conditions generally, notwithstanding any potential success we have in creating revenues, cash flows or earnings. The price of our common shares has been subject to price and volume volatility in the past and will likely continue to be subject to such volatility in the future.

Because our common shares are not listed on a national securities exchange, a broker-dealer may find it more difficult to trade our common shares, and an investor may find it more difficult to acquire or dispose of our common shares in the secondary market.

We are subject to the so-called “penny stock” rules. The SEC has adopted regulations that define a “penny stock” to be any equity security that has a market price per share of less than \$5.00, subject to certain exceptions, such as any securities listed on a national securities exchange. For any transaction involving a “penny stock,” unless exempt, the rules impose additional sales practice requirements on broker-dealers, subject to certain exceptions. A broker-dealer may find it more difficult to trade, and an investor may find it more difficult to acquire or dispose of, our common shares on the OTCQB Venture Marketplace. These factors could significantly negatively affect the market price of our common shares and our ability to raise capital.

General Risk Factors

Market factors outside of our control could have significant adverse impacts on our business, operations and/or prospects.

Operating in the volatile and cyclical natural resource industry subjects us to numerous market factors outside of our control that could have significant and sometimes adverse impacts on our business. Such factors could include significant price declines for key rare earth materials, inflationary impacts on capital and operating costs, public opposition, poor financial and operating performance of other companies in the same industry sector, environmental incidents from resource projects, major technological advances that reduce demand for key rare earth products, unforeseen regulation, military conflict, such as the Russia/Ukraine war, terrorism, banking institution stability, or other geopolitical events that broadly impact the global or domestic economy or natural resource industry. To the extent that such events affect attitudes toward investments in the natural resource sector generally or the rare earths industry specifically, or impact the overall economic climate, could affect our ability to raise the additional capital needed to continue to advance our Projects and business plan.

Our directors, officers and consultants may be engaged in other businesses. Potential conflicts of interest or other obligations of directors, officers and consultants could interfere with corporate operations.

Some of our directors, officers and consultants may be engaged in additional businesses, or situations may arise where our directors, officers and consultants could be in direct competition with us. Conflicts, if any, will be dealt with in accordance with the relevant provisions of applicable policies, regulations, and legislation. Some of our directors and officers are or may become directors or officers of other entities engaged in other business ventures. As a result of their other business endeavors, our directors, officers, and consultants may not be able to devote sufficient time to our business affairs, which may negatively affect our ability to conduct ongoing operations or to generate revenues.

We are subject to the risk of litigation, the causes and costs of which are not always known.

We are subject to litigation arising in the normal course of business and may be involved in disputes that may result in litigation. Although we are not aware of any material pending or threatened litigation or of any legal proceedings known to be contemplated which are, or would be, likely to have a material adverse effect upon us or our operations, taken as a whole, the causes of potential future litigation cannot be known and may arise from, among other things, business activities, environmental and health and safety concerns, share price volatility or failure to comply with disclosure obligations. The results of litigation cannot be predicted with certainty but could include costly damage awards or settlements, fines, and the loss of licenses, concessions, or rights, among other things. If we are unable to resolve a dispute favorably, either by judicial determination or settlement, it may have a material adverse effect on our financial condition, cash flows or results of operations.

We depend upon information technology systems, which are subject to disruption, damage, or failure and have risks associated with implementation and integration.

We depend upon information technology systems in the conduct of our operations. Our information technology systems are subject to disruption, damage, or failure from a variety of sources, including, without limitation, computer viruses, security breaches, cyber-attacks, natural disasters, and defects in design. Cybersecurity incidents, in particular, are evolving and include, but are not limited to, malicious software, attempts to gain unauthorized access to data and other electronic security breaches that could lead to disruptions in systems, unauthorized release of confidential or otherwise protected information or the corruption of data. Various measures have been implemented to manage our risks related to information technology systems and network disruptions. However, given the unpredictability of the timing, nature and scope of information technology disruptions, we could potentially be subject to downtimes, operational delays, the compromising of confidential or otherwise protected information, destruction or corruption of data, security breaches, other manipulation or improper use of our systems and networks or financial losses from remedial actions, any of which could have a material adverse effect on our cash flows, competitive position, financial condition or results of operations.

ITEM 1B. UNRESOLVED STAFF COMMENTS

Not applicable.

ITEM 2. PROPERTIES

BEAR LODGE PROPERTY

The Bear Lodge Property contains two projects, the Bear Lodge REE Project and the Sundance Gold Project. The Bear Lodge REE Project consists of the Bull Hill mineral district, inclusive of the Bull Hill and Whitetail Ridge deposits and the exploration targets of East Taylor and Carbon, all of which are located near Sundance, Wyoming (together the “Bull Hill District”). The Bear Lodge REE Project also includes the proposed hydrometallurgical plant site to be located on private property in Upton, Wyoming that we currently have an option to purchase. Additional details on each of these areas are set forth below under the heading “Bear Lodge REE Project.” We hold our interest in the Bear Lodge Property through our indirect wholly owned subsidiary, Rare Element Resources, Inc., a Wyoming corporation.

The Bear Lodge Project is located seven air miles (11 kilometers) or 12 road miles (19 kilometers) northwest of the town of Sundance, Wyoming, which is on U.S. Interstate Highway 90, and 22 air miles (35 kilometers) west of the South Dakota state line. The Bear Lodge Property is accessible by paved and well-maintained gravel roads. The Bear Lodge Property lies within the Black Hills National Forest along the crest of the northern part of the Bear Lodge Mountains, a narrow northwest-trending range. Physiographically, it is the northwest extension of the Black Hills in western South Dakota and is characterized by rolling grass and pine-covered mountains that reach elevations of 1,950 meters within the Bear Lodge Property. The mountains have moderate slopes covered by western yellow pine forest interspersed with dense thickets of brush. Narrow grassy meadows cover the upper reaches of seasonal drainages. The lowest point within the Bear Lodge Property is about 1,768 meters in elevation. The climate during the summer is warm and relatively dry, followed by cold winters with variable amounts of snow.

We control 100% of the mineral rights at the Bear Lodge Property, consisting of unpatented mining claims and a right of repurchase on adjacent private land. We hold 499 unpatented mining claims located on land administered by the USFS. The Bear Lodge Property is located within parts of Sections 5, 7 through 9, Sections 14 through 23 and Sections 26 through 35 in Township 52 North and Range 63 West, Sixth Principal Meridian, Crook County, Wyoming. All of the public property mining claims are unpatented, such that the paramount title to the land is held by the U.S. All of the mineral resources identified in the Company’s historical technical report are located on mining claims that we hold.

On October 25, 2021, the Company and Whitelaw Creek LLC, a Wyoming limited liability company (“Whitelaw Creek”), entered into an amendment (the “Amendment”) to the asset purchase agreement dated October 20, 2016 between the Company and Whitelaw Creek (the “APA”). The Amendment modified certain provisions of the APA related to the terms and conditions of the Company’s option to repurchase (the “Repurchase Option”) approximately 640 acres of non-core real property located in Crook County, Wyoming, that is under consideration for a stockpile facility for the Bear Lodge

REE Project. Pursuant to and subject to the terms of the Amendment, among other things, the term of the Repurchase Option (which was to expire on October 26, 2021) was extended for up to three additional years, subject to annual option extension payments from the Company to Whitelaw Creek of \$25 in cash per year (each, a “Repurchase Option Extension Payment”); and the exercise price of the Repurchase Option was increased from \$1,000 to a price to be determined by a mutually agreed upon real estate appraiser (the “Repurchase Price”), provided that (i) the Repurchase Price must not be less than \$1,200 or greater than \$1,850 and (ii) any Repurchase Option Extension Payments paid by the Company to Whitelaw Creek must be credited toward the Company’s payment of the Repurchase Price if the Repurchase Option is later exercised. In October 2022, the Company made the \$25 Repurchase Option Extension Payment to Whitelaw Creek to extend the term of the Repurchase Option through October 26, 2023.

Our 100% interest in the 499 unpatented mining claims was, in part, acquired from Phelps Dodge Exploration Company (now a subsidiary of Freeport-McMoRan Copper and Gold Inc. (“Freeport”)) by way of a Mineral Lease and Option for Deed in 2000, and 404 claims were transferred from Newmont Mining Corporation (“Newmont”) to us in May 2010.

Some of our mining claims and a portion of a defined area of influence surrounding the claims were previously subject to a production royalty of 2% of net smelter returns (“NSR”) royalty payable to Freeport, but the Company purchased the NSR royalty in March 2009. We hold an unencumbered REE project, including all 499 unpatented mining claims, free of third-party royalties for REE production.

In order to maintain all claims in good standing, the Company is responsible for the payment of annual federal claim maintenance fees (currently \$0.155/claim) and the recording of the annual claim maintenance and intent to hold notice with Crook County, Wyoming. All 499 unpatented claims included in the project are located on both federal and private lands and are subject to annual maintenance fees payable to the United States Bureau of Land Management. Mineral rights on the mining claims and the approximately 640-acre private parcel under the Repurchase Option provide the Company mineral and surface rights to explore, develop, and mine the Bear Lodge property, subject to the prior procurement of required operating permits and approvals, and compliance with applicable federal, state, and local laws, regulations, and ordinances.

Exploration has been conducted on the Bear Lodge Property since 1949. In addition to Freeport, several mining companies have conducted exploration and drilling programs at or near the Bear Lodge Property since the discovery of mineralization. No mining operations were conducted at the Bear Lodge Property by any of the prior owners.

Motels, restaurants, gas stations, and other services are available at Sundance, Upton, and other nearby towns, and a greater variety of accommodations are available to the east in Spearfish, South Dakota. All necessary infrastructure, such as housing, food, fuel, etc. would be available in these towns, or further to the west in Gillette and southeast in Newcastle. Water rights at the mine site are available through permitting by the Wyoming State Engineer’s Office. Near the mine site, a power line, which requires upgrading, runs to within a mile of the Bear Lodge Property. Economical electrical power would be supplied by the Powder River Energy Corporation.

Supplies can be trucked to the Bear Lodge Property 60 miles (100 kilometers) from Gillette, which is located on both U.S. Interstate Highway 90 and rail lines. A Burlington Northern Santa Fe rail transport line is also located at Moorcroft, 34 miles (54 kilometers) west of Sundance, and at Upton, 40 miles (64 kilometers) south. The Powder River Basin contains multiple coal-fired power plants, and Gillette, the largest city in the basin, would be a major logistics center for any development at the Bear Lodge Property. The current size of the mine property is sufficiently large to support a mining operation, with no foreseeable obstacles to expansion, subject to a favorable outcome regarding permitting.

We are not aware of any outstanding environmental liabilities associated with the Bear Lodge Property, except for required reclamation work associated with our exploration and drilling activities. Previous exploration activities were approved by both the USFS and the Wyoming Department of Environmental Quality. We have an approved reclamation plan and have posted a surety bond to cover the required reclamation.

Additional local, state, and federal licenses and permits will be required for exploration, mining, processing and/or beneficiation operations, if we decide to proceed with further exploration or mine development and operations.

Bear Lodge Property – Location Map



Geological Setting

The Bear Lodge Mountains of northeast Wyoming are composed primarily of the upper levels of a mineralized tertiary alkaline-igneous complex that is a component of the Black Hills Uplift of western South Dakota and northeast Wyoming. Tertiary alkaline intrusive bodies in the northern Black Hills occur along a N70-80W trending belt that extends from Bear Butte in South Dakota, through the Bear Lodge Mountains, to Devil's Tower and Missouri Buttes in northeast Wyoming. The Bear Lodge mining district is in the Bear Lodge Mountains, near the western end of the northern Black Hills intrusive belt. The Bear Lodge Mountains expose and are underlain by multiple alkaline plugs, sills, and dikes and intruded into Precambrian basement and Paleozoic and Mesozoic sedimentary rocks approximately 38–52 million years ago. REE and gold mineralization are found in separate areas of the central crest and northern part of the Bear Lodge Mountains.

The Bear Lodge alkaline-igneous complex is a northwest-trending alkaline intrusive dome with dimensions of approximately 10 kilometers NW-SE by 6 kilometers NE-SW. The complex consists predominantly of multiple intrusions of phonolite, trachyte, and other alkaline igneous rocks, and a variety of associated breccias and diatremes.

Exploration and Drilling

The Bear Lodge Mountains were initially prospected for gold during the late nineteenth and early twentieth century. Rare earth mineralization was first discovered in approximately 1949. Various companies conducted sporadic exploration of the area from the 1970s through the 1990s, both for rare earths and for gold. Commencing in 2004, we initiated REE exploration activities and from 2004 through 2013, a total of more than 160,000 feet of drilling was completed in over 200 core holes. Our exploration activities between 2013 through 2015 were limited as our focus turned to development drilling at the Bull Hill and Whitetail Ridge deposits. These exploration activities included geochemical, geophysical, geological, and mineralogical modeling of the district and individual deposits.

The 2013 drilling program involved infill drilling at the Whitetail Ridge deposit including 14 core holes for a total of 3,556 meters (11,697 feet). The second phase consisted of 21 core holes totaling 3,247 meters (10,650 feet) and six reverse circulation ("RC") twin holes totaling 832 meters (2,730 feet). The RC twin holes were drilled using a center return hammer with the objective of minimizing hole erosion and obtaining assay data directly correlative to that from the adjacent core holes.

The 2014 program consisted of the excavation of a test trench along the southwestern flank of Bull Hill in August. The main mineralized zone was exposed and exploited for the collection of geological information including dike dimension and structural continuity, grade variation, ore and gangue mineralogy, pit slope stability engineering and confirmation of parameters utilized in ore resource calculations. The program netted 907 tonnes of sample materials, the bulk of which is stored for current and future metallurgical work.

The 2015 condemnation program consisted of six rotary holes, and a total of 3,000 feet was drilled in September of 2015 to complete a program that was halted by the USFS in 2012 due to an archeological discovery. The program evaluated the subsurface for carbonatite-hosted REE mineralization and followed up on gold mineralization discovered in 2010 within and adjacent to the proposed physical upgrade (“PUG”) site. Based on results from the 2015 condemnation program, the PUG area is considered void of economic mineralization.

No drilling was conducted from 2017 through the end of 2022 and no drilling is currently planned for 2023.

Bear Lodge REE Project

The Bear Lodge REE Project comprises several REE resource areas within the Bear Lodge Property. REE mineralization at the Bear Lodge Property occurs in the central lobe of the Bear Lodge Property alkaline-igneous complex. Most of the important identified REE deposits and occurrences within the Bear Lodge Property alkaline complex are contained within the Company’s block of unpatented lode mining claims. The REE deposits are located primarily in the vicinity of the Bull Hill deposit.

REE mineralized bodies occur as dikes, veins, and stockworks within the Bull Hill and Whitetail Ridge deposit areas of the Bear Lodge Property. The mineralization includes a well-defined, near-surface, oxidized FMR zone; a near-surface, oxidized, but incompletely leached, carbonatite zone (oxide-carbonate zone); a transitional or mixed zone (oxide + sulfide); and a deeper sulfide-bearing carbonatite (a high-carbonate igneous rock) zone. The oxide-carbonate and transitional zones were referred to collectively as a “transitional zone” in some prior news releases and technical reports. The mineralized zones were subsequently sub-classified, based on key characteristics of those zones. The FMR dikes and veins contain no matrix carbonates or sulfides. The sulfides are completely oxidized to hydrous iron oxides, and the non-REE bearing carbonate minerals (calcite and strontianite) show near-complete leaching from the zone, which ranges from the surface to depths of about 90–150 meters. The oxide-carbonate zone generally occurs beneath the oxide zone but approaches the surface locally in select dikes. It is characterized by the near absence of sulfides, with the residual iron oxides formed during almost complete oxidation of the former sulfide minerals, and by variable amounts of relict matrix carbonates (calcite ± strontianite) and the REE mineral, ancylite (a hydrous Strontianite-REE carbonate).

Bull Hill and Whitetail Ridge Deposits

The Bull Hill deposit mineralized bodies occur as steeply dipping, FMR-carbonatite dike swarms and associated stockwork. Geological interpretation of results from the 2010–2014 drill and trench programs indicates that the Bull Hill deposit area is dominated by northwest-striking mineralized bodies in the southern two-thirds of the resource area, while the northern part of the resource area exhibits a transitional change in strike from dominantly northwesterly to almost due north. The dike swarm primarily intrudes heterolithic intrusive breccia of the Bull Hill diatreme and adjacent trachytic and phonolitic intrusive rocks. Carbonatite dikes at depth are interpreted to transition toward the surface into oxide-carbonate and FMR bodies. The mineralized structures range in size from veinlets to large dikes more than 30 meters in width. The Bull Hill deposit consists of one dominant dike set and several subsidiary dike sets in a swarm that has dimensions of more than 457 meters along strike and less than 100 meters in width. The dikes appear to pinch and swell in both strike and dip directions, and they can be traced in drill holes more than 305 meters down dip.

The Whitetail Ridge deposit occurs about 700 meters northwest of the Bull Hill deposit. The REE mineralization consists of northwest- and north-striking FMR dikes, and an FMR stockwork zone that is also elongated northeasterly, with dimensions of roughly 380 meters by 290 meters. The enveloping gravity and radiometric geophysical anomalies and coincident soil geochemical anomalies are larger and may indicate a broader distribution of REE mineralization beneath the extensive soil and colluvial cover. Drilling conducted in 2011 through 2013 indicates that much of the mineralization is confined within the volume of the Whitetail Ridge diatreme.

Other Exploration Target Areas at the Bear Lodge REE Project

Discovery of high-grade REE mineralization at the East Taylor Target Area and the Carbon Target Area expanded the area of known REE mineralization outside of the Bull Hill and Whitetail Ridge deposits. The data indicates that the Bear Lodge REE Project area covers a crudely elliptical area that extends approximately 1,750 meters northwest-southeast by 1,300 meters northeast-southwest. The Carbon exploration target area is located northwest of the Bull Hill deposit, and the East Taylor Target Area is located west of the Bull Hill deposit. Drill assay data from the East Taylor Target Area and the Carbon Target Area identify these areas as zones of HREE-enrichment relative to the Bull Hill deposit. These two exploration target areas, along with the Whitetail Ridge deposit, are peripheral to the Bull Hill deposit. The discovery of these target areas indicates good potential for additional deposits of high-grade REE in the western half of the Bear Lodge REE Project, and those deposits appear to be particularly enriched in HREE.

Historical Pre-feasibility Study

In 2013 and 2014, we worked on optimizing the Bull Hill District development plan, the mineral process methods, and the Bear Lodge REE Project economics. In 2014, a Technical Report meeting the requirements of NI 43-101 was completed and included a PFS containing an estimate of the mineralization at the Bear Lodge REE Project as well as preliminary estimates of initial and life-of-mine capital costs for the potential development of the project. These estimates have not been updated since the date of that report and the assumptions contained therein need to be updated to be accurate in today's environment.

Project Stage

The Bear Lodge Property is an exploration stage property with no proven and probable reserves. As an exploration stage property, there has been no historical production from this property.

Permitting and Licensing Progress

The USFS is the lead agency in the NEPA process to prepare an EIS on the Bear Lodge REE Project. This process is essential to securing the permits and approvals necessary to move into production. In early 2012, we submitted the plan of operations for the Bear Lodge REE Project, which the USFS accepted as complete in May 2013. The USFS selected a project manager and prime contractor for preparation of the EIS, published notice in the Federal Register and completed necessary scoping work. The USFS issued a draft EIS on January 15, 2016, outlining plan alternatives and proffering a preferred alternative. The U.S. Army Corps of Engineers and the appropriate state and local government agencies were involved in the EIS process as cooperating agencies. On January 22, 2016, our Board of Directors decided to conserve cash due to the then difficult market conditions and suspended all permitting and licensing efforts, including the EIS process. We notified the USFS and cooperating agencies, the NRC, and the state of Wyoming of our decision to suspend permitting and licensing efforts, and the parties acknowledged receipt of the notice. During 2022, the Company undertook environmental sampling to update the baseline environmental data for the Bear Lodge REE Project. Assuming permitting and licensing efforts resume within a reasonable time, the final EIS and draft Record of Decision, the decision document that establishes the acceptable operating conditions, would be expected within 18 to 30 months of the resumption of such permitting and licensing efforts.

Metallurgy and Mineralization

A planned PUG plant, to be located within the Bear Lodge REE Project area, was designed to maximize concentration of the rare earth minerals, and produce a mineral concentrate using a crushing, screening, and gravity separation process depending on the material type. The PUG process was designed to concentrate the rare earth-bearing fines and reduce the physical mass. There are areas of the historical mineable pit that contain variable amounts of weathered oxide material or oxide-carbonate Mineralized Material, and that contain variable grades of stockwork mineralization adjacent to the higher-grade material. Each of these material types was projected to have a different upgrade percentage and mass reduction in the PUG circuit. The historical mining plan anticipated exploitation of a distinct high-grade zone early in the Bear Lodge REE Project that was planned to allow for preferential mining in the initial years of the mine. Low and mid-grade material were also to be mined and stockpiled for future PUG processing.

Reclamation of mining-related facilities was planned to occur during mine operations, where applicable, and upon completion of mining and stockpiling of materials. Other facilities, including the PUG plant, would be reclaimed as soon as the stockpiled materials are depleted.

The Company had historically conducted metallurgical test work primarily at SGS Lakefield Research Limited of Lakefield, Ontario, Canada, which is independent from the Company. Through that work, the Company developed a proprietary and patented extraction and separation process. These results, along with the 2021 larger-scale pilot plant test work completed by Umweltleistungen (“UIT”), an affiliate of General Atomics, are being utilized in the development of the Demonstration Plant.

RARE EARTH PROCESSING AND SEPARATION DEMONSTRATION PLANT PROJECT

A consortium of companies, of which the Company is a member, led by General Atomics, has secured with the DoE a \$21,900 Assistance Agreement for the engineering, construction and operation of a rare earth separation and processing Demonstration Plant to be located in Upton, Wyoming at a leased industrial site near infrastructure. The consortium created by General Atomics, an affiliate of Synchron, includes certain of General Atomics’ affiliates, the Company, and LNV, an Ardurra Group, Inc. company, as engineering and construction subcontractor. The Company, as a subrecipient of the award, along with the other consortium members, commenced work on the planning and design of the demonstration project in November 2021, and the Company’s contractual arrangement with General Atomics was finalized in December 2021. The DoE funding represents approximately one-half of the total estimated costs for the project.

Pursuant to the Cost Share Funding Assumption Agreement, dated as of November 30, 2021, between the Company and General Atomics, the Company agreed to assume and pay for the approximately one-half non-federal costs incurred by General Atomics and the consortium for the design, construction, and operation of the Demonstration Plant. The non-federal cost-share funding for the Demonstration Plant was secured by the Company through the rights offering that closed in December 2021 and is more fully described in “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations” of this report.

