



## ANNUAL REPORT 2023







# LEVERAGING **DISRUPTIVE TECHNOLOGIES** TO FIND AND DEVELOP CRITICAL METALS FOR AN **ELECTRIC ECONOMY**

Ivanhoe Electric is a United States company that combines advanced mineral exploration technologies with electric metals exploration projects predominantly located in the United States.

We use our accurate and powerful Typhoon™ geophysical surveying system, together with advanced data analytics provided by our subsidiary, Computational Geosciences Inc., to accelerate the mineral exploration process.

Our portfolio of electric metals exploration projects is headlined by the Santa Cruz Copper Project in Arizona, the Tintic Copper-Gold Project in Utah, and the Hog Heaven Copper-Gold-Silver Project in Montana, each located on private land. We also operate a 50/50 joint venture with Saudi Arabian Mining Company Ma'aden to explore for minerals on approximately 48,500 square kilometers of underexplored land in the Arabian Shield.

Ivanhoe Electric is committed to responsible and sustainable advancement of our projects by incorporating high standards for environmental, social and governance practices in our decision-making framework at the earliest stages of our projects.



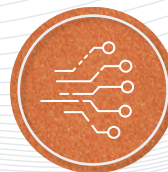
**Founded by Robert Friedland**, an entrepreneurial explorer, technology innovator and company builder, and **led by an experienced executive management team**



Advancing the **high-grade Santa Cruz Copper Project** on private land in Arizona



TYPHOON™



COMPUTATIONAL GEOSCIENCES INC.

Disruptive geophysical surveying technology and machine learning-based software applications **accelerate the exploration process**



U.S.-focused portfolio of assets well-positioned to benefit from **U.S. energy transition** and **favorable long-term fundamentals for copper**



**Large-scale mineral exploration joint venture** in Saudi Arabia with Ma'aden





## JOINT MESSAGE FROM OUR EXECUTIVE CHAIRMAN AND PRESIDENT & CEO



**ROBERT FRIEDLAND**  
Executive Chairman



Dear Fellow Shareholders,

We are pleased to present you with our 2023 Annual Report. This past year was our first full year since our IPO in 2022. The year was used to lay solid foundations for the rapid growth of America's next great mining company. Let's reflect on what was achieved in the past year and look forward to another year of great successes.

Ivanhoe Electric enters 2024 with a strong balance sheet and an exceptional group of mineral projects and technology assets. These include our portfolio of exceptionally high-quality electric metals exploration projects located primarily in the United States. It also includes our proprietary and disruptive Typhoon™ geophysical surveying system and the advanced, machine learning-based software of Computational Geosciences (CGI). Our assets are rounded out by the grid-scale vanadium redox flow battery technologies of VRB Energy.

The disruptive power of Typhoon™ is utilized by a dedicated team of professionals who leverage its ability to see deep below the Earth's surface. This

combined with CGI's software greatly accelerates the exploration process by more rapidly identifying where to drill. These technologies are on prime display at our joint venture with Ma'aden in Saudi Arabia where we have the immense task of working to uncover the mineral wealth of that country over an exclusive area the size of Switzerland. Closer to home, Typhoon™ has been deployed right across America – from North Carolina in the east, north to Montana, south to our flagship Santa Cruz Copper Project in Arizona, and west to our White Hill Copper Project in Nevada.

At our flagship Santa Cruz Copper Project in Arizona, our mining engineering team led by Senior Vice President of Mine Development Glen Kuntz, is doing the hard work necessary to advance an exceptionally modern, high-grade underground copper project in the heart of America's Copper State. Santa Cruz is one of those rare projects that is located not only on private land but also near major rail and road junctions and other necessary infrastructure,





**TAYLOR MELVIN**

President and Chief Executive Officer

including natural gas and electricity. Situated just outside Casa Grande, Arizona (approximately midway between Phoenix and Tucson), it would be difficult to imagine a more ideal location for one of the largest and highest-grade undeveloped copper resources in the United States.

The world needs copper today and is going to need a lot more of it tomorrow. In such a world, the Santa Cruz Copper Project in Arizona stands out. It benefits from being entirely on private land that we acquired in 2023. We already control the subsurface mineral rights. Santa Cruz is situated in a historical mining jurisdiction with copper production having taken place literally across the road and all throughout the State of Arizona.

All of those factors contributed to the outstanding results of the Santa Cruz Project Initial Assessment that was released in September 2023. The Initial Assessment outlines the operating parameters and potential economics for a modern 5.9 million tonnes per year underground copper mine. The

Initial Assessment envisions a small surface footprint operation, an estimated twenty-year mine life and an average grade over that mine life of 1.58% copper. The initial project capital required is approximately \$1.15 billion which leads to very low projected capital intensity per unit of copper produced.