The purpose of the Demonstration Plant will be to process and separate certain rare earth elements from previously stockpiled high-grade sample materials from the Bear Lodge REE Project, utilizing the Company’s proprietary extraction and separation processes. The Demonstration Plant is being designed as a demonstration scale facility that will produce high-purity Neodymium/Praseodymium (“NdPr”), as well as other rare earth oxides. Successful operation will serve as a precursor to a future full-scale production facility.

Demonstration Plant Permitting and Licensing

The Demonstration Plant will encompass the physical processing of the sample materials followed by chemical processing to extract selected elements. All chemicals will be managed in accordance with federal, state, and local environmental and safety regulations. The Company is seeking a source materials possession license from the NRC as well as an air quality permit from the Wyoming Department of Environmental Quality (the “WDEQ”). A road use permit will also be required from the USFS to improve the access road to the sample storage location. The permitting and licensing process is underway, with the WDEQ air quality permit and USFS access road permits being issued in late 2022, and we expect the remainder of the permitting and licensing to be completed in the second half of 2023.

Demonstration Plant Project Schedule

To achieve the Demonstration Plant project objectives, the schedule is divided into three distinct performance periods covering a total of 40 months, which commenced on October 1, 2021. During the 40-month time period, there are three DOE go/no go decision points.

- Period 1: Design, Permitting and Licensing Commencement – 15 months
- Period 2: Procurement and Construction – approximately 15-17 months
- Period 3: Operations – approximately 8 to 10 months

The objective of Period 1, which was achieved in December 2022, was the completion of the design of the facility and the establishment of requirements and standards to support the subsequent procurement of process equipment, as well as commencement of permitting and licensing. Licensing and permitting will extend into Period 2 and potentially into the early part of Period 3. The objective of Period 2, now underway, is the procurement of the process equipment and the construction of the Demonstration Plant. The objective of Period 3 is the actual operation of the Demonstration Plant itself in accordance with all local, state, and federal permits, licenses, and regulations.

The first DOE go/no-go decision point occurred upon final design, which was achieved in December 2022. The second go/no go decision point is following the completion of the NRC licensing and DOE NEPA review, expected in the second half of 2023, and the third go/no go decision point is at the completion of construction of the plant and achieving readiness for operations, expected in mid-2024.

End-of-Project Goals

The goal of the project is to build and operate a permitted and licensed Demonstration Plant that:

- demonstrates the separation of NdPr and La at commercially required purity levels;
- produces commercial-purity NdPr as well as mixed light/medium REE concentrate, subject to further refining;
- provides a path for the separation of other rare earths, including Sm, Dy and other essential heavy elements;
- provides a basis for economic scale-up to future commercial capacity;
- provides a basis for the demonstration of improved separation economics with expected fewer process steps and a smaller closed-cycle plant as compared with traditional processing methods; and
- demonstrates a process which may be capable of processing feed from other sources, either from the U.S. or other allied countries.

SUNDANCE GOLD PROJECT

The Sundance Gold Project is the second project located on our Bear Lodge Property. The Sundance Gold Project consists of 288 unpatented lode mining claims adjacent to the Bear Lodge Project in Crook County, Wyoming. In 2011, we published a Technical Report that contained dated estimates of inferred mineral resources on the Sundance Gold Project. As a result of the Company's current focus on the Bear Lodge REE Project, no drilling or exploration on the Sundance Gold Project has been conducted since the end of 2011. We have not done sufficient work to classify the historical estimate as a current estimate of mineral resources, mineral reserves, or exploration results, and we are not treating the estimate as a current estimate of mineral resources, mineral reserves, or exploration results.

ITEM 3. LEGAL PROCEEDINGS

We are not aware of any material pending or threatened litigation or of any proceedings known to be contemplated by governmental authorities which are, or would be, likely to have a material adverse effect upon the Company or our operations, taken as a whole. There are no material proceedings pursuant to which any of our directors, officers or affiliates or any owner of record or beneficial owner of more than 5% of our securities or any associate of any such director, officer or security holder is a party adverse to the Company or has a material interest adverse to it.

ITEM 4. MINE SAFETY DISCLOSURES

We consider health, safety, and environmental stewardship to be a core value for the Company.

Pursuant to Section 1503(a) of the Dodd-Frank Act, issuers that are operators, or that have a subsidiary that is an operator, of a coal or other mine in the U.S. are required to disclose in their periodic reports filed with the SEC information regarding specified health and safety violations, orders and citations, related assessments and legal actions, and mining-related fatalities under the regulation of the Federal Mine Safety and Health Administration of 1977 under the Federal Mine Safety and Health Act of 1977. During the year ended December 31, 2022, the Company was not subject to any regulation by the Mine Safety and Health Administration under the Federal Mine Safety and Health Act of 1977.

PART II

ITEM 5. MARKET FOR REGISTRANT’S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

MARKET INFORMATION

Our common shares currently trade on the OTCQB Venture Marketplace under the ticker symbol “REEMF.” As of March 24, 2023, we had approximately 47 shareholders of record who hold 212,515,951 common shares issued and outstanding.

DIVIDEND POLICY

We do not anticipate that we will declare any dividends in the foreseeable future. Payment of any future dividends, if any, will be at the discretion of the Board of Directors after taking into account many factors, including our operating results, financial conditions, and anticipated cash needs.

REPURCHASES OF EQUITY SECURITIES

During the quarter ended December 31, 2022, neither the Company nor any affiliate of the Company repurchased any common shares of the Company registered under Section 12 of the Exchange Act.

RECENT SALES OF UNREGISTERED SECURITIES

There were no sales of unregistered securities during the year ended December 31, 2022 that were not previously included in a Current Report on Form 8-K or Quarterly Report on Form 10-Q of the Company.

EQUITY COMPENSATION PLAN INFORMATION

As of December 31, 2022, we had two equity compensation plans under which our common shares had been authorized for issuance to our officers, directors, employees, and non-employee consultants: our 10% Rolling Stock Option Plan, as amended and restated (the “2011 Plan”), and our 2022 Equity Incentive Plan (the “2022 Plan”), which was approved by our Board on June 22, 2022 and adopted by our shareholders on August 23, 2022.

The following table sets out those securities of the Company which have been authorized for issuance under each equity compensation plan at December 31, 2022:

Equity Compensation Plan Information

| <u>Plan category</u> | <u>Number of securities to be issued upon exercise of outstanding options and rights</u> (a) | <u>Weighted average exercise price of outstanding options and rights</u> (b) | <u>Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))</u> (c) |
|--|---|---|---|
| Equity compensation plans approved by security holders | | | |
| 2011 Plan | 3,910,000 | \$ 1.31 | Nil |
| 2022 Plan | 250,000 | \$ 0.45 | 16,986,689 |
| Total | 4,160,000 | \$ 1.26 | 16,986,689 |

See “Part III Item 11. Executive Compensation” for additional information relating to our equity compensation plans.

CERTAIN U.S. FEDERAL INCOME TAX CONSIDERATIONS

The following discussion is a general summary of the material U.S. federal income tax consequences of the ownership and disposition of our common shares by a holder of our common shares that is a U.S. Holder (as defined below). This summary is general in nature and does not address the effects of any state or local taxes, U.S. federal estate, gift, or generation-skipping taxes, or the tax consequences in jurisdictions other than the U.S. In addition, this discussion does not discuss all aspects of U.S. federal income taxation that may be material to investors subject to special treatment under U.S. federal income tax law. For example, this discussion does not address all U.S. federal income tax aspects that may be material to U.S. Holders who own or have owned, directly or by the application of certain constructive ownership rules, 10% or more of the outstanding shares of the Company by either vote or by value, U.S. expatriates, insurance companies, tax-exempt entities, financial institutions, persons subject to the alternative minimum tax, or the base erosion and anti-abuse tax, regulated investment companies, securities broker-dealers or dealers, traders in securities who elect to apply a mark-to-market method of accounting, partnerships or other pass-through entities and investors in such an entity, persons holding our securities as part of a larger integrated transaction, persons who acquire our securities as compensation, persons who may be subject to the tax on global intangible low-taxed income, persons who may be eligible for a deduction for a portion of foreign-derived intangible income or global intangible low-tax income, and persons whose functional currency is not the U.S. dollar. This summary is based on the U.S. Internal Revenue Code of 1986, as amended (the “Code”), the regulations promulgated thereunder, court decisions and published rulings of the Internal Revenue Service (the “IRS”), as in effect on the date hereof, and the Convention between the U.S. and Canada with Respect to Taxes on Income and on Capital signed on September 26, 1980, as amended and currently in force (the “Treaty”), and does not take into account the possible effect of future legislative or administrative changes or court decisions. We will not request any rulings from the IRS or obtain any opinions from counsel on the tax consequences described below, or on any other issues. The IRS or a court might reach a contrary conclusion with respect to the issues addressed herein if the matter were to be contested. Future legislative or administrative changes or court decisions may significantly change the conclusions expressed herein, and any such changes or decisions may have a retroactive effect with respect to the matters discussed herein.

YOU SHOULD CONSULT YOUR OWN ADVISOR REGARDING THE U.S. FEDERAL INCOME TAX CONSEQUENCES OF THE ACQUISITION, OWNERSHIP AND DISPOSITION OF OUR COMMON SHARES IN LIGHT OF YOUR PARTICULAR CIRCUMSTANCES.

Definition of a U.S. Holder

As used herein, the term “U.S. Holder” means a beneficial owner of our securities that is (a) an individual citizen or resident of the U.S. for U.S. federal income tax purposes; (b) a corporation (or other entity taxable as a corporation for U.S. federal income tax purposes) created or organized in or under the laws of the U.S. or any state thereof or the District of Columbia; (c) an estate the income of which is subject to U.S. federal income taxation regardless of its source; or (d) a trust, if (i) a court within the U.S. can exercise primary supervision over the administration of the trust and one or more U.S. persons are authorized to control all substantial decisions of the trust or (ii) a valid election is in effect under applicable Treasury Regulations to treat such trust as a U.S. person.

Passive Foreign Investment Company Rules

We will be classified as a passive foreign investment company (a “PFIC”) in any taxable year in which, after taking into account the income and assets of certain subsidiaries, either (i) at least 75% of our gross income is passive income, or (ii) at least 50% of the average value of our assets is attributable to assets that produce or are held for the production of passive income. Whether we will be classified as a PFIC in any taxable year is a factual determination and will depend upon our assets, the market value of our common shares, and our activities in each year and is therefore subject to change.

We believe that we were a PFIC for the year ended December 31, 2022. We expect that we will be a PFIC for the year ending December 31, 2023, and that we may also be a PFIC for subsequent years. The tests for determining PFIC status are dependent upon a number of factors, some of which are beyond our control and can be subject to uncertainties. Accordingly, we cannot provide certainty that we were or were not a PFIC for the year ended December 31, 2022, or that we will or will not be a PFIC for the year ending December 31, 2023, or for any future year. We will use commercially reasonable efforts to provide information as to our status as a PFIC and the PFIC status of any subsidiary in which the

Company owns more than 50% of such subsidiary's total aggregate voting power to U.S. Holders who make a written request for such information.

If we are classified as a PFIC for any taxable year, the so-called "excess distribution" regime will apply to any U.S. Holder of our common shares that does not make a QEF election or mark-to-market election, as described below. Under the excess distribution regime, (i) any gain the U.S. Holder realizes on the sale or other disposition of our common shares (possibly including a gift, exchange in a corporate reorganization, or grant as security for a loan) and any "excess distribution" that we make to such U.S. Holder (generally, any distributions to such holder in respect of our common shares during a single taxable year that are greater than 125% of the average annual distributions received by such U.S. Holder in the three preceding years or, if shorter, such holder's holding period for such common shares), will be treated as ordinary income that was earned ratably over each day in such U.S. Holder's holding period for such common shares; (ii) the portion of any such gains or distributions allocated to the current year or prior years before the first day of the first taxable year beginning after December 31, 1986, in which we became a PFIC would be includible by the U.S. Holder as ordinary income in the current year; (iii) the portion of such gain or distribution that is allocable to prior taxable years during which we were a PFIC will be subject to tax at the highest rate applicable to ordinary income for the relevant taxable years, regardless of the tax rate otherwise applicable to such U.S. Holder and without reduction for deductions or loss carryforwards; and (iv) the interest charge generally applicable to underpayments of tax will be imposed with respect of the tax attributable to each such year. The interest charge discussed above generally will be non-deductible interest expense for individual U.S. Holders.

Certain elections may be available with respect to our common shares (the so-called "QEF," "mark-to-market," and "deemed sale" elections) if we are a PFIC, but these elections may accelerate the recognition of taxable income and may result in the recognition of ordinary income. If the Company is a PFIC for any tax year during which a U.S. Holder holds our common shares, and no such elections have been made, the Company will continue to be treated as a PFIC with respect to such U.S. Holder, regardless of whether the Company ceases to be a PFIC in one or more subsequent years.

If a U.S. Holder makes a timely election to treat the Company as a "qualifying electing fund" or "QEF" (a "QEF election") with respect to such U.S. Holder's interest therein, the above-described rules regarding the excess distribution regime generally will not apply. Instead, the electing U.S. Holder would include annually in its gross income its pro rata share of our ordinary earnings and any net capital gain for each taxable year regardless of whether such income or gain was actually distributed. Special rules apply to U.S. Holders who own their interests in a PFIC through intermediate entities or persons.

A U.S. Holder may make a QEF election only if the U.S. Holder receives certain information (known as a "PFIC annual information statement") from us annually. We will use commercially reasonable efforts to make available to U.S. Holders, upon written request, an accurate PFIC annual information statement for each year in which the Company is a PFIC. A QEF election with respect to our common shares is generally timely filed only if it is made on a timely filed federal income tax return for the first year in the U.S. Holder's holding period for our common shares in which we were a PFIC. A U.S. Holder for whom a QEF election would otherwise be untimely may be able to make a special "deemed sale" election pursuant to which the U.S. Holder recognizes any gain inherent in the U.S. Holder's common shares and restarts the U.S. Holder's holding period in our common shares for purposes of making a QEF election. A deemed sale election generally can be made only if the U.S. Holder owns common shares on the first day of our taxable year in which the election is to be effective.

Alternatively, a U.S. Holder of our common shares may elect to recognize any gain or loss on its common shares on a mark-to-market basis at the end of each taxable year, so long as our common shares are regularly traded on a qualified exchange. The OTCQB Venture Marketplace, on which our common shares currently trade, may not be a qualified exchange for this purpose. Therefore, we cannot provide assurance that our common shares are regularly traded on a qualified exchange for PFIC purposes, and we provide no assurance that our common shares will be regularly traded on a qualified exchange for this or any subsequent year in which we may be a PFIC.

If a mark-to-market election is made, the excess distribution regime will not apply to amounts received with respect to our common shares from and after the effective time of the election, and any mark-to-market gains or gains on disposition will be treated as ordinary income. Mark-to-market losses and losses on disposition will be treated as ordinary losses to the extent of the U.S. Holder's unrecovered prior net mark-to-market gains. Losses in excess of prior net mark-to-market gains

will generally not be recognized. The mark-to-market election must be made by the due date (as may be extended) for filing the U.S. Holder's federal income tax return for the first year in which the election is to take effect. A mark-to-market election applies to all future years of an electing U.S. Holder during which the stock is regularly traded on a qualifying exchange, unless revoked with the IRS's consent.

The QEF election and mark-to-market election rules are complex. U.S. Holders should consult their tax advisor regarding the availability and procedure for making these elections.

Special adverse rules apply to U.S. Holders of our common shares for any year in which we are a PFIC and own or dispose of shares in another corporation that is also a PFIC (a "lower-tier PFIC"), as might be the case with our wholly owned subsidiary, Rare Element Holdings Ltd. A U.S. Holder who owned our common shares while we were a PFIC will be deemed to own its proportionate share of any lower-tier PFIC, and will be subject to U.S. federal income tax on (i) a distribution on the shares of a lower-tier PFIC and (ii) a disposition of shares of a lower-tier PFIC, both as if the U.S. Holder directly held the shares of such lower-tier PFIC. Moreover, a QEF election or mark-to-market election that is made for our common shares would not apply to a lower-tier PFIC. While a separate QEF election may be made for a lower-tier PFIC, we do not undertake to provide the financial information to U.S. Holders that would allow them to make a QEF election for any lower-tier PFIC. A mark-to-market election generally may not be made with respect to a lower-tier PFIC.

A U.S. Holder who makes a QEF election for our common shares but not for shares of a lower-tier PFIC will be taxable under the excess distribution regime on gain that we recognize on the sale of shares of the lower-tier PFIC. Any U.S. Holder who makes a mark-to-market or deemed sale election for our common shares could be subject to the PFIC rules with respect to income of the lower-tier PFIC, even though the value of the lower-tier PFIC already was subject to tax via mark-to-market or deemed sale adjustments.

The IRS has issued proposed regulations that, subject to certain exceptions, would treat as taxable certain transfers of PFIC stock by a U.S. Holder that has not made a timely QEF election or mark-to-market election that are generally not otherwise taxed, such as gifts, exchanges pursuant to corporate reorganizations, and transfers at death. Generally, in such cases, the basis of our common shares in the hands of the transferee and the basis of any property received in the exchange for those shares would be increased by the amount of gain recognized. The specific tax effect to the U.S. Holder and the transferee may vary based on the manner in which the common shares are transferred. Each U.S. Holder should consult a tax advisor with respect to how the PFIC rules affect their tax situation prior to transferring PFIC shares.

Special adverse rules that impact certain estate planning goals could apply to our common shares if we are a PFIC. Special rules apply with respect to the calculation of the amount of the foreign tax credit with respect to excess distributions by a PFIC.

Each U.S. Holder that has a direct or indirect interest in our common shares for a year for which we were a PFIC, generally would be required to file an IRS Form 8621 ("Form 8621"), if, during such year, the U.S. Holder received distributions or recognized gain with respect to our common shares, or was deemed to receive an indirect distribution from a lower-tier PFIC or to recognize gain on an indirect disposition of lower-tier PFIC stock, or in such other situations as the IRS may require. Form 8621 is also used to make certain elections with respect to PFICs, including a QEF election and a mark-to-market election. Each U.S. Holder should consult its tax advisor regarding these and any other relevant information or other reporting requirements.

If we are a PFIC in the taxable year in which we pay a dividend or the immediately preceding taxable year, dividends on our common shares will not be "qualified dividend income," and such dividends received by individual U.S. Holders generally will be taxed at ordinary income tax rates, subject to the tax rules that apply to excess distributions from PFICs, as discussed above.

Sale or Other Disposition of Our Common Shares

The tax treatment of a sale or other disposition of our common shares by a U.S. Holder will differ based upon whether the PFIC rules apply and whether the U.S. Holder has made any of the elections described above.

If the excess distribution regime discussed above applies to the sale or disposition of our common shares, the rules regarding the taxation of excess distributions will generally apply upon a sale or other disposition of the common shares.

If the excess distribution regime discussed above does not apply to the sale or disposition of our common shares, the difference between the amount received and the adjusted tax basis of the common shares will be a gain or loss. If, as usually is the case, the common shares are a capital asset in the hands of the U.S. Holder, such gain or loss will be a capital gain or loss. If the U.S. Holder has made a QEF election with respect to the shares, the adjusted basis will be increased by the U.S. Holder's proportionate share of income and capital gains taken into account each year as a result of the QEF election. If the U.S. Holder has made a mark-to-market election with respect to the shares, the adjusted basis will be increased by the net income recognized on the common shares as a result of the mark-to-market election. Capital gain or loss with respect to common shares generally will be long-term capital gain or loss if the holding period for the shares giving rise to such gain or loss exceeds one year. Under current law, long-term capital gains realized by individual U.S. Holders are taxed at reduced rates. Short-term capital gains are taxed at ordinary income rates. The deductibility of capital losses is subject to significant limitations.

Distributions

We do not expect to pay dividends in the foreseeable future. However, subject to the PFIC rules discussed below, a U.S. Holder must include in gross income as dividend income the gross amount of any distribution (including the amount of any Canadian withholding tax thereon) paid by the Company out of its current or accumulated earnings and profits (as determined for U.S. federal income tax purposes) with respect to our common shares. A distribution on our common shares in excess of current or accumulated earnings and profits will be treated as a tax-free return of capital to the extent of the U.S. Holder's adjusted basis in such common shares (thus reducing, but not below zero, the adjusted tax basis of such common shares), and thereafter as gain from the sale or exchange of common shares. See "Sale or Other Disposition of Our Common Shares" above.

If we are a PFIC in the taxable year in which we pay a dividend or the immediately preceding taxable year, dividends received by individual U.S. Holders generally will be taxed at ordinary income tax rates, subject to the rules that apply to excess distributions from PFICs, as discussed above.

If we are not a PFIC in the taxable year in which we pay a dividend or the immediately preceding taxable year, dividends received by individual U.S. Holders will be taxed to such U.S. Holder at the rates applicable to long-term capital gains as "qualified dividend income" if (i) we are eligible for benefits of the Treaty or (ii) our common shares are readily tradable on an established securities market. We have not determined if we are eligible for such benefits, and our common shares are not currently readily tradable on an established securities market. However, dividend income will not be qualified dividend income (and will be taxed at ordinary income rates) if the U.S. Holder has not held its common shares for at least 61 days during the 121-day period beginning 60 days before the ex-dividend date (or as noted above, if we are a PFIC for the taxable year in which the dividend is paid or in the preceding taxable year).

Dividends paid to a corporate U.S. Holder will be taxed as ordinary income and will not generally be eligible for the dividends received deduction.

Surcharge on Net Investment Income; Other Tax Rules

A surtax of 3.8% (the "unearned income Medicare contribution tax") is imposed on the "net investment income" of certain U.S. citizens and resident aliens, and on the undistributed "net investment income" of certain estates and trusts, in each case in excess of a threshold amount. Net investment income generally includes dividends and net gain from the disposition of property (other than property held in a "non-passive" trade or business). Net investment income is reduced by deductions that are properly allocable to such income. Special rules determine when the unearned income Medicare contribution tax applies to distributions or income with respect to PFICs. U.S. Holders should consult with their U.S. tax advisors concerning how these rules would apply to an investment in our common shares.

Foreign Currency Transactions

Generally, amounts received by a U.S. Holder in foreign currency (including dividends paid in foreign currency) will be valued at the rate of exchange on the date of receipt. The subsequent disposition of any foreign currency received (including an exchange for U.S. currency) will generally give rise to ordinary gain or loss should the rate of exchange subsequently change.

Foreign Tax Credit or Deduction

A U.S. Holder who pays (or has withheld from distributions) Canadian income tax with respect to the ownership of our common shares may be entitled, at the election of the U.S. Holder, to either receive a deduction or a tax credit for U.S. federal income tax purposes with respect to such foreign tax paid or withheld. Significant and complex limitations apply to the foreign tax credit, including the general limitation that the credit cannot exceed the proportionate share of the U.S. Holder's U.S. income tax liability that the U.S. Holder's "foreign source" income bears to his or its worldwide taxable income. In applying this limitation, the various items of income and deduction must be classified as either "foreign source" or "U.S. source." Complex rules govern this classification process.

In lieu of a credit, a U.S. Holder who itemizes deductions may elect to deduct all of such holder's foreign taxes in the taxable year. A deduction does not reduce U.S. tax on a dollar-for-dollar basis like a tax credit, but the deduction for foreign taxes is not subject to the same limitations applicable to foreign tax credits. U.S. Holders are urged to consult their own tax advisors regarding the availability of foreign tax credits.

A U.S. Holder's ability to use foreign tax credits could be adversely affected if we are a PFIC.

Information Reporting and Backup Withholding

Certain U.S. Holders are required to report information relating to an interest in our common shares, subject to certain exceptions, by attaching a completed IRS Form 8938, Statement of Specified Foreign Financial Assets, with their tax return for each year in which they hold an interest in our common shares or warrants. U.S. Holders are urged to consult their own tax advisors regarding information reporting requirements relating to their ownership of our common shares.

Dividend payments made with respect to our common shares and proceeds from the sale or other disposition of our common shares may be subject to information reporting requirements and to U.S. backup withholding.

In general, backup withholding will apply, currently at a rate of 24%, with respect to reportable payments made to a U.S. Holder unless (i) the U.S. Holder is a corporation or other exempt recipient, and if required, demonstrates such exemption, or (ii) the U.S. Holder furnishes the payor with a taxpayer identification number on IRS Form W-9 in the manner required, certifies under penalty of perjury that such U.S. Holder is not currently subject to backup withholding and otherwise complies with the backup withholding requirements.

Backup withholding is not an additional tax. Rather, the amount of any backup withholding imposed on a payment to a holder will be allowed as a refund or a credit against such holder's U.S. federal income tax liability, provided that the required information is timely furnished to the IRS.

ITEM 6. [RESERVED]

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

You should read the following discussion and analysis of our financial condition and results of operations together with our financial statements and related notes appearing elsewhere in this Annual Report. This discussion and analysis contains forward-looking statements that involve risks, uncertainties, and assumptions. See "Cautionary Note Regarding Forward-Looking Statements." Our actual results may differ materially from those anticipated in these forward-looking statements

as a result of many factors, including, but not limited to, those set forth in “Item 1A. Risk Factors” and elsewhere in this Annual Report.

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our Consolidated Financial Statements and accompanying notes included in Item 8 of this Annual Report. This Management’s Discussion and Analysis (this “MD&A”) has been prepared based on information known to management as of March 27, 2023. This MD&A is intended to help the reader understand the consolidated audited financial statements of the Company.

All currency amounts are expressed in thousands of U.S. dollars, except per share and common share amounts, unless otherwise noted.

OVERVIEW AND OUTLOOK

Our primary focus has been and continues to be the engineering, permitting, construction and operation of a demonstration-scale REE processing and separation plant to be located in Upton, Wyoming. If successful, this Demonstration Plant will show that our propriety extraction technology is able to process and separate certain REEs from sample materials extracted from our Bear Lodge REE Project in a more efficient and economical manner than traditional processing methods and will serve as a precursor to a future full-scale production facility.

During 2022, the Company, along with the other consortium members, continued their work on the Demonstration Plant, and this work is expected to continue through the project’s expected completion date in the early part of 2025. In December 2022, the Demonstration Plant achieved its final engineering design milestone marking the completion of the DoE’s first go decision point. The completion of this milestone was a gating event for the DoE’s continued funding of the project as provided for in the 2021 award grant. Future gating milestones include the expected completion of permitting activities in the second half of 2023 and the completion of the Plant’s construction thereafter. Operations to process and separate the REE from the stockpiled sample are expected to follow the completion of the Plant’s construction for an additional eight-to-10-month period.

In November 2022, the Company received notice that it had been awarded an additional \$4,400 grant from the WEA to be used toward the advancement of the Demonstration Plant. This award, along with the funds remaining from its December 2021 rights offering will be used to fund the Company’s fifty percent (50%) share of the Demonstration Plant’s total expected cost of \$42,000 with the other fifty percent of the funding coming from the DoE. Through December 31, 2022, the Company had paid a total of \$6,700 toward its share of the expected cost of the Demonstration Plant (see Note 4 to our Consolidated Financial Statements for a more complete discussion).

Longer term, the Company will not have sufficient funds to progress its development activities beyond the Demonstration Plant, including with respect to feasibility studies, permitting, and licensing, and development and construction related to its Bear Lodge REE Project. Therefore, the achievement of these longer-term activities will be dependent upon securing additional funds through financings, off-take agreements, joint ventures, strategic transactions, or sales of non-core assets. There is no assurance, however, that the Company will be successful in completing any such other financings or transactions. Ultimately, in the event the Company cannot secure additional financial resources, or complete a strategic transaction in the longer term, it may need to suspend its operational plans or potentially liquidate its business interests, and investors may lose all or part of their investment.

RESULTS OF OPERATIONS

Year Ended December 31, 2022 Compared with the Year Ended December 31, 2021

Summary

Our consolidated net loss for the year ended December 31, 2022 was \$9,426, or \$0.04 per share, compared with our consolidated net loss of \$5,402, or \$0.03 per share, for the same period in 2021. See our discussion below for the primary

drivers of this change. As an exploration stage company, we had no properties in production and generated no revenues during 2022 or 2021.

Exploration and Evaluation

Our exploration and evaluation costs totaled \$4,155 for the year ended December 31, 2022, compared with \$2,089 for the same period in 2021. This increase of \$2,066 was largely attributable to the activities associated with our Bear Lodge REE Project and the Demonstration Plant as work progressed under the Cost Share Agreement. See Note 4 to the Consolidated Financial Statements for a more complete discussion of this Cost Share Agreement.

Corporate Administration

Our corporate administration costs increased to \$5,205 for the year ended December 31, 2022, compared with \$3,114 for the same period in 2021. This increase of \$2,091 over the comparative period was largely driven by an increase in our stock-based compensation of \$1,384 and a severance payment of \$242 made to Mr. Scott, our former Chief Executive Officer.

Impairment Charges

During the year ended December 31, 2021, we recorded impairment charges of \$30 related to the write-down of certain equipment that was no longer in use. We had no such similar charge for the year ended December 31, 2022.

Interest Income

For the year ended December 31, 2022, the Company generated interest income of \$258 from the proceeds remaining from its December 2021 rights offering. During the year ended December 31, 2021, we had no such proceeds available for investment.

Accretion Expense

For the years ended December 31, 2022 and 2021, we recorded accretion expense of \$284 and \$114, respectively, related to the Company's option to repurchase approximately 640 acres of non-core real property in Wyoming for not less than \$1,200 or greater than \$1,850 in the form of cash, common shares of the Company, or a combination of cash and common shares of the Company. Accretion expense is recorded each reporting period to increase the repurchase option liability to the maximum exercise price of \$1,850, less any annual option payments of \$25. See Note 7 to the Consolidated Financial Statements for a more complete discussion of the repurchase option.

FINANCIAL POSITION, LIQUIDITY AND CAPITAL RESOURCES

Operating Activities

Net cash used in operating activities increased by \$6,582 during the year ended December 31, 2022 as compared to the same period in 2021. This increase was almost entirely due to the \$6,700 paid to General Atomics, as leader of the consortium, during the year under the Cost Share Agreement for work on the Demonstration Plant. During the year ended December 31, 2021, no similar payments were made to General Atomics under the Cost Sharing Agreement.

Financing Activities

During the year ended December 31, 2021, the Company received net proceeds of \$24,950 from its rights offering (as discussed below) and \$133 from stock option exercises. There were no such financing activities during 2022.

In December 2021, the Company completed a rights offering for gross proceeds of approximately \$25,400 in which each holder of the Company's common shares as of the close of business on the record date of October 19, 2021 was eligible to participate. Terms of the rights offering included the issuance of one subscription right for each common share owned

by each holder on the record date, with each subscription right entitling the holder to purchase one common share of the Company at a subscription price of \$0.24 per share (the “basic subscription privilege”). If any holder exercised its basic subscription privilege in full, the holder could also exercise an oversubscription privilege to purchase additional common shares for which were unsubscribed at the expiration of the rights offering, subject to availability and pro rata allocation of shares among persons exercising the oversubscription privilege. The Company has used and plans to use the net proceeds from the rights offering for the permitting, licensing, engineering, construction and operation of the rare earth separation and processing Demonstration Plant near the Company’s Bear Lodge REE Project and other general corporate purposes, with a portion used for the prepayment of outstanding indebtedness, in the principal amount of \$1,000, which repayment was completed in December 2021. The previously discussed \$21,900 financial award from the DoE for the Demonstration Plant will fund approximately one-half of the expected total cost of the Demonstration Plant, with the balance of the required funding being provided by the Company.

Liquidity and Capital Resources

At December 31, 2022, we had a working capital balance of \$17,628, which was a decrease of \$6,257 from our December 31, 2021 working capital balance of \$23,885. This decrease was mainly due to amounts paid by the Company during 2022 under the Cost Share Agreement for work on the Demonstration Plant.

In November 2022, the Company received notice that it had been awarded a \$4,400 grant from the WEA to be used toward the advancement of the Demonstration Plant. The WEA grant is a cost-reimbursement award that will be available to the Company for the reimbursement of future Demonstration Plant expenses. At December 31, 2022, the terms of this grant were still being finalized by the WEA pursuant to finalization of a funding or similar agreement and no amount of the \$4,400 award had been received by the Company. Depending on the award’s final terms and conditions, the Company may be able to claim a portion of the \$4,400 grant during 2023.

Inclusive of amounts already advanced, the Company’s share of the total costs under the Cost Share Agreement are expected to equal or exceed \$22,000 over the life of the Demonstration Plant project. As a result, the Company will not have sufficient funds to progress with longer term activities, including with respect to feasibility studies, permitting, development and construction related to the Bear Lodge REE Project, even after taking into account the expected receipt of the \$4,400 in WEA grant monies. Therefore, the achievement of these longer-term activities will be dependent upon additional financings, off-take agreements, joint ventures, strategic transactions, or sales of various assets. There can be no assurance, however, that the Company will be successful in completing any such financings or other transactions. Ultimately, in the event the Company cannot secure additional financial resources, or complete a strategic transaction in the longer term, it may need to suspend its operational plans or potentially liquidate its business interests, and investors may lose all or part of their investment.

Off-Balance Sheet Arrangements

We have no off-balance sheet arrangements required to be disclosed in this Annual Report.

Contractual Obligations

Cost Share Agreement – Related Party

On November 30, 2021, the Company and General Atomics entered into a Cost Share Funding Assumption Agreement (the “Cost Share Agreement”) pursuant to which the Company agreed to assume and pay for certain costs incurred by General Atomics and the consortium for the design, construction, and operation of a rare earth separation and processing Demonstration Plant near the Bear Lodge REE Project in Upton, Wyoming.

As previously discussed, in January 2021, the DoE announced that a consortium of companies, which includes the Company, led by General Atomics, an affiliate of Synchron, and certain of its affiliates, and LNV, an Ardurra Group, Inc. company, as engineering and construction subcontractor, was selected for a potential financial award in the amount of \$21,900 for the engineering, construction and operation of a rare earth separation and processing Demonstration Plant. The DoE award was finalized through a cooperative agreement dated October 1, 2021 (the “Cooperative Agreement”) between

General Atomics and the DoE with respect to the engineering, permitting, and licensing, construction and operation of the Demonstration Plant. The Cooperative Agreement provides that up to approximately \$43,900 in allowable costs for the Demonstration Plant would be funded on a cost-share basis, 50% by the DoE and 50% by a non-federal entity.

Pursuant to the terms of the Cost Share Agreement, the Company is obligated to make payments totaling \$21,900 to General Atomics, as leader of the consortium, for its share of the assumed costs for the Demonstration Plant, \$6,700 of which had been paid through December 31, 2022.

The term of the Cost Share Agreement will continue until the date of completion of the Demonstration Plant, unless terminated earlier by either party. Either party may terminate the Cost Share Agreement immediately upon written notice to the other party if any of the following events occurs: (a) the Cooperative Agreement is terminated for any reason prior to the completion of the Demonstration Plant; (b) the other party commits a material breach of its obligations under the Cost Share Agreement and fails to cure such breach within 30 days; or (c) the other party makes an assignment for the benefit of its creditors, files a petition in bankruptcy, is adjudicated insolvent or bankrupt, or commences any insolvency or bankruptcy proceedings. Upon any early termination of the Cost Share Agreement, the Company must pay for all costs incurred by or on behalf of General Atomics to wind down the Demonstration Plant other than any allowable costs for such wind-down paid for by the DoE.

Intellectual Property Rights – Related Party

During October 2017, the Company and Synchron executed an intellectual property rights agreement, whereby Synchron received rights to use and improve the Company’s intellectual property relating to the Company’s patents and related technical information. The Company retains the right to use any such improvements. See “Item 1A. Risk Factors” of this Annual Report.

Land Purchase Option

On October 25, 2021, the Company and Whitelaw Creek LLC, a Wyoming limited liability company (“Whitelaw Creek”), entered into an amendment (the “Amendment”) to the asset purchase agreement dated October 20, 2016 between the Company and Whitelaw Creek (the “Asset Purchase Agreement”). The Amendment modified certain provisions of the Asset Purchase Agreement related to the terms and conditions of the Company’s option to repurchase (the “Repurchase Option”) approximately 640 acres of non-core real property located in Crook County, Wyoming, that is under consideration for a waste rock facility for the Bear Lodge REE Project. Pursuant to and subject to the terms of the Amendment, among other things, the term of the Repurchase Option (which was to expire on October 26, 2021) was extended for up to three additional years, subject to annual option extension payments from the Company to Whitelaw Creek of \$25 in cash per year (each, a “Repurchase Option Extension Payment”); and the exercise price of the Repurchase Option was increased from \$1,000 to a price to be determined by a mutually agreed upon real estate appraiser (the “Repurchase Price”), provided that (i) the Repurchase Price must not be less than \$1,200 or greater than \$1,850 and (ii) any Repurchase Option Extension Payments paid by the Company to Whitelaw Creek must be credited toward the Company’s payment of the Repurchase Price if the Repurchase Option is later exercised. In October 2022, the Company made the \$25 Repurchase Option Extension Payment to Whitelaw Creek to extend the term of the Repurchase Option through October 26, 2023.

CRITICAL ACCOUNTING POLICIES

For a summary of our significant accounting policies, including those discussed below, see Note 3 to our Consolidated Financial Statements.

CRITICAL ACCOUNTING ESTIMATES

The preparation of consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of expenses during the reporting period. Actual results could differ from those estimates. The amounts which involve significant estimates include reclamation obligations and income tax.

Reclamation Obligations

Our mining and exploration activities are subject to various laws and regulations, including legal and contractual obligations to reclaim, remediate, or otherwise restore properties at the time the property is removed from service. Reclamation obligations are recognized when incurred and recorded as liabilities at fair value. The reclamation obligation is based on when spending for an existing disturbance will occur. We reclaim the disturbance from our exploration programs on an ongoing basis and, therefore, the portion of our reclamation obligation corresponding to our exploration programs will be settled in the near term and is classified as a current liability. The remaining reclamation associated with environmental monitoring programs is classified as a long-term liability; however, because we have not declared proven and probable reserves as defined under Item 1300 of Regulation S-K, the timing of these reclamation activities is uncertain as the reclamation areas will be utilized once the project is operating. For exploration stage properties that do not qualify for asset capitalization, the costs associated with the obligation are charged to operations. For development and production stage properties, the costs are added to the capitalized costs of the property and amortized using the units-of-production method. We review, on a quarterly basis, unless otherwise deemed necessary, the reclamation obligation associated with our properties.

Our reclamation obligation is secured by a surety bond held for the benefit of the state of Wyoming in an amount determined by the applicable federal or state regulatory agency.

Accounting for reclamation and remediation obligations requires management to make estimates unique to each mining operation of the future costs the Company expects to incur to complete the reclamation and remediation work required to comply with existing laws and regulations. These estimates require considerable judgment and are sensitive to changes in underlying inputs and assumptions. Such changes, including, but not limited to, (i) changes to environmental laws and regulations, which could increase the scope and extent of work required, (ii) changes in the timing of reclamation and remediation activities, which could occur over an extended future period and (iii) changes in the methods and technology utilized to settle reclamation and remediation obligations, could have a material impact on our business, financial condition, results of operations and cash flows.

Income Taxes

The Company applies the provisions of Financial Accounting Standards Board Accounting Standard Codification (“ASC”) 740 Income Taxes. The Standard requires an asset and liability approach for financial accounting and reporting for income taxes and the recognition of deferred tax assets and liabilities for the temporary differences between the financial reporting basis and tax basis of the Company’s assets and liabilities at enacted tax rates expected to be in effect when such amounts are realized or settled. Due to losses from inception, the Company has no tax liability. Currently, the Company has no deferred taxes arising from temporary differences between income for financial reporting and income tax purposes.

The Company classifies tax-related penalties and net interest on income taxes as income tax expense. As of December 31, 2022 and 2021, no income tax expense had been incurred or accrued.

New Accounting Pronouncements

As of December 31, 2022, the Company had adopted all accounting pronouncements affecting the Company.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Not applicable.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The following Consolidated Financial Statements and Reports of Independent Registered Public Accountants are filed as part of this Item 8 and are included in this Annual Report.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and
Shareholders of Rare Element Resources, Ltd.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheet of Rare Element Resources, Ltd. (the Company) as of December 31, 2022, and the related consolidated statements of income, comprehensive loss, shareholders' equity (deficit), and cash flows for the year December 31, 2022, and the related notes (collectively referred to as the financial statements). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2022 and the results of its operations and its cash flows for the year ended December 31, 2022, in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audit. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audit, we are required to obtain an understanding of internal control over financial reporting, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audit included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audit also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audit provides a reasonable basis for our opinion.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the financial statements and (2) involved especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Cost Share Agreement – Refer to Note 4 to the financial statements

As discussed in Note 4 to the financial statements, the Company is a member of a consortium of companies, led by General Atomics, a related party, who are developing a Demonstration Plant (the project) that will process high-grade rare-earth material. In connection with the arrangement, the Company entered into a cost share agreement with General Atomics, in which the Company agreed to assume and pay for 50% of those costs incurred by, and on behalf of, General Atomics, as leader of the consortium, for the project.

We considered management's assessment and accounting of the cost share agreement as a significant audit matter because of the significant judgments required by management to determine the activity completed in accordance with the agreements. This required a high degree of auditor judgment and an increased extent of effort to address these matter.

Addressing the matter involved gaining an understanding of the process to account for the cost share agreement. We obtained and interpreted the cost share agreement and subcontracts to ensure the amounts were consistently applied. We evaluated management's analysis, and compared that to applicable accounting guidance. Finally, we obtained the Company's fund flows and examined the costs used in their calculation to ensure they were in accordance with the agreements.

/s/ Haynie & Company

Salt Lake City, Utah

March 27, 2023

We have served as The Company's auditor since 2022

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Shareholders and Board of Directors
Rare Element Resources, Ltd.
Littleton, Colorado

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheet of Rare Element Resources, Ltd. (the “Company”) as of December 31, 2021, the related consolidated statements of operations and comprehensive loss, shareholders’ equity (deficit), and cash flows for the year then ended, and the related notes (collectively referred to as the “consolidated financial statements”). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2021, and the results of its operations and its cash flows for the year then ended, in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on the Company’s consolidated financial statements based on our audit. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (“PCAOB”) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audit we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company’s internal control over financial reporting. Accordingly, we express no such opinion.

Our audit included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audit also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audit provides a reasonable basis for our opinion.

/s/ BDO USA, LLP

We served as the Company's auditor from 2020 through 2022.

Spokane, Washington

March 22, 2022

RARE ELEMENT RESOURCES LTD.
CONSOLIDATED BALANCE SHEETS
(Expressed in thousands of U.S. Dollars, except shares outstanding)

| | December 31, | |
|--|---------------------|------------------|
| | 2022 | 2021 |
| ASSETS: | | |
| CURRENT ASSETS | | |
| Cash and cash equivalents | \$ 15,523 | \$ 22,247 |
| Restricted cash (Note 4) | — | 2,700 |
| Due from related party (Note 4) | 174 | 106 |
| Prepaid to related party (Note 4) | 2,142 | — |
| Prepaid expenses and other | 140 | 75 |
| Total Current Assets | <u>17,979</u> | <u>25,128</u> |
| Equipment, net (Note 7) | 15 | 16 |
| Right of use asset (Note 5) | 273 | 372 |
| Investment in land (Note 7) | 600 | 600 |
| Total Assets | <u>\$ 18,867</u> | <u>\$ 26,116</u> |
| LIABILITIES: | | |
| CURRENT LIABILITIES | | |
| Accounts payable and accrued liabilities | \$ 227 | \$ 407 |
| Due to related party (Note 4) | — | 712 |
| Lease liability, current (Note 5) | 124 | 124 |
| Total Current Liabilities | <u>351</u> | <u>1,243</u> |
| Reclamation obligation | 132 | 132 |
| Lease liability, long-term (Note 5) | 168 | 253 |
| Repurchase option (Note 7) | 1,281 | 1,047 |
| Total Liabilities | <u>1,932</u> | <u>2,675</u> |
| Commitments and Contingencies (Note 10) | | |
| SHAREHOLDERS' EQUITY: | | |
| Common shares, no par value – unlimited shares authorized; shares outstanding at December 31, 2022 and 2021 of 212,515,951 and 212,466,889, respectively | 136,906 | 136,906 |
| Additional paid in capital | 28,673 | 25,753 |
| Accumulated deficit | (148,644) | (139,218) |
| Total Shareholders' Equity | <u>16,935</u> | <u>23,441</u> |
| Total Liabilities and Shareholders' Equity | <u>\$ 18,867</u> | <u>\$ 26,116</u> |

The accompanying notes are an integral part of these audited consolidated financial statements.