All of that would be expected from this size of resource in this location in Arizona. However, the project continues to set itself apart with its emission credentials. The proposed design of the Santa Cruz Copper Project includes modern underground bulk mining technologies coupled with renewable power generation. That leads to projected carbon dioxide equivalent emissions that are among the lowest in the world and about 1/8<sup>th</sup> that of the global mining industry average.

The current study is just the beginning for the Santa Cruz Copper Project. The Initial Assessment focuses solely on the high-grade oxide and soluble copper domains which total 4.7 million tonnes of contained



Typhoon™ geophysical survey system in action in the U.S.

copper resource. The underlying primary sulfide resources at the Santa Cruz Project are not included in the Initial Assessment. These underlying sulfide porphyry systems provide a significant opportunity for future phased expansion of the project. Indeed, recent exploration drilling at the Texaco Ridge exploration area intercepted over 325 meters of 0.81% total copper, suggesting that the primary sulfide resource has much more room to grow.

The next stop for the Santa Cruz Project is its prefeasibility study which we expect to complete in the first half of 2025.

We are explorationists at heart and 2023 kept our extremely experienced exploration team very busy. We commenced drilling at both the Tintic Copper-Gold Project in Utah and the Hog Heaven Copper-Gold-Silver Project in Montana, both located on private land. Drilling at both projects has identified the significant potential for porphyry copper mineralization with elevated gold and silver credits.

At Tintic, we continue to test the large district located 40 miles south of Rio Tinto's Bingham Canyon mine as we seek the deep porphyry source for the near-surface mineralization that fueled historic mining operations.

At Hog Heaven, we have encountered base and precious metal mineralization with increasing

copper intensity across a broad strike length at step-out drill holes near the historic Flathead Mine. We currently are drilling Hog Heaven to test for the porphyry source of the identified high-sulfidation system.

This year will also see drilling at the Bitter Creek Project in Arizona and at White Hill in Nevada. It will also see the first drills turn in Saudi Arabia.

In cooperation with our joint venture partner, Saudi Arabian Mining Company Ma'aden, we commenced exploration activities in 2023 on the vast 48,500 km<sup>2</sup> of underexplored Arabian Shield covered by our 50/50 joint venture. The Arabian Shield in Saudi Arabia is an ideal geologic environment for our Typhoon™ and CGI technologies to explore over large areas for mineralization deep beneath geological cover.

We conducted our first Typhoon™ survey on the Umm Ash Shalahib exploration license to the south of Ma'aden's Al Amar gold-copper-zinc mine. We announced the first survey results in January. We will be drill testing the initial targets in the first half of 2024. We will also be deploying the full fleet of three Typhoon™ units for the joint venture in 2024. We have never had so many Typhoon™ units working at the same time in this dedicated manner. Everyone is excited at the prospects for future discoveries as we accelerate our activities in the Arabian Peninsula.





Ivanhoe Electric's Board of Directors on a site visit to the Santa Cruz Copper Project in Arizona.

“ Coupled with our technologies and our people, we have what is needed to find and develop new significant sources of electric metals.

None of this would be possible without capital. In 2023, the company raised over \$325 million in new equity to fund our activities. Investors vote with their dollars, and we are humbled by the continued vote of confidence in our company, our assets and our team.

The long-term fundamentals for electric metals like copper remain exceptionally strong. On the supply side, new discoveries are rare and new projects can face lengthy delays to reach production. Many potential new projects are in challenging jurisdictions, many face limited access to water and clean energy, and most face difficult political environments. Ivanhoe Electric believes that it has the right assets in the right locations to overcome these challenges. Coupled

Sincerely,

**ROBERT FRIEDLAND**  
Executive Chairman

**TAYLOR MELVIN**  
President and Chief Executive Officer

with our technologies and our people, we have what is needed to find and develop new significant sources of electric metals. Without the metals that we are seeking to find and develop, humanity would shiver and freeze in the dark.

We are pursuing these ambitious goals with a steadfast focus on providing a safe work environment for our people and ensuring strong alignment with the interests of all stakeholders. These include the communities in which we operate, the local, regional and State governments whose support is critical, our joint venture partners, and our shareholders.

The future is bright for Ivanhoe Electric. We appreciate your continued support.