RARE ELEMENT RESOURCES LTD.
CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS
(Expressed in thousands of U.S. Dollars, except per share and common share amounts)

| | Year Ended December 31, | |
|--|--------------------------------|-------------------|
| | 2022 | 2021 |
| Operating expenses: | | |
| Exploration and evaluation (<i>See Note 4 for related party costs</i>) | \$ (4,155) | \$ (2,089) |
| Corporate administration | (5,205) | (3,114) |
| Depreciation and amortization | (1) | (30) |
| Impairment charges | — | (30) |
| Total operating expenses | <u>(9,361)</u> | <u>(5,263)</u> |
| Non-operating income (expense): | | |
| Interest income | 258 | — |
| Accretion expense | (284) | (114) |
| Interest expense | <u>(39)</u> | <u>(25)</u> |
| Total non-operating income (expense) | <u>(65)</u> | <u>(139)</u> |
| Net loss | <u>\$ (9,426)</u> | <u>\$ (5,402)</u> |
| LOSS PER SHARE - BASIC AND DILUTED | <u>\$ (0.04)</u> | <u>\$ (0.03)</u> |
| WEIGHTED AVERAGE NUMBER OF SHARES OUTSTANDING | 212,475,088 | 173,490,546 |

The accompanying notes are an integral part of these audited consolidated financial statements.

RARE ELEMENT RESOURCES LTD.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(Expressed in thousands of U.S. Dollars)

| | <u>For the year ended December 31,</u> | |
|---|--|------------------|
| | <u>2022</u> | <u>2021</u> |
| CASH FLOWS FROM OPERATING ACTIVITIES: | | |
| Net loss | \$ (9,426) | \$ (5,402) |
| Adjustments to reconcile net loss to net cash used in operating activities: | | |
| Depreciation | 1 | 5 |
| Accretion expense | 284 | 114 |
| Impairment charges | — | 30 |
| Right of use asset amortization | 99 | 25 |
| Lease liability | (85) | (20) |
| Stock-based compensation | 2,920 | 1,536 |
| Repurchase Option | (50) | — |
| | <u>(6,257)</u> | <u>(3,712)</u> |
| Changes in working capital: | | |
| Due from related party | (68) | (106) |
| Prepaid expenses and other | (2,207) | (28) |
| Accounts payable and accrued liabilities | (892) | 1,004 |
| Net cash used in operating activities | <u>(9,424)</u> | <u>(2,842)</u> |
| CASH FLOWS FROM FINANCING ACTIVITIES: | | |
| Stock option exercise | — | 133 |
| Financing transaction, net (Note 8) | — | 24,950 |
| Net cash and cash equivalents provided by financing activities | <u>—</u> | <u>25,083</u> |
| Increase (Decrease) in cash, cash equivalents and restricted cash | (9,424) | 22,241 |
| Cash, cash equivalents and restricted cash - beginning of the period | 24,947 | 2,706 |
| Cash, cash equivalents and restricted cash - end of the period | <u>\$ 15,523</u> | <u>\$ 24,947</u> |
| Supplemental cash flow disclosures: | | |
| Right of use asset - operating lease capitalized | \$ — | \$ 397 |
| Reconciliation of amounts in the Balance Sheet to amounts in the Cash Flow Statement: | | |
| Cash and cash equivalents | \$ 15,523 | \$ 22,247 |
| Restricted cash | — | 2,700 |
| Total of cash, cash equivalents and restricted cash - end of period | <u>\$ 15,523</u> | <u>\$ 24,947</u> |

Supplemental disclosure with respect to cash flows – Note 11

The accompanying notes are an integral part of these audited consolidated financial statements.

RARE ELEMENT RESOURCES LTD.
CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY (DEFICIT)
(Expressed in thousands of U.S. Dollars)

| | Common Shares | Amount | Additional Paid in Capital | Accumulated Deficit | Total |
|-----------------------------------|--------------------|-------------------|----------------------------------|------------------------|------------------|
| Balance, December 31, 2020 | 104,895,245 | \$ 111,823 | \$ 24,217 | \$ (133,816) | \$ 2,224 |
| Stock option exercises | 1,763,200 | 133 | — | — | 133 |
| Stock-based compensation | — | — | 1,536 | — | 1,536 |
| Financing transaction (Note 8) | 105,808,444 | 24,950 | — | — | 24,950 |
| Net loss | — | — | — | (5,402) | (5,402) |
| Balance, December 31, 2021 | 212,466,889 | \$ 136,906 | \$ 25,753 | \$ (139,218) | \$ 23,441 |
| Stock option exercises | 49,062 | — | — | — | — |
| Stock-based compensation | — | — | 2,920 | — | 2,920 |
| Net loss | — | — | — | (9,426) | (9,426) |
| Balance, December 31, 2022 | <u>212,515,951</u> | <u>\$ 136,906</u> | <u>\$ 28,673</u> | <u>\$ (148,644)</u> | <u>\$ 16,935</u> |

The accompanying notes are an integral part of these audited consolidated financial statements.

RARE ELEMENT RESOURCES LTD.
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2022

(all amounts stated in thousands of U.S. dollars except share and per share amounts)

1. NATURE OF OPERATIONS

Rare Element Resources Ltd. (“we,” “us,” “Rare Element” or the “Company”) was incorporated under the laws of the Province of British Columbia, Canada, on June 3, 1999.

Rare Element holds a 100% interest in the Bear Lodge rare earth elements project (the “Bear Lodge REE Project”) located near the town of Sundance in northeast Wyoming. The Bear Lodge REE Project consists of several large, disseminated rare earth elements (“REE”) deposits that comprise one of the highest-grade REE deposits identified in North America. In addition, to neodymium-praseodymium (“Nd/Pr”), the Bear Lodge REE Project has a favorable distribution of a number of other critical rare earth elements. The Company also holds a 100% interest in the Sundance Gold Project that is adjacent to the Bear Lodge REE Project and contains a historical inferred mineral resource primarily composed of three gold targets within the area of the Bear Lodge property (the “Bear Lodge Property”). Given the Company’s longstanding focus on the Bear Lodge REE Project and the current interest in REE, the advancement of the Sundance Gold Project has been on hold since 2011 and will likely remain so for the foreseeable future.

The Company is currently focused on the advancement of a rare earth processing and separation demonstration plant (the “Demonstration Plant”) project. In January 2021, a consortium of companies, of which the Company is a part, received notice from the Department of Energy (“DoE”) that the consortium had been selected for negotiation of a potential financial award for the engineering, construction and operation of a rare earth separation and processing Demonstration Plant. The consortium of companies is led by General Atomics, an affiliate of Synchron, the Company’s majority shareholder, and includes certain of General Atomics’ affiliates, and LNV, an Ardurra Group, Inc. company, as engineering and construction subcontractor. A formal proposal was submitted by the consortium in response to a published Funding Opportunity Announcement in mid-2020 for the construction and operation of a rare earth separation and processing plant utilizing proprietary technology to produce commercial-grade products. The DoE finalized the award, and an agreement was executed by the DoE’s grants/agreement officer on September 27, 2021, with an effective date of October 1, 2021. The Company, as a subrecipient of the award, along with the other consortium members, commenced work on the planning and design of the Demonstration Plant project in November 2021, with the Company’s contractual arrangement with General Atomics finalized in December 2021. The DoE funding is in the amount of \$21,900 and represents approximately one-half of the total estimated costs for the Plant. The Demonstration Plant will process already stockpiled high-grade sample materials from the Bear Lodge REE Project.

To address the Company’s funding needs, during December 2021, the Company completed a rights offering for gross proceeds of approximately \$25,400. The Company is using the net proceeds from the rights offering for the permitting, licensing, engineering, construction, and operation of the Demonstration Plant near the Company’s Bear Lodge REE Project. The previously noted \$21,900 financial award from the DoE is expected to fund approximately one-half of the expected total cost of the Demonstration Plant, with the balance of the required funding being provided by the Company utilizing the proceeds from the rights offering and the recently announced \$4,400 grant from the Wyoming Energy Authority (“WEA”).

Even with the completion of the 2021 rights offering and expected receipt of the WEA grant monies (see Note 13 to our Consolidated Financial Statements), the Company will not have sufficient funds to progress with its longer term activities beyond the Demonstration Plant’s operation period, including with respect to feasibility studies, permitting, licensing, development, and construction related to the Bear Lodge REE Project. Therefore, the achievement of these longer-term activities will be dependent upon the receipt of additional funds through financings, off-take agreements, joint ventures, strategic transactions, or sales of various assets.

The Company has incurred losses since its inception, and further losses are anticipated in the development of its business. As of December 31, 2022, the Company had cash and cash equivalents of \$15,523 and our cash used in operations during the year ended December 31, 2022 was \$9,424, of which approximately \$6,700 was used for the payment of costs associated with the Demonstration Plant project, while the remainder was used for the payment of the Company’s general and administrative expenses and other ongoing costs of sustaining its properties and mining claims.

RARE ELEMENT RESOURCES LTD.
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2022

(all amounts stated in thousands of U.S. dollars except share and per share amounts)

2. BASIS OF PRESENTATION

Principles of Consolidation

These consolidated financial statements have been prepared in accordance with United States generally accepted accounting principles (“GAAP”) and are inclusive of the accounts of Rare Element Resources Ltd. and its directly and indirectly held wholly owned subsidiaries, which consist of its wholly owned subsidiary Rare Element Holdings Ltd. (“Holdings”) and Holdings’ wholly owned subsidiary, Rare Element Resources, Inc. All numbers in the consolidated financial statements are presented in U.S. dollars (in thousands), unless otherwise denoted.

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Use of Estimates

The preparation of consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of expenses during the reporting period. Actual results could differ from those estimates. The amounts that involve significant estimates include our reclamation obligations and stock-based compensation.

Cash and Cash Equivalents

Cash and cash equivalents consist of cash and liquid investments with an original maturity of three months or less. At December 31, 2022 and 2021, cash and cash equivalents consisted of \$15,523 and \$22,247, respectively, of funds held in bank and investment accounts with financial institutions in the United States.

The Company continually monitors its cash positions with, and the credit quality of, the financial institutions with which it invests. The Company maintains balances in various U.S. financial institutions in excess of U.S. federally insured limits.

Restricted Cash

The Company periodically maintains cash deposits that are held and earmarked for a specific purpose. At December 31, 2021, the Company had set aside \$2,700 for amounts to be paid under its cost sharing agreement with General Atomics, as leader of the consortium. These amounts were paid to General Atomics during 2022.

Mineral Properties and Exploration and Evaluation Costs

Mineral property acquisition costs, including indirectly related acquisition costs, are capitalized when incurred. Acquisition costs include cash consideration and the fair market value of the Company’s common shares (the “Common Shares”) issued as consideration. Properties acquired under option agreements, whereby payments are made at the sole discretion of the Company, are capitalized as mineral property acquisition costs at such time as the payments are made. Exploration costs are expensed as incurred. When it is determined that a mining deposit can be economically and legally extracted or produced based on established proven and probable mineral reserves under Item 1300 of Regulation S-K, development costs related to such reserves and incurred after such determination will be considered for capitalization. The establishment of proven and probable reserves is based on results of feasibility studies. Upon commencement of commercial production, capitalized costs will be amortized over their estimated useful lives or units of production, whichever is a more reliable measure. Capitalized amounts relating to a property that is abandoned or otherwise considered uneconomic for the foreseeable future will be written off.

RARE ELEMENT RESOURCES LTD.
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2022

(all amounts stated in thousands of U.S. dollars except share and per share amounts)

Reclamation Obligations

The Company's mining and exploration activities are subject to various laws and regulations, including legal and contractual obligations to reclaim, remediate, or otherwise restore properties at the time the property is removed from service. Reclamation obligations are recognized when incurred and recorded as liabilities at fair value. The reclamation obligation is based on when spending for an existing disturbance will occur. The Company reclaims the disturbance from its exploration programs on an ongoing basis; therefore, the portion of its reclamation obligation corresponding to its exploration programs expected to be settled in the near term is classified as a current liability. The remaining reclamation associated with environmental monitoring programs is classified as a long-term liability; however, because we have not declared proven or probable mineral reserves as defined under Item 1300 of Regulation S-K, the timing of these reclamation activities is uncertain as the reclamation areas will only be utilized once the Bear Lodge REE Project is operating. For exploration stage properties that do not qualify for asset capitalization, the costs associated with the reclamation obligation are charged to operations. For development and production stage properties, the costs are added to the capitalized costs of the property and amortized using the units-of-production method. We review, on a quarterly basis, unless otherwise deemed necessary, the reclamation obligation in connection with the Bear Lodge Property.

The Company's reclamation obligation is secured by a surety bond held for the benefit of the state of Wyoming in an amount determined by the applicable federal or state regulatory agencies. The Company's reclamation obligation was \$132 as of December 31, 2022 and 2021.

Depreciation

Depreciation is computed using the straight-line method. The Company depreciates computer equipment, furniture and fixtures and geological equipment over a period of three to ten years. The Company depreciates vehicles over a period of five years.

Stock-based Compensation

The fair value of stock-based compensation awards is measured at the date of grant and amortized over the requisite service period, which is generally the vesting period, with a corresponding increase in additional paid-in capital. The Company uses the Black-Scholes option valuation model to calculate the fair value of awards granted.

In the case of a share-based compensation award that is either cancelled or forfeited prior to vesting, the amortized expense associated with the unvested awards is reversed. The Company has elected to account for forfeitures as they occur.

Income Taxes

The Company accounts for income taxes under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. Under the asset and liability method, the effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date. A valuation allowance is recognized if it is more likely than not that the entire or some portion of the deferred tax asset will not be recognized.

Loss per Share

Loss per share is computed using the weighted average number of shares outstanding during the period. During December 2021, the Company completed a rights offering (see Note 8) whereby the Company offered existing shareholders the right to purchase additional common shares at \$0.24 (the "offer price"). The offer price was significantly lower than the fair value of the common shares at that time. The discounted offer price was considered a bonus element, similar to a stock

RARE ELEMENT RESOURCES LTD.
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2022

(all amounts stated in thousands of U.S. dollars except share and per share amounts)

dividend. As a result, the earnings per share calculation was adjusted retroactively for the bonus element for all periods presented. For the year ended December 31, 2021, the Company's basic and diluted earnings per share calculations have been adjusted to include the impact of the bonus element.

To calculate diluted loss per share, the Company uses the treasury stock method and the if-converted method. Diluted loss per share is not presented, as the effect on the basic loss per share would be anti-dilutive. At December 31, 2022 and 2021, we had 4,160,000 and 2,180,000 of potentially dilutive securities, respectively, related to outstanding stock options.

Fair Value

GAAP defines fair value as the price that would be received to sell an asset or be paid to transfer a liability in an orderly transaction between market participants at the measurement date (exit price) and establishes a fair-value hierarchy that prioritizes the inputs used to measure fair value using the following definitions (from highest to lowest priority):

- Level 1 — Unadjusted quoted prices in active markets that are accessible at the measurement date for identical, unrestricted assets or liabilities.
- Level 2 — Observable inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly, including quoted prices for similar assets and liabilities in active markets; quoted prices for identical or similar assets and liabilities in markets that are not active; or other inputs that are observable or can be corroborated by observable market data by correlation or other means.
- Level 3 — Prices or valuation techniques requiring inputs that are both significant to the fair-value measurement and unobservable.

Financial assets and liabilities subject to fair value measurements on a recurring basis and the level of inputs used in such measurements by major security type as of December 31, 2022 and 2021 are presented in the following table:

| Fair value at December 31, 2022 | | | | |
|--|-----------|-----------|---------|---------|
| | Total | Level 1 | Level 2 | Level 3 |
| Assets: | | | | |
| Money market funds | \$ 5,216 | \$ 5,216 | \$ — | \$ — |
| U.S. Treasury bills | 9,961 | 9,961 | — | — |
| Fair value at December 31, 2021 | | | | |
| | Total | Level 1 | Level 2 | Level 3 |
| Assets: | | | | |
| Money market funds | \$ 22,700 | \$ 22,700 | \$ — | \$ — |

Money market funds and U.S. Treasury bills are valued at cost, which approximates fair value. These amounts are included on the balance sheet in cash and cash equivalents at December 31, 2022 and cash and cash equivalents and restricted cash at December 31, 2021.

Recently Issued Accounting Pronouncements

None.

RARE ELEMENT RESOURCES LTD.
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2022

(all amounts stated in thousands of U.S. dollars except share and per share amounts)

4. RELATED PARTY

Cost Share Agreement with General Atomics

In January 2021, a consortium of companies, of which the Company is a part, received notice from the DoE that the consortium had been selected for negotiation of a potential financial award for the engineering, construction, and operation of the Demonstration Plant. The consortium of companies is led by General Atomics, an affiliate of Synchron (the Company's majority shareholder), and includes certain of General Atomics' affiliates, and LNV, an Ardurra Group, Inc. company, as engineering and construction subcontractor. A formal proposal was submitted by the consortium in response to a published Funding Opportunity Announcement in mid-2020 for the construction and operation of the Demonstration Plant utilizing proprietary technology to produce commercial-grade products. The DoE's share of the Demonstration Plant project funding is \$21,900 and represents approximately one-half of the total estimated costs for the project. The Demonstration Plant is planned to process already stockpiled high-grade sample materials from the Bear Lodge REE Project. The DoE agreement was executed by the DoE's grants/agreement officer on September 27, 2021, with an effective date of October 1, 2021. The DoE award was finalized through a cooperative agreement dated October 1, 2021 (the "Cooperative Agreement") that was awarded by the DoE for the Demonstration Plant. The Cooperative Agreement provides that up to approximately \$43,900 in allowable costs for the Demonstration Plant would be funded on a cost-share basis, 50% by the DoE and 50% by a non-federal entity.

On November 30, 2021, the Company and General Atomics entered into a Cost Share Funding Assumption Agreement (the "Cost Share Agreement") pursuant to which the Company agreed to assume and pay for certain costs incurred by, and on behalf of, General Atomics for the design, construction, and operation of the Demonstration Plant near the Bear Lodge REE Project in Upton, Wyoming.

Pursuant to the terms of the Cost Share Agreement, the Company has made payments to General Atomics, as leader of the consortium, totaling \$6,700 through December 31, 2022, for Company-assumed costs for the Demonstration Plant, with the number and amount of additional payments to be subject to the mutual written agreement of the parties. At December 31, 2021, the initial payment of \$2,700 was classified on the Company's balance sheet as restricted cash.

The term of the Cost Share Agreement will continue until the date of completion of the Demonstration Plant, unless terminated earlier by either party. Either party may terminate the Cost Share Agreement immediately upon written notice to the other party if any of the following events occurs: (a) the Cooperative Agreement is terminated for any reason prior to the completion of the Demonstration Plant; (b) the other party commits a material breach of its obligations under the Cost Share Agreement and fails to cure such breach within 30 days; or (c) the other party makes an assignment for the benefit of its creditors, files a petition in bankruptcy, is adjudicated insolvent or bankrupt, or commences any insolvency or bankruptcy proceedings. Upon any early termination of the Cost Share Agreement, the Company must pay for all costs incurred by or on behalf of General Atomics to wind down the Demonstration Plant other than any allowable costs for such wind-down paid for by the DoE.

The following table summarizes transactions under the Cost Share Agreement for the years ended December 31, 2022 and 2021:

| | <u>2022</u> | <u>2021</u> |
|---|-----------------|-------------|
| Balance of funds paid under the Cost Share Agreement at beginning of year | \$ — | \$ — |
| Funds transferred to General Atomics during the year | 6,700 | — |
| Company's share of Demonstration Plant project costs during the year | (4,558) | — |
| Balance of funds remaining on deposit with General Atomics at end of year | <u>\$ 2,142</u> | <u>\$ —</u> |

RARE ELEMENT RESOURCES LTD.
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2022

(all amounts stated in thousands of U.S. dollars except share and per share amounts)

As of December 31, 2022 and 2021, the Company had also recorded related party payables to General Atomics of nil and \$712, respectively, for amounts owing to General Atomics under the Cost Share Agreement.

The following table summarizes the related party receivable activity with General Atomics for reimbursable costs incurred by the Company under the Cost Share Agreement for the years ended December 31, 2022 and 2021:

| | <u>2022</u> | <u>2021</u> |
|---|---------------|---------------|
| Balance of receivables due from General Atomics at beginning of year ⁽¹⁾ | \$ 106 | \$ — |
| Reimbursable costs incurred by the Company during the year ⁽¹⁾ | 900 | 106 |
| Reimbursements received from General Atomics during the year | (832) | — |
| Balance of receivables due from General Atomics at end of year ⁽¹⁾ | <u>\$ 174</u> | <u>\$ 106</u> |

- (1) Because the Company had not yet advanced any funds under the Cost Share Agreement at December 31, 2021, the amounts due from General Atomics at December 31, 2021 represented just the portion of those amounts expected to be paid from DoE-sourced funds under the Cooperative Agreement whereas at December 31, 2022 the amounts owing from General Atomics included the full 100% share of all amounts billed by the Company under the Cost Share Agreement; including those amounts to be repaid from the \$6,700 advanced by the Company to General Atomics, as leader of the consortium, during the year ended December 31, 2022.

During January and February 2023, the Company received payments from General Atomics of all amounts owing under the Cost Share Agreement at December 31, 2022.

5. LEASES

The Company accounts for leases in accordance with ASC 842 – *Leases*. This accounting standard requires all lessees to record the impact of leasing contracts on the balance sheet as a right to use asset and corresponding liability. This is measured by taking the present value of the remaining lease payments over the lease term and recording a right to use asset (“ROU”) and corresponding lease obligation for lease payments. Rent expense is realized on a straight-line basis and the lease obligation is amortized based on the effective interest method. The amounts recognized reflect the present value of remaining lease payments for all leases that have a lease term greater than 12 months. The discount rate used is an estimate of the Company’s incremental borrowing rate based on information available at lease commencement in determining present value of lease payments.

In considering the lease asset value, the Company considers fixed or variable payment terms, prepayments, and options to extend, terminate or purchase. Renewal, termination, or purchase options affect the lease term used for determining lease asset value only if the option is reasonably certain to be exercised.

Effective September 21, 2021, the Company entered into a lease agreement for real property including land, a facility and office space in Upton, Wyoming for the Demonstration Plant. The lease is a 12-month lease with annual renewal terms. During June 2022, the lease was renewed, extending the termination date to September 30, 2023. The agreement, which is classified as an operating lease, generally provides for base rent, and requires the Company to pay all insurance, personal property taxes on any structure or improvements made by the Company and other maintenance costs. The lease agreement does not include variable lease payments, nor does it contain residual value guarantees or restrictive covenants.

RARE ELEMENT RESOURCES LTD.
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2022

(all amounts stated in thousands of U.S. dollars except share and per share amounts)

Total future minimum lease payments as of December 31, 2022 were as follows:

| | | |
|---------------------------------|----|------|
| 2023 | \$ | 124 |
| 2024 | | 124 |
| 2025 | | 93 |
| Total lease payments | | 341 |
| Less interest | | (49) |
| Present value of lease payments | \$ | 292 |

For the years ended December 31, 2022 and 2021, \$85 and \$20, respectively, were included in operating cash flows for amounts paid for operating leases.

As of December 31, 2022 and 2021, the weighted average lease terms for the Company's one operating lease were 2.75 years and 3.75 years (including renewal options), respectively, and the weighted average discount rate was estimated at 12% for both years.

6. MINERAL PROPERTIES

Bear Lodge Property, Wyoming, USA

The Company, through its indirectly held, wholly owned subsidiary, Rare Element Resources, Inc., holds a 100% interest in 499 unpatented mining claims located on land administered by the USFS and a repurchase option (see Note 7) on approximately 640 acres (257 hectares) of fee property, together which contain (1) the Bear Lodge REE Project that contains REE mineralization; and (2) the Sundance Gold Project that contains gold mineralization. The property is situated in the Bear Lodge Mountains of Crook County, in northeast Wyoming.

7. EQUIPMENT AND LAND

Equipment

At December 31, 2022 and 2021, equipment consisted of the following:

| | December 31, 2022 | | | December 31, 2021 | | |
|----------------------|-------------------|--------------------------|----------------|-------------------|--------------------------|----------------|
| | Cost | Accumulated depreciation | Net book value | Cost | Accumulated depreciation | Net book value |
| Geological equipment | \$ 240 | \$ 225 | \$ 15 | \$ 240 | \$ 224 | \$ 16 |
| Vehicles | 50 | 50 | — | 50 | 50 | — |
| | <u>\$ 290</u> | <u>\$ 275</u> | <u>\$ 15</u> | <u>\$ 290</u> | <u>\$ 274</u> | <u>\$ 16</u> |

Depreciation expense for the years ended December 31, 2022 and 2021 was \$1 and \$5, respectively. The Company evaluates the recoverability of the carrying value of equipment when events and circumstances indicate that such assets might be impaired. As a result of this evaluation, during the year ended December 31, 2021, the Company recorded impairment charges of \$30 related to assets no longer in use. There were no such charges during the year ended December 31, 2022.

Land

On October 25, 2021, the Company and Whitelaw Creek LLC, a Wyoming limited liability company ("Whitelaw Creek"), entered into an amendment (the "Amendment") to the asset purchase agreement dated October 20, 2016 between the

RARE ELEMENT RESOURCES LTD.
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2022

(all amounts stated in thousands of U.S. dollars except share and per share amounts)

Company and Whitelaw Creek (the “APA”). The Amendment modified certain provisions of the APA related to the terms and conditions of the Company’s option to repurchase (the “Repurchase Option”) approximately 640 acres of non-core real property located in Crook County, Wyoming, that is under consideration for a stockpile facility for the Bear Lodge REE Project. Pursuant to and subject to the terms of the Amendment, among other things, the term of the Repurchase Option (which was to expire on October 26, 2021) was extended for up to three additional years, subject to annual option extension payments from the Company to Whitelaw Creek of \$25 in cash per year (each, a “Repurchase Option Extension Payment”); and the exercise price of the Repurchase Option was increased from \$1,000 to a price to be determined by a mutually agreed upon real estate appraiser (the “Repurchase Price”), provided that (i) the Repurchase Price must not be less than \$1,200 or greater than \$1,850 and (ii) any Repurchase Option Extension Payments paid by the Company to Whitelaw Creek must be credited toward the Company’s payment of the Repurchase Price if the Repurchase Option is later exercised. In October 2022, the Company made the \$25 Repurchase Option Extension Payment to Whitelaw Creek to extend the term of the Repurchase Option through October 26, 2023.

For accounting purposes, the value of this land has been reflected in the Company’s financial statements as an asset (“Investment in Land”) with a related liability (“Repurchase Option”) recorded for the Company’s obligation under the Repurchase Option. Accretion expense is recorded each reporting period to increase the repurchase option liability to the maximum exercise price of \$1,850, less any annual option payments of \$25 per year. For the years ended December 31, 2022 and 2021, the Company recorded accretion expense of \$284 and \$114, respectively, related to this Repurchase Option.

8. SHAREHOLDERS’ EQUITY

Stock-based Compensation

As of December 31, 2022 and 2021, the Company had issued and outstanding stock options of 3,910,000 and 2,180,000, respectively, that were issued under its 10% Rolling Stock Option Plan, as amended, and restated (the “2011 Plan”) and 250,000 and nil, respectively, that were issued under its 2022 Equity Incentive Plan (the “2022 Plan”).

The 2011 Plan was replaced in 2022 by the 2022 Plan, and as such, no additional stock options can be granted under the 2011 Plan. Under the 2011 Plan, our Board of Directors could from time-to-time grant stock options to eligible directors, officers, employees, and consultants. The maximum term of any stock option grant under the 2011 Plan was 10 years.

Under the 2022 Plan, as approved by our shareholders at the annual meeting of shareholders on August 23, 2022, our Board of Directors is authorized to grant stock options, stock appreciation rights, restricted stock units, performance stock units and other cash and share-based awards to eligible directors, officers, employees, or consultants up to a maximum of 17,236,689 common shares. The maximum term of any grant under the 2022 Plan is 10 years.

The Company estimates the fair value of its stock option grants using the Black-Scholes option valuation model and the closing price of our common shares on the grant date. The significant assumptions used to estimate the fair value of the 2,080,000 and 855,000 stock option awards granted during the years ended December 31, 2022 and 2021, respectively, were as follows:

| | <u>Year Ended December 31,</u> | |
|-------------------------|--------------------------------|-------------|
| | <u>2022</u> | <u>2021</u> |
| Risk-free interest rate | 1.71-4.18 % | 1.69 % |
| Expected volatility | 135 - 144 % | 146 % |
| Expected dividend yield | Nil | Nil |
| Expected term in years | 8 | 8 |

RARE ELEMENT RESOURCES LTD.
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2022

(all amounts stated in thousands of U.S. dollars except share and per share amounts)

The following table summarizes our stock option activity for the years ended December 31, 2022 and 2021:

| | Year Ended December 31, | | | |
|----------------------------------|----------------------------|--|----------------------------|--|
| | 2022 | | 2021 | |
| | Number of Stock Options | Weighted Average Exercise Price | Number of Stock Options | Weighted Average Exercise Price |
| Outstanding, beginning of period | 2,180,000 | \$ 1.18 | 3,100,000 | \$ 0.28 |
| Granted | 2,080,000 | \$ 1.29 | 855,000 | \$ 2.25 |
| Exercised ⁽¹⁾ | (100,000) | \$ 0.25 | (1,775,000) | \$ 0.13 |
| Outstanding, end of period | 4,160,000 | \$ 1.26 | 2,180,000 | \$ 1.18 |
| Exercisable, end of period | 2,932,500 | \$ 1.28 | 1,377,500 | \$ 0.94 |
| Non-vested, end of period | 1,227,500 | \$ 1.20 | 802,500 | \$ 1.59 |

- ⁽¹⁾ The 100,000 and 1,775,000 of stock options exercised during the years ended December 31, 2022 and 2021, respectively, resulted in 49,062 and 1,763,200 common shares being issued on a net settlement basis pursuant to the terms of the 2011 Plan.

Stock-based compensation expense is included in corporate administration expenses within the Company's consolidated statements of operations. For the years ended December 31, 2022 and 2021, the Company recognized compensation expense related to stock option awards of \$2,920 and \$1,536, respectively. As of December 31, 2022, there was approximately \$173 of total unrecognized compensation cost related to the 1,227,500 unvested stock options that is expected to be recognized over a weighted-average remaining period of approximately 1.8 years.

| As of December 31, 2022: | Intrinsic Value | Weighted Average Remaining Life (Years) |
|---------------------------|-----------------|--|
| Stock options outstanding | \$ 168 | 6.8 |
| Stock options exercisable | \$ 168 | 5.7 |
| Stock options non-vested | \$ — | 9.2 |

The intrinsic value of stock options exercised during the years ended December 31, 2022 and 2021 was \$24 and \$2,985, respectively.

The weighted-average grant-date fair value of options granted during the years ended December 31, 2022 and 2021 was \$1.29 and \$2.25, respectively.

See Note 13 for a discussion of stock options granted subsequent to December 31, 2022.

Rights Offering

During December 2021, the Company completed a rights offering for gross proceeds of approximately \$25,400 in which each holder of the Company's common shares as of the close of business on the record date of October 19, 2021 was eligible to participate. Terms of the rights offering included the issuance of one subscription right for each common share owned by each holder on the record date with each subscription right entitling the holder to purchase one common share of the Company at a subscription price of \$0.24 per share (the "basic subscription privilege"). If any holder exercised its

RARE ELEMENT RESOURCES LTD.
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2022

(all amounts stated in thousands of U.S. dollars except share and per share amounts)

basic subscription privilege in full, the holder could also exercise an oversubscription privilege to purchase additional common shares for which were unsubscribed at the expiration of the rights offering, subject to availability and pro rata allocation of shares among persons exercising the oversubscription privilege. The rights offering resulted in the issuance of 105,808,444 Common Shares of the Company.

The net proceeds from the rights offering are being used for the permitting, licensing, engineering, construction and operation of the rare earth separation and processing Demonstration Plant near the Company's Bear Lodge REE Project and other general corporate purposes, with a portion used for the repayment of outstanding indebtedness, in the principal amount of \$1,000, which repayment was completed in December 2021. The previously discussed \$21,900 financial award from the DoE for the Demonstration Plant is expected to fund approximately one-half of the expected total cost of the Demonstration Plant, with the balance of the required funding to come from the Company.

9. INCOME TAX

The Company recognizes future tax assets and liabilities for each tax jurisdiction based on the difference between the financial reporting and tax bases of assets and liabilities using the enacted tax rates expected to be in effect when the taxes are paid or recovered. A valuation allowance is provided against net future tax assets for which the Company does not consider the realization of such assets to meet the required "more likely than not" standard.

The Company's future tax assets and liabilities at December 31, 2022 and 2021 include the following components:

| | As of December 31, | |
|--|---------------------------|---------------|
| | 2022 | 2021 |
| Deferred tax assets: | | |
| Non-current: | | |
| Noncapital loss carryforwards, Canada | \$ 2,685 | \$ 2,651 |
| Capital loss carryforwards, Canada | 6 | 6 |
| Net operating loss carryforwards, U.S. | 23,675 | 22,235 |
| Mineral properties | 2,239 | 1,714 |
| Reclamation provision | 37 | 28 |
| Equipment | 104 | 91 |
| Share based compensation | 757 | 237 |
| Research and development | 212 | 513 |
| Deferred tax assets | <u>29,715</u> | <u>27,475</u> |
| Valuation allowance | (29,715) | (27,475) |
| Net | <u>\$ —</u> | <u>\$ —</u> |
| Deferred tax liabilities: | | |
| Deferred tax liabilities | <u>\$ —</u> | <u>\$ —</u> |
| Net deferred tax asset/(liability) | <u>\$ —</u> | <u>\$ —</u> |

The composition of the Company's valuation allowance by tax jurisdiction is summarized as follows:

| | As of December 31, | |
|---------------------------|---------------------------|------------------|
| | 2022 | 2021 |
| Canada | \$ 3,127 | \$ 3,093 |
| United States | 26,588 | 24,382 |
| Total valuation allowance | <u>\$ 29,715</u> | <u>\$ 27,475</u> |

RARE ELEMENT RESOURCES LTD.
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2022

(all amounts stated in thousands of U.S. dollars except share and per share amounts)

The valuation allowance increased by \$2,240 from the year ended December 31, 2021 to the year ended December 31, 2022. Since it is more likely than not that the deferred tax assets will not be realized, the Company has recorded a full 100% valuation allowance against the deferred tax assets.

At December 31, 2022, the Company had U.S. net operating loss (“NOL”) carryforwards of approximately \$98,970 with expiration dates ranging from 2023 to those not having an expiration date. As a result of the Tax Cuts and Jobs Act, U.S. NOL carryforwards generated in years ending after 2017 have an indefinite carryforward period (no expiration date) rather than the 20-year carryforward period that applied to those NOL carryforwards generated in 2017 and earlier years.

Section 382 of the Internal Revenue Code could apply and limit our ability to utilize a portion of our U.S. NOL carryforwards. However, since no Section 382 study has been completed, the actual usage of U.S. NOL carryforwards has not been determined.

At December 31, 2022, the Company also had Canadian non-capital loss carryforwards of approximately C\$12,938, which expire from 2026 to 2041 and capital loss carryforwards of C\$59.

For financial reporting purposes, loss from continuing operations before income taxes consists of the following components:

| | For the year ended December 31, | |
|---------------|--|-------------------|
| | 2022 | 2021 |
| Canada | \$ (487) | \$ (310) |
| United States | (8,939) | (5,092) |
| | <u>\$ (9,426)</u> | <u>\$ (5,402)</u> |

A reconciliation of expected income tax on net income at statutory rates is as follows:

| | As of December 31, | |
|---------------------------------------|---------------------------|-------------|
| | 2022 | 2021 |
| Net loss | \$ (9,426) | \$ (5,402) |
| Statutory tax rate | 27 % | 27 % |
| Tax expense at statutory rate | (2,545) | (1,459) |
| State taxes | (277) | (290) |
| Foreign rate differential | 477 | 302 |
| Change in tax rates | 55 | 43 |
| Share issuance costs amortization | — | (3) |
| Stock-based compensation | 248 | 56 |
| Nondeductible expenses | 17 | 11 |
| Expired net operating loss carryovers | — | 9 |
| Prior year true-up | (215) | (53) |
| Change in valuation allowance | 2,240 | 1,384 |
| Income tax expense | <u>\$ —</u> | <u>\$ —</u> |

The Company does not have any unrecognized income tax benefits. Should the Company incur interest and penalties relating to tax uncertainties, such amounts would be classified as a component of interest expense and operating expense, respectively.

Rare Element and its wholly owned subsidiary, Rare Element Holdings Ltd., file income tax returns in the Canadian federal and provincial jurisdictions, while its wholly owned subsidiary, Rare Element Resources, Inc., files in the U.S. federal and various state jurisdictions. The years still open for audit are generally the current year plus the previous three. However,

RARE ELEMENT RESOURCES LTD.
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2022

(all amounts stated in thousands of U.S. dollars except share and per share amounts)

because we have NOL carryforwards, certain items attributable to closed tax years are still subject to adjustment by applicable taxing authorities through an adjustment to tax losses carried forward to open years.

10. COMMITMENTS AND CONTINGENCIES

Potential Environmental Contingency

The Company's exploration and development activities are subject to various federal and state laws and regulations governing the protection of the environment. These laws and regulations are continually changing and generally have become more restrictive. The Company conducts its operations to protect public health and the environment and believes that its operations are materially in compliance with all applicable laws and regulations. The Company has made, and expects to make in the future, expenditures to comply with such laws and regulations. The ultimate amount of reclamation and other future site-restoration costs to be incurred for existing mining interests is uncertain.

Contract Commitment – Related Party

Pursuant to the Cost Share Agreement between the Company and General Atomics and as discussed more fully in Note 4, the Company has agreed to assume and pay for approximately one-half of the costs incurred by General Atomics and the other consortium members for the design, construction, and operation of the Demonstration Plant.

Asset Purchase Agreement

On October 25, 2021, the Company and Whitelaw Creek LLC, a Wyoming limited liability company ("Whitelaw Creek"), entered into an amendment (the "Amendment") to the asset purchase agreement dated October 20, 2016 between the Company and Whitelaw Creek (the "Asset Purchase Agreement"). The Amendment modified certain provisions of the Asset Purchase Agreement related to the terms and conditions of the Company's option to repurchase (the "Repurchase Option") approximately 640 acres of non-core real property located in Crook County, Wyoming, that is under consideration for a waste rock facility for the Bear Lodge REE Project. Pursuant to and subject to the terms of the Amendment, among other things, the term of the Repurchase Option (which was to expire on October 26, 2021) was extended for up to three additional years, subject to annual option extension payments from the Company to Whitelaw Creek of \$25 in cash per year (each, a "Repurchase Option Extension Payment"); and the exercise price of the Repurchase Option was increased from \$1,000 to a price to be determined by a mutually agreed upon real estate appraiser (the "Repurchase Price"), provided that (i) the Repurchase Price must not be less than \$1,200 or greater than \$1,850 and (ii) any Repurchase Option Extension Payments paid by the Company to Whitelaw Creek must be credited toward the Company's payment of the Repurchase Price if the Repurchase Option is later exercised. In October 2022, the Company made the \$25 Repurchase Option Extension Payment to Whitelaw Creek to extend the term of the Repurchase Option through October 26, 2023.

11. SUPPLEMENTAL DISCLOSURE WITH RESPECT TO CASH FLOWS

The Company did not have any significant non-cash transactions during the years ended December 31, 2022 or 2021.

12. SEGMENT INFORMATION

The Company operates in a single reportable operating segment; that segment being the exploration of mineral properties. The Company's chief executive officer, who is the chief operating decision maker, reviews financial information on an aggregate basis for evaluating financial performance. All of the Company's long-lived assets are located in the United States.

RARE ELEMENT RESOURCES LTD.
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2022

(all amounts stated in thousands of U.S. dollars except share and per share amounts)

13. SUBSEQUENT EVENTS

Wyoming Energy Authority Financial Award

In November 2022, the Company received notice that it had been awarded a \$4,400 grant from the WEA to be used toward the advancement of the Demonstration Plant. The WEA grant is a cost-reimbursement award that will be available to the Company for the reimbursement of future Demonstration Plant expenses. At December 31, 2022, the terms of this grant were still being finalized by the WEA pursuant to finalization of a funding or similar agreement and no amount of the \$4,400 award had been received by the Company. Depending on the award's final terms and conditions, the Company may be able to claim a portion of the \$4,400 grant during 2023. No amounts related to this grant have been included in the Company's December 31, 2022 financial statements.

Stock Option Grant

On January 4, 2023, the Company granted a total of 1,020,000 stock options to certain employees, directors and consultants having an exercise price of \$0.38. These options vest as follows: 50% on July 4, 2023 and 50% on January 4, 2024.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

There were no changes in or disagreements with accountants on accounting or financial disclosures that were not previously included in a Current Report on Form 8-K of the Company.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

The principal executive officer and principal financial officer, with the supervision of the Board of Directors and Audit Committee and participation of management, have evaluated the effectiveness of our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Exchange Act), as of December 31, 2022. Based on the evaluation, the principal executive officer and principal financial officer concluded that the disclosure controls and procedures in place are effective to ensure that information required to be disclosed by the Company in reports that the Company files or submits under the Exchange Act is recorded, processed, summarized, and reported within time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by the Company in reports that it files or submits under the Exchange Act is accumulated and communicated to our management, including our principal executive and financial officers, or persons performing similar functions, as appropriate, to allow timely decisions regarding required disclosure.

Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting of the Company. Internal control over financial reporting is defined in Rule 13a-15(f) promulgated under the Exchange Act as a process designed by, or under the supervision of, our principal executive and principal financial officers, and effected by our Board of Directors, management, and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with GAAP. Our internal control over financial reporting includes those policies and procedures that:

- pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of our assets;
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with GAAP, and that our receipts and expenditures are being made only in accordance with authorizations of our management and directors; and
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on the financial statements.

Subsequent to the addition of the CFO position in March 2022, our internal control procedures and policies have been updated and enhanced. Nevertheless, because of their inherent limitations, internal controls over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2022. In making this assessment, our management used the criteria set forth in the Internal Control—Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on management's assessment, we have concluded that, as of December 31, 2022, our internal control over financial reporting was effective. Because we are a smaller reporting company and a non-accelerated filer, our independent registered public accounting firm is not required to attest to or issue a report on the effectiveness of our internal control over financial reporting.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting during the quarter ended December 31, 2022 that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

None.

ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not applicable.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Directors

The following sets forth certain information about each of the Company's seven directors. The table below sets out the names and ages of the Company's directors; their provinces or states and country of residence; the offices they hold within the Company, if any; their occupations; and the dates since which they have served as directors of the Company. There are no family relationships among any directors or officers of the Company.

| Name, Age, Province or State and Country of Residence and Current Positions, if any, held in the Company | Unless otherwise indicated below, served as director since |
|--|---|
| BRENT D. BERG, 51 Wyoming, USA <i>Director</i> <i>President and Chief Executive Officer, Rare Element Resources Ltd.</i> | November 1, 2022 |
| GERALD W. GRANDEY, 76 (1)(2) Colorado, USA <i>Director</i> <i>Former Chief Executive Officer, Cameco Corporation</i> | August 2, 2013 |
| KELLI C. KAST, 56 (3) Colorado, USA <i>Director</i> <i>Consultant, Rare Element Resources, Inc.</i> | August 23, 2022 |
| LOWELL A. SHONK, 73 (1) Nevada, USA <i>Director</i> <i>Board Secretary, Cupric Canyon Capital LP/LLC</i> | April 23, 2013 |
| DAVID I. ROBERTS, 85 (3) California, USA <i>Director</i> <i>President and CEO, General Atomics Uranium Resources LLC</i> | November 17, 2017 |
| BARTON S. BRUNDAGE, 60 (1) Colorado, USA <i>Director</i> <i>President, Cordillera Corporation</i> | December 18, 2019 |
| NICOLE J. CHAMPINE, 52 (3) Colorado, USA <i>Director</i> <i>Vice President and General Counsel, Cordillera Corporation</i> | March 31, 2022 |

- (1) Current member of the Company's Audit Committee, of which Lowell A. Shonk is the chair.
- (2) Gerald W. Grandey was elected Chairman of the Board of Directors on June 10, 2015.
- (3) Current member of the Nominating, Corporate Governance and Compensation Committee (the "NCG&C Committee"), of which Nicole Champine is the chair.

The following are brief biographies of the Company's directors:

Brent D. Berg currently serves as President and Chief Executive Officer ("CEO") of the Company. Mr. Berg has over 25 years' experience in the mining and mineral processing industry, including 16 years in mine management roles and over 11 years working for in-situ recovery operations. From April 2020 to October 2022, he served as General Manager of Florence Copper Inc. From January 2019 to April 2020, Mr. Berg served as Vice President of Sustainability, Health & Safety for Excelsior Mining Corp. In addition, he spent over 21 years at Cameco Corporation in various roles, including as President of Cameco Resources, where he was responsible for oversight of the company's U.S. operations in Wyoming and Nebraska (2013–2018), General Manager of Cameco Corporation's Smith Ranch – Highland Operation (2011–2013), and Director of Environmental Leadership (2010–2011). Mr. Berg is a Professional Engineer with a B.A.Sc. in Regional Environmental Systems Engineering from the University of Regina and an MBA from the University of Regina.

Gerald W. Grandey has over 40 years of executive leadership in the mining industry. He is the former Chief Executive Officer of Canadian-based Cameco Corporation, one of the world's largest uranium producers. In 2010, Harvard Business Review recognized Mr. Grandey as being one of the Top 100 CEOs in the world because of the value created for shareholders during his tenure at Cameco. After 18 years with Cameco, he retired as Chief Executive Officer and as a director in 2011. Previously, he held senior executive positions with Concord Services and Energy Fuels Nuclear. Mr. Grandey was recognized in 2014 for leadership in the nuclear industry with the U.S. Nuclear Energy Institutes' William S. Lee Award; inducted into the Canadian Mining Hall of Fame in 2013; awarded the Canadian Nuclear Association's Ian McRae Award in 2012 for his work in advancing nuclear energy in Canada; and was nominated for the 2011 Oslo Business for Peace Award in recognition of his efforts to facilitate nuclear disarmament. He is the Vice Chairman of the Board of Governors of the Colorado School of Mines Foundation and is Chairman Emeritus for the London-based World Nuclear Association. Mr. Grandey is a former board member of Nutrien Ltd. (2018–2019), Potash Corporation of Saskatchewan (2011–2018), Cameco Corporation (1999–2011), Centerra Gold Inc. (2004–2010), Inmet Mining Corporation (2012–2013), SandSpring Resources Ltd. (2010–2015) and Canadian Oil Sands Limited (2011–2016). He has a degree in geophysical engineering from the Colorado School of Mines and a law degree from Northwestern University.

Barton S. Brundage has served since May 2021 as President of Cordillera Corporation ("Cordillera"), an affiliate of General Atomics and Synchron. In his current role and prior position of Executive Vice President (June 2007–May 2021), Mr. Brundage is and has been responsible for the day-to-day management of Cordillera's real estate operations in Colorado, Utah, and California. Since June 2007, he has served as Chairman of the board of directors of jetCenters, Inc. ("JCI"), an aviation fueling company and a subsidiary of Cordillera. Since January 2021, Mr. Brundage has served as Chairman of the board of directors of Ohio Gas Company, a regulated gas utility company based in Bryan, Ohio, that is affiliated with Cordillera. Since 2007, Mr. Brundage has also served as a director and/or executive officer for several other Cordillera-affiliated companies, including San Miguel Valley Corporation, Silver Cliff Land And Cattle Company, Colorado Barns Corporation, First City Investment Corporation, Lamartine Consolidated Mines Corporation, Boston Commons, Inc., Oceanic Exploration Company, Oceanic International Properties Corporation, and Sorrento West Properties, Inc. Prior to his current position with Cordillera and its affiliates, Mr. Brundage served as the Chief Financial Officer of JCI (July 1996–May 2007). Prior to his position with JCI, Mr. Brundage was employed by Brundage & Company (June 1985–July 1996), a regional investment banking firm specializing in mergers and acquisitions and long-term corporate financing. At Brundage & Company, he was employed in various capacities in the family-managed business, including Vice President, Senior Financial Analyst, and Analyst. He continues to serve as a member of Brundage & Company's board of directors (since 1980). Mr. Brundage received his Bachelor of Arts degree in Business Administration from Fort Lewis College and his Master of Business Administration from the University of Denver.

Nicole J. Champine has served as Vice President and General Counsel of Cordillera, an affiliate of General Atomics, since July 2007, and previously served as Cordillera's Legal Counsel (July 2001–July 2007). She has served as the President and a director of San Miguel Valley Corporation, a subsidiary of Cordillera, since June 2007 and July 2009, respectively. In addition, since May 2010, Ms. Champine has served as the President and a director of Oceanic Exploration Company, an oil and gas exploration company affiliated with Cordillera. From May 1998 to June 2001, she was a real estate and land development lawyer at the law firm of Otten, Johnson, Robinson, Neff & Ragonetti, P.C. From June 1993 to August 1995, Ms. Champine served as a project engineer for Peter Kiewit & Sons in Utah and Colorado on heavy-highway projects. She received her Bachelor of Science in Structural Engineering from the University of Texas at Austin and her Juris Doctorate from the University of Denver.

David I. Roberts is the President and Chief Executive Officer of General Atomics Uranium Resources LLC (since August 2007), which owns the stock of several General Atomics affiliated uranium companies. These affiliates include Rio Grande Resources Corporation and Nuclear Fuels Corporation, which have uranium properties in the United States and market uranium worldwide; Baywood Holdings Inc., which owns the Australian uranium mining and exploration companies Heathgate Resources Pty Ltd and Quasar Resources Pty Ltd; and General Atomics Energy Services, Inc., which is a partner in ConverDyn. Mr. Roberts holds the following positions at the indicated privately held companies, all of which are affiliates of General Atomics: President of Systems Integration, LLC (since September 2017), General Atomics Global Corporation (since December 2019), and General Atomics Aeronautical UK Ltd (since December 2011); Senior Vice President of General Atomics (since August 2016); and Director of Sequoyah Fuels International Corp. (since July 2016), Diazyme Laboratories Inc. (since July 2016), Aeronautical Systems Inc. (since July 2018) and Synchron (since September 2017). His previous positions at General Atomics include 19 years as Senior Vice President of the Advanced Technologies Group of General Atomics (June 1988–August 2007), where he was responsible for divisions involved in the development and application of advanced technologies for defense, energy and transport applications. Previously, he held staff positions performing research and development in support of advanced nuclear reactor programs (June 1968–June 1988). Prior to joining General Atomics, Mr. Roberts was associated with the General Electric Company (May 1967–May 1968), where he was involved in development and manufacture of military re-entry vehicles, and with Rolls Royce and Associates (U.K.) supporting design and construction of nuclear submarine reactors for the Royal Navy. Mr. Roberts was educated at London University and received an MIM (Materials Engineering) in 1960. He is a registered professional engineer in California, a chartered engineer (U.K.), and a member of numerous professional associations.

Kelli C. Kast has over 25 years of in-house legal experience, including seven years as a top legal officer in the precious metals industry, and 10 years in the rare earth industry. She has served as a consultant of Rare Element Resources, Inc., a subsidiary of the Company, since June 2015. From July 2012 to May 2015, Ms. Kast served as the Vice President, General Counsel, Chief Administrative Officer and Corporate Secretary of the Company. She served as Coeur d'Alene Mine Corporation's Vice President, General Counsel and Corporate Secretary from May 2005 to March 2009 and as its Chief Administrative Officer from March 2009 to December 2011. From 2004 to 2005, Ms. Kast served as Corporate Counsel for HealtheTech Inc. From 1997 to 2003, she served as the Assistant General Counsel and Corporate Secretary for Global Water Technologies Inc. and Psychrometric Systems, Inc. Ms. Kast earned her Juris Doctor from the University of South Dakota School of Law and her Bachelor's degree from the University of Idaho.

Lowell A. Shonk has 43 years of experience in the copper, molybdenum, gold, coal, iron ore, industrial minerals and lithium extractive and processing industries, holding positions as a financial executive at operational, divisional and corporate levels. Mr. Shonk is one of the founding partners and Board Secretary of Cupric Canyon Capital LLC ("Cupric"), a private equity company in partnership with Global Natural Resource Investments (formerly a unit of Barclays Bank PLC). Cupric's 88% owned affiliate, Khoemacau Copper Mining (Pty) Ltd. holds a large high-grade copper-silver project in Botswana where operations reached full production in December 2022 after nine years of exploration and development. He served as Cupric's Chief Executive Officer from February 2012 to March 2013 and as its Chief Financial Officer from January 2010 to February 2012. Prior to his Cupric involvement, Mr. Shonk served as Vice President of Financial and Operational Analysis at Phelps Dodge Corporation and Freeport-McMoRan Copper & Gold Inc. from 1999 through 2009. Mr. Shonk also served as Controller and/or Chief Financial Officer in various divisions of Cyprus Amax Mineral Company and its predecessor mining companies beginning in 1979. Mr. Shonk is the former chairman of the audit committee of the Society of Mining, Metallurgy and Exploration (2010-2016). From 2001 to 2009, he served on the board of directors and as chairman of the audit committee of Apache Nitrogen Products Inc. He obtained his undergraduate degree in Economics

from Indiana University, a master’s degree in Mineral Economics from Colorado School of Mines and an MBA from the University of Colorado – Denver.

Executive Officers

The Company’s current executive officers, their state and country of residence, the offices they hold within the Company, and the dates since which they have served as officers of the Company are as follows:

| Name, Age, Province or State and Country of Residence and Positions, current and former, if any, held in the Company | Served as officer since |
|--|-------------------------|
| Brent D. Berg, 51 Wyoming, USA <i>President and CEO</i> | November 1, 2022 |
| WAYNE E. RICH, 58 <i>Colorado, USA</i> <i>Chief Financial Officer</i> | March 28, 2022 |

Brent D. Berg. See “Item 10. Directors, Executive Officers and Corporate Governance—Directors” above for biographical information regarding Mr. Berg.

Wayne E. Rich most recently served as Vice President of Finance, Treasurer and Corporate Secretary of Eden Innovations LLC from August 2017 to March 2022. He served as Chief Financial Officer of Star Mountain Resources, Inc. from November 2015 to January 2017 and as Chief Financial Officer of Northern Zinc, LLC from May 2015 to November 2015, when it was acquired by Star Mountain Resources, Inc., which filed for Chapter 11 bankruptcy protection in February 2018. Mr. Rich served in various capacities at Prospect Global Resources, Inc., a publicly traded mining company, including as Chief Financial Officer and Vice President of Finance (September 2011–December 2012) and Senior Vice President of Accounting and Treasury (December 2012–May 2014). From October 2008 to September 2011, he served as Treasurer and Director of Corporate Finance of Thompson Creek Metals Inc., a publicly traded metals and mining company. Prior to that, he served in several capacities at The Doe Run Resources Corporation, an integrated mining and metals manufacturing company, from August 1998 to October 2008, including as Treasurer (April 2007–October 2008) and Assistant Treasurer (July 2004–April 2007). Mr. Rich began his career with KPMG Peat Marwick. Mr. Rich holds a Master’s in Business Administration from Illinois State University and a Bachelor of Science in Accountancy from Eastern Illinois University.

Corporate Cease Trade Orders or Bankruptcies

To the knowledge of the Company, no director of the Company is, or within the 10 years prior to the date of this Annual Report has been, a director or executive officer of any company that (i) was subject to a cease trade or similar order or an order that denied the relevant company access to any exemption under securities legislation, for a period of more than 30 consecutive days (any of the foregoing being an “order”), that was issued while he or she was acting in the capacity of director, chief executive officer or chief financial officer of that company; or (ii) was subject to an order that was issued after he or she ceased to be a director, chief executive officer or chief financial officer and which resulted from an event that occurred while he or she was acting in that capacity.

To the knowledge of the Company, no director of the Company is, or within the 10 years prior to the date of this Annual Report has been, a director or executive officer of any company that (i) was bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency, or became subject to or instituted any proceedings, arrangement or compromise with creditors, or had a receiver, receiver manager or trustee appointed to hold his or her assets; or (ii) within one year of his or her ceasing to act in that capacity, became bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency or was subject to or instituted any proceedings, arrangement or compromise with creditors or had a receiver, receiver manager or trustee appointed to hold its assets.

Individual Bankruptcies

No director of the Company has, within the 10 years prior to the date of this Annual Report, become bankrupt or made a proposal under any legislation relating to bankruptcy or insolvency, or been subject to or instituted any proceedings, arrangement or compromise with creditors, or had a receiver, receiver manager or trustee appointed to hold the assets of that individual.

Penalties or Sanctions

None of the directors of the Company has (i) been subject to any penalties or sanctions imposed by a court relating to securities legislation or by a securities regulatory authority, (ii) entered into a settlement agreement with a securities regulatory authority or (iii) been subject to any other penalties or sanctions imposed by a court or regulatory body that would likely be considered important to a reasonable security holder making a decision about whether to vote for the director or in making an investment decision.

Indebtedness of Directors and Executive Officers

None of the current or former directors or executive officers of the Company, nor any associate or affiliate of the foregoing persons, are or have been indebted to the Company since the beginning of the fiscal year ended December 31, 2022.

Management Contracts

No management functions of the Company are, to any substantial degree, performed by a person or company other than the directors or executive officers of the Company, in their roles as such.

Corporate Governance

Ethical Business Conduct

The Board has adopted a Code of Conduct, which is based on the fundamental principles of honesty, loyalty, fairness, forthrightness and use of common sense in general. The Code of Conduct is available on the Company's website at www.rareelementresources.com and on the Canadian System for Electronic Document Analysis and Retrieval ("SEDAR") at www.sedar.com. The Code of Conduct applies to all directors, officers and employees, including the principal executive, financial and accounting officers. The Audit Committee is responsible for setting the standards of business conduct contained in the Code of Conduct, and it annually reviews the Code of Conduct.

The Board, through the NCG&C Committee, is responsible for monitoring compliance with the Code of Conduct. The NCG&C Committee reviews, with management, any issues with respect to compliance with the Code of Conduct. The Board intends to disclose on its website any waiver from a provision of its Code of Conduct that applies to any of its principal executive officer, principal financial officer, principal accounting officer or controller or persons performing similar functions that relates to any element of its Code of Conduct. No waivers were granted from the requirements of the Company's Code of Conduct during the fiscal year ended December 31, 2022, or during the subsequent period through to the date of this Annual Report.

The Board ensures that the directors exercise independent judgment in considering transactions and agreements in respect of which a director or executive officer has a material interest. The Code of Conduct sets out the procedure with respect to reporting conflicts of interest. Actual or potential conflicts of interests are reported to the Chair of the NCG&C Committee. Members of the NCG&C Committee are required to be particularly vigilant in reviewing and approving conflicts of interests.

Standing Board Committees

Audit Committee

The Company has a separately designated, standing Audit Committee established in accordance with Section 3(a)(58)(A) of the Exchange Act. Under Canadian securities laws, the Company is required to have an audit committee comprised of not less than three directors. Each member of the Audit Committee must meet the independence requirements imposed by applicable law and must not be an employee, officer or affiliate of the Company. The Company's current Audit Committee consists of Lowell A. Shonk (Chair), Gerald W. Grandey, and Barton S. Brundage. The Audit Committee's functions are to oversee the accounting and financial reporting process and the audit of the annual financial statements of the Company. The Audit Committee met six times during the fiscal year ended December 31, 2022.

Audit Committee Charter

The Audit Committee, under the guidance of the Audit Committee Charter approved by the Board, assists the Board in fulfilling its oversight responsibilities by reviewing (i) the financial statements, reports and other information provided to shareholders, regulators and others; (ii) the independent auditor's qualifications, independence and performance; (iii) the internal controls that management and the Board have established; (iv) the audit, accounting and financial reporting processes generally; and (v) compliance by the Company with legal and regulatory requirements. The text of the Audit Committee's Charter is furnished with this Annual Report as Exhibit 99.1 hereto and is also available on the Company's website at www.rareelementresources.com.

Independence

The Board has determined that all of the members of the Company's Audit Committee are independent within the meaning of National Instrument 52-110 – *Audit Committees* ("NI 52-110").

Audit Committee Financial Expert

The Company's Board has determined that Lowell A. Shonk, Chair of the Audit Committee, satisfies the requirement of an "audit committee financial expert," as defined under Item 407 of the Regulation S-K, and each of Messrs. Shonk, Brundage and Grandey is "financially literate" within the meaning thereof set forth in NI 52-110. See above under Part III, Item 10. "Directors, Executive Officers and Corporate Governance—Directors" for a description of the relevant education and experience of each of the Audit Committee members.

Nominating, Corporate Governance, and Compensation Committee

The current members of the NCG&C Committee are Nicole J. Champine (Chair), David I. Roberts, and Kelli C. Kast. Each of Ms. Champine and Mr. Roberts is considered to be independent within the meaning of NI 58-101. The NCG&C Committee met five times during the fiscal year ended December 31, 2022.

NCG&C Committee Charter

The NCG&C Committee is governed by a charter which sets forth the NCG&C Committee functions, which are, among other things, to establish procedures for the director nomination process and recommend nominees for election to the Board; to develop and periodically review the effectiveness of the Board's corporate governance guidelines; and to determine and recommend to the independent members of the Board the base salaries and annual incentive awards, including cash and equity-based incentive awards for the CEO, and where applicable, in consultation with the CEO, for other senior officers, on an annual basis. The NCG&C Committee Charter is available on the Company's website at www.rareelementresources.com.

Board Nominating Procedures

The NCG&C Committee believes that candidates for the Board should have (i) the ability to exercise objectivity and independence in making informed business decisions; (ii) extensive knowledge, experience and judgment; (iii) integrity; (iv) loyalty to the interests of the Company and its shareholders; (v) a willingness to devote the extensive time necessary to fulfill a director's duties; (vi) the ability to contribute to the diversity of perspectives present in board deliberations; and (vii) an appreciation of the role of the Company in society. The NCG&C Committee considers candidates meeting these criteria who are suggested by directors, management, shareholders and search firms hired to identify and evaluate qualified candidates.

Shareholders may submit recommendations in writing by a letter addressed to the CEO of the Company or the Chair of the NCG&C Committee. The NCG&C Committee will carefully consider each shareholder recommendation, evaluating each shareholder-recommended candidate for director under the same standards as candidates identified by any other method.

Compensation Functions

The NCG&C Committee is responsible for reviewing and making recommendations to the Board regarding the Company's compensation policies and programs as well as salary and benefit levels for individual executives. The Board, in turn, gives final approval on compensation matters. The NCG&C Committee does not and cannot delegate its authority to determine and recommend director and executive officer compensation.

ITEM 11. EXECUTIVE COMPENSATION

The following discussion summarizes our compensation program for our named executive officer for the 2022 fiscal year.

Named Executive Officers

"Named Executive Officer" or "NEO" means (a) all individuals who served as CEO of the Company during the fiscal year ended December 31, 2022; (b) each of the two most highly compensated executive officers, or the two most highly compensated individuals acting in a similar capacity, other than the CEO, at the end of the fiscal year ended December 31, 2022; and (c) each individual who would be an NEO under clause (b) above but for the fact that the individual was neither an executive officer of the Company, nor acting in a similar capacity, at the end of that fiscal year.

During the fiscal year ended December 31, 2022, the Company had three NEOs: Brent D. Berg, President and CEO of the Company; Wayne E. Rich, Chief Financial Officer of the Company; and Randall J. Scott, former President and CEO of the Company (who retired as the President and CEO on November 1, 2022).

Summary Compensation Table

Set out below is a summary of compensation paid to the Company's NEO during the fiscal years ended December 31, 2022 and 2021.

| Name and Principal Position | Year | Salary (\$) | Bonus (\$) | Option | All Other | Total (\$) |
|--|------|-------------|------------|----------------------------|----------------------------------|--------------|
| | | | | Awards ⁽¹⁾ (\$) | Compensation ⁽²⁾ (\$) | |
| Brent D. Berg ⁽³⁾ <i>President and CEO</i> | 2022 | \$ 41,666 | \$ 60,000 | \$ 107,725 | \$ 10,095 | \$ 219,486 |
| Randall J. Scott ⁽⁴⁾ <i>Former President and CEO</i> | 2022 | \$ 201,250 | \$ — | \$ 682,490 | \$ 255,065 | \$ 1,138,805 |
| | 2021 | \$ 230,000 | \$ 75,000 | \$ 556,795 | \$ — | \$ 861,795 |
| Wayne E. Rich ⁽⁵⁾ <i>Chief Financial Officer</i> | 2022 | \$ 164,557 | \$ 50,000 | \$ 142,186 | \$ — | \$ 356,743 |

- (1) The grant date fair value of option-based awards is determined by using the Black-Scholes option valuation model based on assumptions for the risk-free interest rate, expected dividend yield, expected volatility of the Common Shares, and expected life of the options set forth in Notes 3 and 8 to the consolidated financial statements included in this Annual Report.
- (2) Other compensation includes (i) the reimbursement of \$10,095 in relocation expenses for Mr. Berg and (ii) the payment of \$241,500 in severance and \$13,565 in accrued vacation benefits for Mr. Scott.
- (3) Mr. Berg was appointed as the President and Chief Executive Officer of the Company on November 1, 2022.
- (4) Mr. Scott retired as the President and Chief Executive Officer of the Company on November 1, 2022.
- (5) Mr. Rich was appointed as the Chief Financial Officer of the Company on March 28, 2022.

Narrative Discussion of Compensation and Plan-Based Awards

Employment Agreements

The Company has historically maintained employment agreements with its executive officers. The material terms of prior employment agreements have included (a) employment for an indefinite term unless employment is terminated as provided in the agreement; (b) severance arrangements, including upon a change in control; (c) a base salary; and (d) participation in the stock option plans of the Company (as described below), the incentive bonus, and the Company's benefit plans as are from time to time available to executive officers of the Company.

Brent D. Berg

Mr. Berg has had an employment agreement with the Company since November 1, 2022 (the "Berg Employment Agreement"). Pursuant to the Berg Employment Agreement, (i) Mr. Berg's initial annual base salary is US\$250,000; (ii) Mr. Berg was paid by December 1, 2022 a one-time signing bonus of US\$60,000, which must be repaid to the Company if Mr. Berg terminates his employment for convenience on or before November 1, 2023; (iii) Mr. Berg was reimbursed for up to US\$20,000 in certain actual, documented relocation expenses; (iv) Mr. Berg will be eligible to receive an annual performance bonus and such long-term incentive awards as may be determined by the Board; and (v) Mr. Berg will be eligible to participate in the employee benefit programs, if offered, of the Company.

Pursuant to the terms of the Berg Employment Agreement, Mr. Berg is entitled to separation benefits in the event that his employment is terminated by the Company without "cause" (as defined in the Berg Employment Agreement) or by Mr. Berg for "good reason" (as defined in the Berg Employment Agreement) due to certain reasons, including a material change in title or duties, a material reduction in compensation, a material breach of the Berg Employment Agreement by the Company or the failure by the Company to maintain reasonable directors and officers liability insurance acceptable to the Board, in each case which the Company has failed to cure. The severance payment to be received by Mr. Berg upon termination under the circumstances described above will be equal to one year of Mr. Berg's base salary in effect on the date of termination and paid to Mr. Berg in a lump sum 60 days after the date of such termination, provided that Mr. Berg has been with the Company for at least two years. In addition, Mr. Berg's equity incentive awards will vest as of the date of termination, provided that Mr. Berg executes a general release of claims.

Wayne E. Rich

Mr. Rich has had an employment agreement with the Company since March 28, 2022 (the "Rich Employment Agreement"). Pursuant to the terms of the Rich Employment Agreement, (i) Mr. Rich's initial annual base salary was \$215,000 and is subject to adjustment at the Company's discretion; (ii) Mr. Rich will be eligible to receive an annual performance bonus and such long-term incentive awards as may be determined by the Board; and (iii) Mr. Rich will be eligible to participate in the employee benefit programs, if offered, by the Company.

Additionally, Mr. Rich is entitled to separation benefits in the event that his employment is terminated by the Company without “cause” or by Mr. Rich for “good reason” (in each case, as defined in the Rich Employment Agreement) due to certain reasons, including a material change in title or duties, a material reduction in compensation, a material geographic relocation, or a material breach of the Rich Employment Agreement by the Company, in each case which the Company has failed to cure. The severance payment to be received by Mr. Rich upon termination under the circumstances described above will be equal to one year of Mr. Rich’s base salary in effect on the date of termination and paid to Mr. Rich in a lump sum 60 days after the date of such termination. In addition, Mr. Rich’s equity incentive awards will vest automatically upon such termination.

Randall J. Scott

Mr. Scott had an employment agreement with the Company from April 2013 until November 1, 2022 (the “Scott Employment Agreement”). Pursuant to the terms of the Scott Employment Agreement, (i) Mr. Scott’s annual base salary was \$241,500 as of January 1, 2022 and was subject to adjustment at the Company’s discretion; (ii) Mr. Scott was eligible to receive an annual performance bonus and such long-term incentive awards as may be determined by the Board; and (iii) Mr. Scott was eligible to participate in the employee benefit programs, if offered, by the Company. Additionally, Mr. Scott was entitled to separation benefits in the event that his employment is terminated by the Company without “cause” or by Mr. Scott for “good reason” (in each case, as defined in the Scott Employment Agreement) due to certain reasons, including a material change in title or duties, a material reduction in compensation, a material geographic relocation, or a material breach of the Scott Employment Agreement by the Company, in each case which the Company has failed to cure. The severance payment to be received by Mr. Scott upon termination under the circumstances described above was equal to one year of Mr. Scott’s base salary in effect on the date of termination and paid to Mr. Scott in a lump sum 60 days after the date of such termination. In addition, Mr. Scott’s equity incentive awards would vest automatically upon such termination.

On June 27, 2022, Rare Element Resources, Inc. entered into an amendment to the Scott Employment Agreement to provide for certain terms of Mr. Scott’s planned retirement (the “Scott Employment Agreement Amendment” and the Scott Employment Agreement, as amended by the Scott Employment Agreement Amendment, the “Amended Scott Employment Agreement”). Pursuant to the Scott Employment Agreement Amendment, Mr. Scott continued to serve as the Company’s Chief Executive Officer until November 1, 2022, the date on which Mr. Scott’s successor as Chief Executive Officer commenced employment with the Company. Until November 1, 2022, Mr. Scott performed his duties and responsibilities arising out of his position as the Chief Executive Officer as well as such succession planning and transition activities as were reasonably requested by the Board, including, without limitation, using reasonable efforts to ensure a smooth transition of his duties to the successor Chief Executive Officer or other officers of the Company. Upon the termination of Mr. Scott’s employment with the Company in accordance with the terms of the Amended Scott Employment Agreement, the Company paid to Mr. Scott any accrued vacation benefits. In addition, upon Mr. Scott’s execution of a consulting agreement with the Company and a general release of claims, the Company also paid to Mr. Scott a severance payment equal to one year of Mr. Scott’s base salary as in effect on the date of termination (or \$241,500).

In connection with the Scott Employment Agreement Amendment, the Company entered into a consulting agreement (as described below) with Mr. Scott to provide for the terms of Mr. Scott’s continued service with the Company for a certain period of time following Mr. Scott’s retirement (the “Scott Consulting Agreement”). The term of the Scott Consulting Agreement began on November 1, 2022 and will continue through December 31, 2027, unless terminated sooner in accordance with the terms of the Scott Consulting Agreement.

Pursuant to the Scott Consulting Agreement, Mr. Scott will provide consulting services to the Company on such projects as the Chairman of the Board or the Chief Executive Officer of the Company may reasonably request, and Mr. Scott will reasonably agree, related to the business of the Company, including executive transition services to the Company, periodic advice and counseling to the Chief Executive Officer of the Company and transferring knowledge with respect to legacy items, and may additionally include advising and assisting on such other matters as may be requested by the Board or the Chief Executive Officer from time to time. As consideration for the consulting services provided under the Scott Consulting Agreement, Mr. Scott will receive a consulting fee at a rate of \$20,125 per month for the period commencing on November 1, 2022 and ending on December 31, 2022. Thereafter, the rate of the consulting fee will be agreed between the Company and Mr. Scott. In addition, all stock options granted to Mr. Scott pursuant to the Rare Element Resources,

Ltd. 10% Rolling Stock Option Plan or otherwise will remain outstanding and eligible to vest in accordance with their terms during the term of the Scott Consulting Agreement as if Mr. Scott had remained employed by the Company through the term of the Scott Consulting Agreement.

The Scott Consulting Agreement contains certain restrictive covenants, including a confidentiality covenant and a non-competition covenant restricting Mr. Scott from acquiring any interest in any mining or mill site claims, minerals, real property, royalties, or water within 20 miles from the outside boundaries of any of the properties of the Company.

The Company may terminate the Scott Consulting Agreement if Mr. Scott breaches any of the restrictive covenants set forth in the Amended Scott Employment Agreement or the Scott Consulting Agreement or Mr. Scott disparages the Company or engages in egregious conduct detrimental to the Company. Mr. Scott may terminate the Scott Consulting Agreement at any time after December 31, 2022 upon 10 days' written notice. In addition, the Scott Consulting Agreement will end upon Mr. Scott's death or disability.

Equity Plan

As of March 24, 2023, there were 3,910,000 and 250,000 stock options outstanding, respectively, under the 2011 and 2022 Plans, representing approximately 2.0% of the current outstanding Common Shares. The 2011 Plan was terminated effective as of August 23, 2022. Then-existing awards granted under the 2011 Plan will remain outstanding in accordance with their terms, but new equity awards are being granted solely under the 2022 Plan. Material terms of the 2022 Plan are set out below.

Administration

The Board or one or more committees consisting of directors appointed by the Board may administer the 2022 Plan. The Board has delegated general administrative authority for the 2022 Plan to the NCG&C Committee. Except where prohibited by applicable law, a committee may delegate some or all of its authority with respect to the 2022 Plan to another committee of directors or to one or more officers of the Company. For purposes of Rule 16b-3 of the Exchange Act and for grants to non-employee directors, the 2022 Plan must be administered by a committee consisting solely of two or more independent directors. The appropriate acting body, be it the Board, a committee within its delegated authority, or an officer within his or her delegated authority, is referred to as the "Administrator."

The Administrator has broad authority under the 2022 Plan with respect to award grants, including, without limitation, the authority:

- To select participants and determine the type(s) of award(s) that they are to receive;
- To determine the number of shares that are to be subject to awards and the terms and conditions of awards, including the price (if any) to be paid for the shares or the award;
- To cancel, modify, or waive the Company's rights with respect to, or modify, discontinue, suspend, or terminate any or all outstanding awards, subject to any required consents, and subject to the repricing prohibition described below;
- To accelerate, extend the vesting or exercisability or extend the term of any or all outstanding awards subject to any required consents;
- Subject to the other provisions of the 2022 Plan, to make certain adjustments to outstanding awards and authorize the conversion, succession or substitution of awards; and
- To allow the purchase price of awards or Common Shares to be paid in the form of cash, check, or electronic funds transfer, by the delivery of already-owned Common Shares or by a reduction of the number of shares deliverable pursuant to the awards, by services rendered by the recipient of the awards, by notice of third party

payment or by cashless exercise, on such terms as the Administrator may authorize, or any other form permitted by law.

Eligibility

Persons eligible to receive awards under the 2022 Plan include officers and employees of the Company or any of its subsidiaries and non-employee directors of the Company, as well as certain independent contractors who render bona fide services to the Company or one of its subsidiaries and, in the case of independent contractors who are residents of Canada, who provide the services under a written contract with the Company or its subsidiaries, and spend or will spend a significant amount of time and attention on the affairs and business of the Company or its subsidiaries. As of March 24, 2023, there were two employees (including officers) and six consultants of the Company and its subsidiaries, and six non-employee directors of the Company who were eligible to receive awards under the 2022 Plan.

Authorized Shares

The 2022 Plan authorizes the issuance of up to 17,236,689 Common Shares pursuant to plan awards. The 2022 Plan generally provides that shares issued in connection with awards that are granted by or become obligations of the Company through the assumption of awards (or in substitution for awards) in connection with an acquisition of another company will not count against the shares available for issuance under the 2022 Plan, except as may be required by the Administrator or applicable law or stock exchange rules.

Shares that are subject to or underlie awards that expire or for any reason are canceled or terminated, are forfeited, fail to vest, or for any other reason are not paid or delivered under the 2022 Plan are available for reissuance under the 2022 Plan. However, the 2022 Plan prohibits liberal share recycling. Accordingly, shares tendered or withheld to satisfy the exercise price of options or tax withholding obligations, and shares covering the portion of exercised share-settled SARs (regardless of the number of shares actually delivered), count against the share limit.

Awards Under the 2022 Plan

Because awards under the 2022 Plan are granted in the discretion of the Board or a committee of the Board, the type, number, recipients and other terms of future awards cannot be determined at this time.

No Repricing

In no event will any adjustment be made to a stock option or SAR under the 2022 Plan (by amendment, cancellation and regrant, exchange for other awards or cash or other means) that would constitute a repricing of the per share exercise or base price of the award, unless such adjustment is approved by the shareholders of the Company. Adjustments made in accordance with the 2022 Plan to reflect a stock split or similar event are not deemed to be a repricing.

Dividends and Dividend Equivalents

Accrued dividends or dividend-equivalent amounts shall not be paid unless and until the awards to which they relate become vested.

Types of Awards

The 2022 Plan authorizes stock options, SARs, RSUs, PSUs, and other forms of awards that may be granted or denominated in or otherwise determined by reference to the Common Shares, as well as cash awards. The 2022 Plan provides flexibility to offer competitive incentives and to tailor benefits to specific needs and circumstances. Awards may, in certain cases, be paid or settled in cash.

Stock Options

A stock option is a right to purchase Common Shares at a future date at a specified price per share (the “exercise price”). The per share exercise price of an option generally may not be less than the fair market value of a Common Share on the date of grant. On March 24, 2023, the last sale price of the Common Shares as reported on the OTCQB Venture Marketplace was \$0.2812 per share. The maximum term of an option is ten years from the date of grant. An option may be either an incentive stock option or a nonqualified stock option. Incentive stock options are taxed differently than nonqualified stock options and are subject to more restrictive terms under the Internal Revenue Code of 1986, as amended (the “Code”), and the 2022 Plan. Incentive stock options may be granted only to employees of the Company or a subsidiary thereof.

SARs

A SAR is the right to receive payment of an amount equal to the excess of the fair market value of Common Shares on the date of exercise of the SAR over the base price of the SAR. The base price is established by the Administrator at the time of grant of the SAR and may not be less than the fair market value of a Common Share on the date of grant. SARs may be granted in connection with other awards or independently. The maximum term of a SAR is ten years from the date of grant.

RSUs

An RSU represents the right to receive one Common Share on a specific future vesting or payment date. Subject to the restrictions provided in the applicable award agreement and the 2022 Plan, a participant receiving RSUs has no rights as a shareholder with respect to the RSUs until the Common Shares are issued to the participant. RSUs may be granted with dividend-equivalent rights that are payable only if the underlying RSUs vest. RSUs may be settled in cash if so provided in the applicable award agreement.

PSUs

A PSU is a performance-based award that entitles the recipient to receive Common Shares based on attainment of one or more performance goals. Each PSU shall designate a target number of shares payable under the award, with the actual number of shares earned (if any) based on a formula set forth in the award agreement related to the attainment of one or more performance goals. A participant receiving PSUs has no rights as a shareholder until the Common Shares are issued to the participant. PSUs may be granted with dividend-equivalent rights that are payable only if the underlying PSUs are earned. PSUs may be settled in cash if so provided in the applicable award agreement.

Cash Awards

The Administrator, in its sole discretion, may grant cash awards, including, without limitation, discretionary awards, awards based on objective or subjective performance criteria, and awards subject to other vesting criteria.

Other Awards

The other types of awards that may be granted under the 2022 Plan include, without limitation, stock bonuses, and similar rights to purchase or acquire Common Shares, and similar securities with a value derived from the value of, or related to, the Common Shares or returns thereon.

Other Terms

Change of Control

In the event of a change in control, the Administrator will have full discretion to take whatever actions it deems necessary or appropriate with respect to outstanding awards, including, but not limited to (a) provide for full or partial accelerated vesting of any award or a portion thereof, (b) provide for the assumption or substitution of all outstanding awards by the

surviving or acquiring company or parent thereof, (c) provide for the settlement in cash or property and cancellation of any award, and (d) take any other action as the Administrator deems necessary or advisable. In the event that the surviving or acquiring company does not assume or substitute the outstanding awards, all outstanding awards will fully accelerate, with all performance goals or other vesting criteria applicable to any performance-based awards deemed achieved based on performance through the date of such change in control and such awards will terminate and be payable upon the occurrence of a change in control.

Transferability of Awards

Awards under the 2022 Plan generally are not transferable by the recipient other than by will or the laws of descent and distribution, or pursuant to domestic relations orders. Awards with exercise features are generally exercisable during the recipient's lifetime only by the recipient. Any amounts payable or shares issuable pursuant to an award generally will be paid only to the recipient or the recipient's beneficiary or representative. The Administrator has discretion, however, to establish written conditions and procedures for the transfer of awards to other persons or entities, as long as such transfers comply with applicable federal, state and provincial securities laws and provided that any such transfers are not for consideration.

Adjustments

As is customary in plans of this nature, the share limits and the number and kind of shares available under the 2022 Plan and any outstanding awards, as well as the exercise or purchase prices of awards, are subject to adjustment in the event of certain reorganizations, mergers, combinations, recapitalizations, stock splits, stock dividends, or other similar events that change the number or kind of shares outstanding, and extraordinary dividends or distributions of property to the shareholders.

No Limit on Other Authority

The 2022 Plan does not limit the authority of the Board or any committee thereof to grant awards or authorize any other compensation, with or without reference to the Common Shares, under any other plan or authority.

Restrictive Covenants and Clawback Policy

By accepting awards and as a condition to the exercise of awards and the enjoyment of any benefits of the 2022 Plan, participants agree to be bound by any clawback policy adopted by the Company from time to time. Participants may also be subject to restrictive covenants if so required by the Administrator in any award agreement.

Termination of, or Changes to, the 2022 Plan

The Administrator may amend or terminate the 2022 Plan at any time and in any manner. Shareholder approval for an amendment will be required only to the extent then required by applicable law or any applicable stock exchange rules, or as required to preserve the intended tax consequences of the 2022 Plan. For example, shareholder approval is required for any proposed amendment to increase the maximum number of shares that may be delivered with respect to awards granted under the 2022 Plan. Adjustments as a result of stock splits or similar events will not, however, be considered amendments requiring shareholder approval. Unless terminated earlier by the Board, the authority to grant new awards under the 2022 Plan will terminate ten years after the date on which the 2022 Plan was approved by the Board. Outstanding awards will generally continue following the expiration or termination of the 2022 Plan. Generally speaking, outstanding awards may be amended by the Administrator (except for a repricing), but the consent of the award holder is required if the amendment (or any plan amendment) materially and adversely affects the award holder.

Certain United States Federal Tax Consequences

The following summary of the United States federal income tax consequences of awards under the 2022 Plan is based upon U.S. federal income tax laws in effect on the date of this proxy statement. This summary does not purport to be

complete, and does not discuss state, local or non-U.S. tax consequences. The tax consequences of individual awards may vary depending upon the particular circumstances applicable to any individual participant.

Nonqualified Stock Options

The grant of a nonqualified stock option under the 2022 Plan will not result in any federal income tax consequences to the participant or to the Company. Upon exercise of a nonqualified stock option, the participant will recognize ordinary compensation income equal to the excess of the fair market value of the Common Shares at the time of exercise over the option exercise price. If the participant is an employee, this income is subject to withholding for federal income and employment tax purposes. The Company is entitled to an income tax deduction in the amount of the income recognized by the participant, subject to possible limitations imposed by the Code, including Section 162(m) thereof. Any gain or loss on the participant's subsequent disposition of the shares will be treated as long-term or short-term capital gain or loss, depending on the sales proceeds received and whether the shares are held for more than one year following exercise. The Company does not receive a tax deduction for any subsequent capital gain.

Incentive Stock Options

The grant of an incentive stock option (or "ISO") under the 2022 Plan will not result in any federal income tax consequences to the participant or to the Company. A participant recognizes no federal taxable income upon exercising an ISO (subject to the alternative minimum tax rules discussed below), and the Company receives no deduction at the time of exercise. In the event of a disposition of shares acquired upon exercise of an ISO, the tax consequences depend upon how long the participant has held the shares. If the participant does not dispose of the shares within two years after the ISO was granted, nor within one year after the ISO was exercised, the participant will recognize a long-term capital gain (or loss) equal to the difference between the sale price of the shares and the exercise price. The Company is not entitled to any deduction under these circumstances.

If the participant fails to satisfy either of the foregoing holding periods (referred to as a "disqualifying disposition"), he or she will recognize ordinary compensation income in the year of the disposition. The amount of ordinary compensation income generally is the lesser of (i) the difference between the amount realized on the disposition and the exercise price or (ii) the difference between the fair market value of the shares at the time of exercise and the exercise price. Such amount is not subject to withholding for federal income and employment tax purposes, even if the participant is an employee of the Company. Any gain in excess of the amount taxed as ordinary income will generally be treated as a short-term capital gain. The Company, in the year of the disqualifying disposition, is entitled to a deduction equal to the amount of ordinary compensation income recognized by the participant, subject to possible limitations imposed by the Code, including Section 162(m) thereof.

The "spread" under an ISO (i.e., the difference between the fair market value of the shares at exercise and the exercise price) is classified as an item of adjustment in the year of exercise for purposes of the alternative minimum tax. If a participant's alternative minimum tax liability exceeds such participant's regular income tax liability, the participant will owe the alternative minimum tax liability.

Other Awards

Other awards (such as RSUs and PSUs) are generally treated as ordinary compensation income as and when Common Shares or cash are paid to the participant upon vesting or settlement of such awards. If the participant is an employee, this income is subject to withholding for income and employment tax purposes. The Company is generally entitled to an income tax deduction equal to the amount of ordinary income recognized by the recipient, subject to possible limitations imposed by the Code, including Section 162(m) thereof.

Section 162(m) of the Internal Revenue Code

Under Code Section 162(m), no deduction is generally allowed in any taxable year of the Company for compensation in excess of \$1 million paid to any of the Company's "covered employees." A "covered employee" is any individual who has served at any time after December 31, 2016 as the Company's CEO, chief financial officer, or other executive officer

whose compensation has been reported in a Company proxy statement, regardless of whether any such individual is still employed by the Company. We may be prohibited under Code Section 162(m) from deducting compensation paid pursuant to the 2022 Plan to our “covered employees.”

Section 409A of the Internal Revenue Code

Section 409A of the Code provides certain requirements for the deferral and payment of deferred compensation arrangements. In the event that any award under the 2022 Plan is deemed to be a deferred compensation arrangement, and if such arrangement does not comply with Section 409A of the Code, the recipient of such award will recognize ordinary income once such award is vested, as opposed to at the time or times set forth above. In addition, the amount taxable will be subject to an additional 20% federal income tax along with other potential taxes and penalties. It is intended, although not guaranteed, that all awards issued under the 2022 Plan will either be exempt from or compliant with the requirements of Section 409A of the Code.

Outstanding Equity Awards at Fiscal Year-End

The following table sets forth the outstanding option awards held by the NEOs of the Company as of December 31, 2022.

Outstanding Equity Awards at Fiscal Year-End

| Name | Option Awards | | | |
|------------------|---|---|----------------------------|------------------------|
| | Number of Securities Underlying Unexercised Options (#) Exercisable | Number of Securities Underlying Unexercised Options (#) Unexercisable | Option Exercise Price (\$) | Option Expiration Date |
| Brent D. Berg | — | 250,000 | \$ 0.45 | 11/1/2032 |
| Randall J. Scott | 250,000 | 250,000 ⁽²⁾ | \$ 1.42 | 1/5/2032 |
| | 250,000 | — | \$ 2.25 | 4/12/2031 |
| | 250,000 | — | \$ 0.83 | 2/13/2025 |
| | 250,000 | — | \$ 0.07 | 2/18/2024 |
| Wayne E. Rich | — | 125,000 ⁽³⁾ | \$ 1.20 | 3/28/2032 |

⁽¹⁾ The option will vest and become exercisable as follows: 83,333 on November 2, 2023, 83,333 on November 1, 2024, and 83,334 on November 1, 2025.

⁽²⁾ The option will vest and become exercisable as follows: 250,000 on January 5, 2023.

⁽³⁾ The option will vest and become exercisable as follows: 41,666 on March 28, 2023, 41,667 on March 28, 2024, and 41,667 on March 28, 2025.

Potential Payments upon Termination

Pursuant to the employment agreements with Mr. Berg and Mr. Rich, each NEO is entitled to separation benefits in the event that his employment is or was terminated by the Company without “cause” or by such NEO for “good reason” (in each case, as defined in the applicable employment agreement) due to certain reasons, including a material change in title or duties, a material reduction in compensation, a material geographic relocation, or a material breach of such employment agreement by the Company, in each case which the Company has failed to cure. The separation benefits to be received by such NEO upon termination under the circumstances described above must equal such NEO’s base salary in effect on the date of termination. The separation benefits are not contingent upon any change in control and are to be paid to such NEO in a lump sum 60 days after the date of such termination. In addition, such NEO’s equity incentive awards vest automatically upon such termination.

The table below sets out the estimated payments due to the applicable NEO employed by the Company as of December 31, 2022 on a qualifying termination without cause, assuming termination took place pursuant to such employment agreement:

| Name | Base Salary | Total ⁽¹⁾ |
|---------------------------------|-------------|----------------------|
| Brent D. Berg | \$0 | \$0 |
| Randall J. Scott ⁽²⁾ | \$241,500 | \$241,500 |
| Wayne E. Rich | \$215,000 | \$215,000 |

⁽¹⁾ Termination payments, if applicable, are made in a lump sum to the applicable NEO upon a qualifying termination. Once Mr. Berg has been with the Company for at least two years (i.e., beginning on November 1, 2024), the severance payment to be received by Mr. Berg upon a qualifying termination will be equal to one year of Mr. Berg's base salary in effect on the date of termination.

⁽²⁾ The amounts reported in the table above for Mr. Scott represent termination payments actually made to Mr. Scott in connection with his retirement.

Director Compensation

Non-employee directors other than the Chairman and the Synchron director designees receive annual compensation of \$15,000 paid pro rata on a quarterly basis. The Chairman receives annual compensation of \$37,500 per year. The non-Synchron directors of the Company are encouraged to hold Common Shares, thereby aligning their interests with those of the shareholders. In addition to the annual compensation and stock option awards, the Company pays compensation to the Chair of the Audit Committee of \$10,000 and the Chair of the NCG&C Committee of \$6,500 per year. The Synchron director designees elected not to receive any director compensation, including stock options.

The following table sets forth information regarding the compensation received by each of the Company's non-employee directors during the fiscal year ended December 31, 2022:

Director Compensation

| Name | Fees earned (\$) | Option Awards (\$) ⁽⁵⁾ | All other compensation (\$) | Total (\$) |
|--|---------------------|--------------------------------------|--------------------------------|---------------|
| Gerald W. Grandey | 37,500 | 409,494 | — | 446,994 |
| Bart S. Brundage ⁽¹⁾ | — | — | — | — |
| Nicole J. Champine ⁽¹⁾⁽²⁾ | — | — | — | — |
| Kelli C. Kast ⁽³⁾ | 5,322 | — | — | 5,322 |
| Kenneth J. Mushinski ⁽¹⁾⁽²⁾ | — | — | — | — |
| David I. Roberts ⁽¹⁾ | — | — | — | — |
| Paul J. Schlauch ⁽⁴⁾ | 13,685 | 272,996 | — | 286,681 |
| Lowell A. Shonk | 25,000 | 272,996 | — | 297,996 |

⁽¹⁾ Synchron's director designees on the Board, Ms. Champine and Messrs. Brundage, Mushinski and Roberts elected not to receive any director compensation, including stock options.

⁽²⁾ On March 31, 2022, Mr. Mushinski resigned as a director of the Company and Ms. Champine replaced him on the Board.

⁽³⁾ Ms. Kast was elected as a director on August 23, 2022. Ms. Kast is a consultant to Rare Element Resources, Inc., a subsidiary of the Company, and was paid \$307,750 in consulting fees during fiscal year 2022 in addition to her director's compensation. In addition, in 2022, Ms. Kast received stock options with a grant date fair value of \$682,490 in connection with her service as a consultant to Rare Element Resources, Inc.

- (4) Mr. Schlauch’s term as a director of the Company ended on August 23, 2022, as he did not stand for reelection as a director of the Company at the annual meeting of shareholders held on that day.
- (5) The amounts in this column represent the grant date fair value of option awards determined by using the Black-Scholes option valuation model based on assumptions for the risk-free interest rate, expected dividend yield, expected volatility of the Common Shares, and expected life of the options set forth in Notes 3 and 8 to the consolidated financial statements included in this Annual Report.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

Equity Compensation Plan Information

As of December 31, 2022, we had two equity compensation plans under which our common shares had been authorized for issuance to our officers, directors, employees, and non-employee consultants. See “Part II, Item 5. Equity Incentive Plan Information” for additional information relating to our equity compensation plans.

Share Ownership Table

The following table sets forth certain information regarding beneficial ownership, control, or direction, directly or indirectly, of the Company’s Common Shares, as of March 24, 2023 by (i) the Company’s named executive officers and directors and (ii) the Company’s current executive officers and directors as a group.

| Name and Position ⁽¹⁾ | Amount and Nature of Beneficial Ownership * | |
|--|---|------------------------------------|
| | Common Shares ⁽²⁾ | Percentage of Class ⁽³⁾ |
| Gerald W. Grandey – <i>Director and Chairman</i> <i>Saskatoon, Saskatchewan, Canada</i> | 2,588,442 ⁽⁴⁾ | 1.21% |
| Lowell A. Shonk – <i>Director</i> <i>Reno, Nevada, USA</i> | 1,554,680 ⁽⁵⁾ | 0.73% |
| Randall J. Scott – <i>Former President and CEO</i> <i>Littleton, Colorado, USA</i> | 1,264,001 ⁽⁶⁾ | 0.59% |
| Kelli C. Kast – <i>Director</i> <i>Evergreen, Colorado, USA</i> | 875,000 ⁽⁷⁾ | 0.41% |
| Wayne E. Rich – <i>Chief Financial Officer</i> <i>Highlands Ranch, Colorado, USA</i> | 41,667 ⁽⁸⁾ | 0.02% |
| David I. Roberts – <i>Director</i> <i>Solana Beach, California, USA</i> | Nil ⁽⁹⁾ | 0.00% |
| Barton S. Brundage – <i>Director</i> <i>Parker, Colorado, USA</i> | Nil ⁽⁹⁾ | 0.00% |
| Nicole J. Champine – <i>Director</i> <i>Denver, Colorado, USA</i> | Nil ⁽⁹⁾ | 0.00% |
| Brent D. Berg – <i>President, CEO and Director</i> <i>Wyoming, USA</i> | Nil | 0.00% |
| All executive officers and directors as a group (a total of 8 persons) | 5,059,789 | 2.36% |

* Pursuant to Rule 13d-3 under the Exchange Act, beneficial ownership includes shares as to which the individual has or shares voting power or investment power, and any shares that the individual has the right to acquire within 60 days of March 24, 2023, including through the exercise of any option, warrant, or right. For each individual who holds options, warrants or rights to acquire Common Shares, the Common Shares underlying those securities are treated as

owned by that holder and as outstanding Common Shares when that holder's percentage ownership of Common Shares is calculated. Those Common Shares are not treated as outstanding when the percentage ownership of any other holder is calculated.

- (1) Mailing address for all directors and executive officers is c/o Rare Element Resources, Ltd., P.O. Box 271049, Littleton, Colorado 80127.
- (2) Includes Common Shares held as of March 24, 2023, plus Common Shares which may be acquired pursuant to the exercise of stock options exercisable within 60 days after March 24, 2023.
- (3) In accordance with Rule 13d-3(d)(1) under the Exchange Act, the applicable percentage of ownership for each person is based on 212,515,951 Common Shares outstanding as of March 24, 2023.
- (4) Includes 1,913,442 Common Shares and 675,000 Common Shares subject to options held by Mr. Grandey personally.
- (5) Includes 1,204,680 Common Shares and 350,000 Common Shares subject to options held by Mr. Shonk personally.
- (6) Includes 14,001 Common Shares and 1,250,000 Common Shares subject to options held by Mr. Scott personally. This information is based on Form 4s filed by Mr. Scott on February 20, 2019, February 14, 2020, April 15, 2021, December 3, 2021, and January 1, 2022. Mr. Scott's ownership is not included in the total as he was not a current officer or director of the Company on December 31, 2022.
- (7) Includes 875,000 Common Shares subject to options held by Ms. Kast personally.
- (8) Includes 41,667 Common Shares subject to options held by Mr. Rich personally.
- (9) Excludes Common Shares owned by Synchron, of which Mr. Roberts is a director, and an affiliate of which each of Mr. Brundage and Ms. Champine is an officer. Pursuant to and subject to the terms and conditions of an Investment Agreement between the Company and Synchron, Synchron has the right to designate three directors for appointment or election to the Board, where the Board is comprised of seven directors following such appointment. Ms. Champine and Messrs. Brundage and Roberts are the three Synchron designees.

Ownership of Common Shares by Certain Beneficial Owners

The following table sets forth information (as of the date indicated) as to all persons or groups known to the Company to beneficially own, control or direct, directly, or indirectly, 5% or more of the issued and outstanding Common Shares of the Company as of March 24, 2023:

| Name and Address of Beneficial Holder | Common Shares Beneficially Owned (1) | Percentage of Class (2) |
|--|---|--------------------------------|
| Synchron, 3550 General Atomics Court, San Diego, California 92121-1122 General Atomic Technologies Corporation, 3550 General Atomics Court, San Diego, California 92121- 1122 Tenaya Corporation, P.O. Box 910304, San Diego, California, 92191-0304 | 116,356,925 | 54.76% |

- (1) This information is based on a Schedule 13D/A filed on December 23, 2021 by Synchron, General Atomic Technologies Corporation and Tenaya Corporation. Synchron has sole voting and dispositive power over the Common Shares listed.
- (2) Calculated based on 212,515,951 Common Shares outstanding as of March 24, 2023.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS; AND DIRECTOR INDEPENDENCE

Transactions with Related Persons

Engagement of Umwelt-und Ingenieurtechnik GmbH Dresden

In January 2021, the Board approved \$500,000 for test work by Umwelt-und Ingenieurtechnik GmbH Dresden (“UIT”), an affiliate of Synchron, in the first half of 2021 to include optimizing of certain process steps, developing scale-up design criteria for the Demonstration Plant, and confirming operating and capital cost estimates. The three directors of Rare Element nominated by Synchron abstained from deliberating or voting on the matter because Synchron is a significant shareholder of the Company and is an affiliate of UIT. The 2021 contract work by UIT was completed in August 2021 and a report was issued with recommendations to proceed with the incorporation of the technology in the demonstration plant project. For the year ended December 31, 2021, the Company paid approximately \$740,000 for services rendered under the agreement with UIT. There were no amounts owed to UIT as of December 31, 2021 or December 31, 2022.

Cost Share Agreement with General Atomics

On November 30, 2021, the Company and General Atomics, a California corporation and an affiliate of Synchron (“General Atomics”), entered into a Cost Share Funding Assumption Agreement (the “Cost Share Agreement”) pursuant to which the Company agreed to assume and pay for certain costs incurred by General Atomics and the consortium for the design, construction, and operation of the Demonstration Plant near the Bear Lodge REE Project in Upton, Wyoming.

As previously discussed, in January 2021, the DoE announced that a consortium of companies, which includes the Company, led by General Atomics, an affiliate of Synchron, and certain of its affiliates, and LNV, an Ardurra Group, Inc. company, as engineering and construction subcontractor, was selected for a potential financial award in the amount of \$21.9 million for the engineering, construction and operation of the Demonstration Plant. The DoE award was finalized through a cooperative agreement dated October 1, 2021 (the “Cooperative Agreement”) between General Atomics and the DoE with respect to the engineering, permitting, licensing, construction and operation of the Demonstration Plant. The Cooperative Agreement provides that up to approximately \$43.9 million in allowable costs for the Demonstration Plant would be funded on a cost-share basis, 50% by the DoE and 50% by a non-federal entity.

Pursuant to the terms of the Cost Share Agreement, the Company is obligated to make payments totalling \$21.9 million General Atomics, as leader of the consortium, for its share of the assumed costs for the Demonstration Plant, \$6.7 million of which had been paid through December 31, 2022.

The term of the Cost Share Agreement will continue until the date of completion of the Demonstration Plant, unless terminated earlier by either party. Either party may terminate the Cost Share Agreement immediately upon written notice to the other party if any of the following events occurs: (a) the Cooperative Agreement is terminated for any reason prior to the completion of the Demonstration Plant; (b) the other party commits a material breach of its obligations under the Cost Share Agreement and fails to cure such breach within 30 days; or (c) the other party makes an assignment for the benefit of its creditors, files a petition in bankruptcy, is adjudicated insolvent or bankrupt, or commences any insolvency or bankruptcy proceedings. Upon any early termination of the Cost Share Agreement, the Company must pay for all costs incurred by or on behalf of General Atomics to wind down the Demonstration Plant other than any allowable costs for such wind-down paid for by the DoE.

Professional Services Agreement with Ms. Kast

Ms. Kast is, and has been since June 2015, a consultant of Rare Element Resources, Inc., a subsidiary of the Company, and has served as a Board member since August 2023. From July 2012 to May 2015, Ms. Kast served as the Vice President, General Counsel, Chief Administrative Officer, and Corporate Secretary of the Company. On February 17, 2021, Rare Element Resources, Inc. entered into an updated professional services agreement, effective as of March 1, 2021, with Ms. Kast (the “Professional Services Agreement”) that has since been extended on an annual basis and which

currently runs through December 31, 2023. Pursuant to the Professional Services Agreement, Ms. Kast performs business consulting and administrative oversight services for Rare Element Resources, Inc., and the Company. The Professional Services Agreement provides that Ms. Kast shall be paid a monthly retainer and shall be eligible for an annual performance bonus at the discretion of the Board. For the fiscal years 2022 and 2021, Ms. Kast was paid monthly retainers of \$19,250 and \$18,333, respectively, and received cash bonuses of \$75,000 each year. Ms. Kast's monthly retainer was adjusted to \$20,208 in 2023.

Ms. Kast is also eligible for stock option grants pursuant to the Company's equity incentive plan and as approved by the Board. On January 5, 2022 and April 13, 2021, Ms. Kast received stock option grants of 500,000 and 225,000, respectively, that vested (i) 50% each on July 5, 2022, and January 5, 2023 for the 2022 grant, and (ii) 50% each on December 15, 2021, and December 15, 2022 for the 2021 grant. On January 4, 2023, Ms. Kast received a stock option grant of 225,000, which shall vest 50% each on July 4, 2023, and January 4, 2024, respectively.

Review, Approval or Ratification of Transactions with Related Persons

The Company's written corporate governance policies generally discourage transactions involving a potential conflict of interest. The NCG&C Committee is generally responsible for overseeing compliance with the Company's corporate governance policies, which require that transactions that could reasonably be considered to present a conflict of interest be reported to the NCG&C Committee. However, the Audit Committee is responsible for overseeing compliance with the Code of Conduct contained in the Company's corporate governance policies. Specifically, the Audit Committee is responsible for reviewing and overseeing any transaction or contract exceeding or likely to exceed \$120,000 involving the Company and a related party, including transactions subject to disclosure under Item 404 of Regulation S-K. Generally, in reviewing such transactions, the Audit Committee considers the relevant facts and circumstances available and deemed relevant to each determination.

Except for the agreement with UIT and the Cost Share Agreement with General Atomics referenced above, there are no material interests, direct or indirect, of any of the current directors, executive officers, or any shareholder that beneficially owns, directly or indirectly, more than 5% of the outstanding Common Shares, or immediate family members of such persons, in any transaction since January 1, 2021, or in any proposed transaction in which the amount involved exceeded \$120,000.

Director Independence

The Board reviewed and determined independence under National Instrument 58-101 – *Disclosure of Corporate Governance Practices* ("NI 58-101") of each current director. In making its independence determination, the Board considered the circumstances described below.

Based upon the positions of Ms. Kast and Mr. Berg as a consultant to and executive officer of the Company, respectively, the Board determined that that they are not independent. The Board concluded that each of Ms. Champine and Messrs. Grandey, Brundage, Roberts and Shonk are independent. As a result of these analyses, the Board has determined that the seven-member Board is comprised of a majority of independent directors, as required under NI 58-101.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

Audit, Audit-Related, Tax, and Other Fees

The following table sets forth the aggregate fees billed or expected to be billed by Haynie (Salt Lake City, UT, PCAOB ID#457), for professional services rendered in connection with the fiscal year ended December 31, 2022.

| | 2022 |
|--------------------|------------------|
| Audit Fees | \$ 70,000 |
| Audit Related Fees | — |
| Tax Fees | — |
| All Other Fees | — |
| Total | \$ 70,000 |

“Audit Fees” represent fees for the audit of the Company’s annual financial statements and attestation services that are provided in connection with statutory and regulatory filings or engagements.

“Audit-Related Fees” represent fees for professional services.

“Tax Fees” represent fees for professional services rendered for tax compliance, tax advice and tax planning on actual or contemplated transactions.

“All Other Fees” consist of fees for products and services other than the services reported above.

Pre-Approval Policies and Procedures

In accordance with the Audit Committee Charter, the Audit Committee’s responsibilities and powers include pre-approval of permitted non-audit services performed for Rare Element or any of its subsidiaries by the Company’s auditor, subject to any de minimis exception under Section 10A(i)(1)(B) of the Exchange Act any rules promulgated thereunder. Consistent with applicable laws, other than audit, review or attestation services, all other services provided by the Company’s auditor are to be pre-approved by one or more members of the Audit Committee pursuant to authority delegated by the Audit Committee, provided that the Audit Committee is informed of each particular service. All of the engagements and fees discussed above under the heading “Audit, Audit-Related, Tax, and Other Fees” for the fiscal years ended December 31, 2022 and 2021 were pre-approved by the Audit Committee.

Since the commencement of the Company’s most recently completed financial year, the Audit Committee has not made any recommendations to nominate or compensate an external auditor which were not adopted by the Board of the Company.

PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

Documents filed as part of this Annual Report or incorporated by reference:

- (1) The consolidated financial statements are presented in “Item 8. Financial Statements and Supplementary Data.”
- (2) Financial Statement Schedules (omitted because they are either not required, not applicable, or the required information is disclosed in the Notes to the Consolidated Financial Statements or related notes).
- (3) Reference is made to the Exhibit Index that follows the signature pages of this report.

ITEM 16. FORM 10-K SUMMARY

None.

INDEX TO EXHIBITS

| Exhibit Number | Description |
|-------------------|--|
| 3.1 | Certificate of Incorporation (incorporated by reference to Exhibit 1.1 to the Company's Form 20-F filed with the SEC on November 17, 2009) |
| 3.2 | Certificate of Name Change (incorporated by reference to Exhibit 1.2 to the Company's Form 20-F filed with the SEC on November 17, 2009) |
| 3.3 | Articles (incorporated by reference to Exhibit 1.3 to the Company's Form 20-FR filed with the SEC on November 17, 2009) |
| 4.1+ | Description of Securities |
| 10.1* | Asset Purchase Agreement, dated as of October 20, 2016, by and between Rare Element Resources, Inc. and Whitehall Creek, LLC (incorporated by reference to Exhibit 10.1 to the Company's Form 8-K filed with the SEC on October 26, 2016) |
| 10.1.1 | First Amendment to Asset Purchase Agreement, dated as of October 25, 2021, by and between Rare Element Resources, Inc. and Whitehall Creek, LLC (incorporated by reference to Exhibit 10.1 to the Company's Form 8-K filed with the SEC on October 27, 2021) |
| 10.2 | Investment Agreement, dated October 2, 2017, by and between the Company and Synchron (incorporated by reference to Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q filed with the SEC on November 13, 2017) |
| 10.3 | Intellectual Property Rights Agreement, dated October 2, 2017, by and between the Company and Synchron (incorporated by reference to Exhibit 10.5 to the Company's Quarterly Report on Form 10-Q filed with the SEC on November 13, 2017) |
| 10.4 | Cost Share Funding Assumption Agreement entered into on November 30, 2021 by and between General Atomics and Rare Element Resources, Inc. (incorporated by reference to Exhibit 10.1 to the Company's Form 8-K filed with the SEC on December 2, 2021) |
| 10.5* | 10% Rolling Stock Option Plan of the Company, as Amended and Restated on April 7, 2020 (Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q filed with the SEC on May 11, 2020) |
| 10.6* | Rare Element Resources Ltd. 2022 Equity Incentive Plan (Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q filed with the SEC on November 9, 2022) |
| 10.7* | Employment Agreement, effective January 1, 2018, by and between Rare Element Resources, Inc. and Randall J. Scott (incorporated by reference to Exhibit 10.1 to the Company's Form 8-K filed with the SEC on February 26, 2018) |
| 10.7.1* | First Amendment to Employment Agreement, effective as of June 27, 2022, by and between Rare Element Resources, Inc. and Randall J. Scott (incorporated by reference to Exhibit 10.1 to the Company's Form 8-K filed with the SEC on June 29, 2022) |
| 10.8* | Form of Indemnity Agreement (Directors and Officers) (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q filed with the SEC on May 7, 2021) |
| 10.10* | Employment Agreement, dated as of March 28, 2022, by and between Rare Element Resources, Inc. and Wayne Rich (incorporated by reference to Exhibit 10.1 to the Company's Form 8-K filed with the SEC on March 31, 2022) |
| 10.11*+ | Professional Consulting Agreement, dated as of February 17, 2021, by and between Rare Element Resources, Inc. and Kelli Kast as amended effective January 1, 2022 and January 1, 2023 |
| 10.12* | Form of Indemnity Agreement (Directors and Officers) (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q filed with the SEC on May 7, 2021) |
| 16.1 | Letter from BDO USA, LLP, dated as of August 4, 2022 (incorporated by reference to Exhibit 16.1 to the Company's Form 8-K filed with the SEC on August 4, 2022) |
| 21.1 | Subsidiaries of the Company (incorporated by reference to Exhibit 21.1 to the Company's Form 10-K filed with the SEC on September 28, 2011) |
| 23.1+ | Consent of Registered Public Accounting Firm (Haynie & Company; Salt Lake City, UT; PCAOB ID #457) |
| 23.2+ | Consent of Registered Public Accounting Firm (BDO USA, LLP; Spokane, WA; PCAOB ID #243) |

| | |
|----------|---|
| 31.1+ | Certification of the Principal Executive Officer pursuant to Rule 13a-14 of the Exchange Act |
| 31.2+ | Certification of the Principal Financial Officer pursuant to Rule 13a-14 of the Exchange Act |
| 32.1++ | Certification of the Principal Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 |
| 32.2++ | Certification of the Principal Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 |
| 101.INS+ | Inline XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document |
| 101.SCH+ | XBRL Schema Document |
| 101.CAL+ | XBRL Calculation Linkbase Document |
| 101.DEF+ | XBRL Definition Linkbase Document |
| 101.LAB+ | XBRL Label Linkbase Document |
| 101.PRE+ | XBRL Presentation Linkbase Document |
| 104 | Cover Page Interactive Data File (formatted as Inline XBRL with applicable taxonomy extension information contained in Exhibits 101) |

+ Filed herewith.

++ Furnished herewith.

* Indicates a management contract or compensatory plan, contract or arrangement.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

RARE ELEMENT RESOURCES LTD.

By: /s/ Brent D. Berg
Brent D. Berg, President, Chief Executive Officer
and Director
(Principal Executive Officer)

By: /s/ Wayne E. Rich
Wayne E. Rich, Chief Financial Officer
(Principal Financial Officer)

Date: March 27, 2023

Date: March 27, 2023

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

By: /s/ Gerald W. Grandey
Gerald W. Grandey, Chairman of the Board of Directors
Date: March 27, 2023

By: /s/ Brent D. Berg
Brent D. Berg, President, CEO and Director (Principal
Date: March 27, 2023

By: /s/ Barton S. Brundage
Barton S. Brundage, Director
Date: March 27, 2023

By: /s/ Nicole J. Champine
Nicole J. Champine, Director
Date: March 27, 2023

By: /s/ Kelli C. Kast
Kelli C. Kast, Director
Date: March 27, 2023

By: /s/ David I. Roberts
David I. Roberts, Director
Date: March 27, 2023

By: /s/ Lowell A. Shonk
Lowell A. Shonk, Director
Date: March 27, 2023

By: /s/ Wayne E. Rich
Wayne E. Rich, CFO (Principal Financial Officer)
Date: March 27, 2023