## IVANHOE ELECTRIC BY THE NUMBERS

1.58% copper

estimated life-of-mine copper grade  
at Santa Cruz Copper Project

20 years

estimated life of mine  
for Santa Cruz Copper Project

5,975 acres

private land acquired  
at Santa Cruz Copper Project  
in Arizona

1.6 million tonnes

estimated life-of-mine copper  
production for the Santa Cruz  
Copper Project

70%

contribution by renewable power leads  
to projected emissions of 0.49 tonnes  
of CO<sub>2</sub>e per tonne of copper at the  
Santa Cruz Project, about 1/8<sup>th</sup> of global  
industry average

93,737 meters

total drilling at U.S. exploration  
projects in 2023

48,500 km<sup>2</sup>

area of underexplored land on the  
Arabian Shield for mineral exploration  
with our joint venture partner Ma'aden

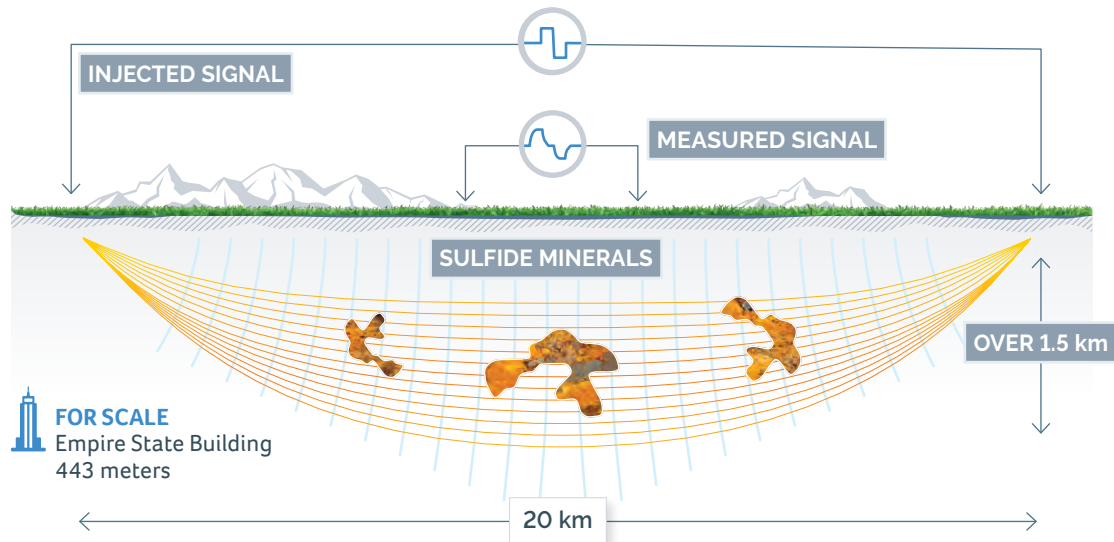




## OUR TECHNOLOGIES

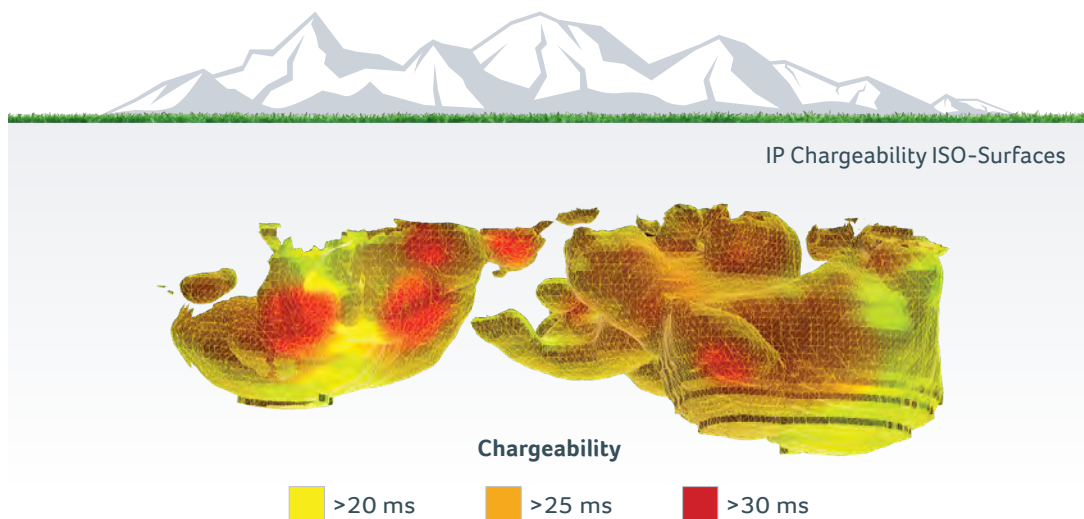
Our proprietary technology platforms **accelerate mineral exploration**

### TYPHOON™ GEOPHYSICAL SURVEY SYSTEM



- ⚡ High-powered transmitter that maps underground variations in rock conductivity and chargeability
- ⚡ Detects sulfide minerals containing copper, nickel, gold and silver with a depth penetration to over 1.5 km

### COMPUTATIONAL GEOSCIENCES INC. (CGI)



- ⚡ Advanced software to model discoveries of sulfide minerals, water and oil
- ⚡ Processes datasets produced by Typhoon™ into 3D images for drill targeting



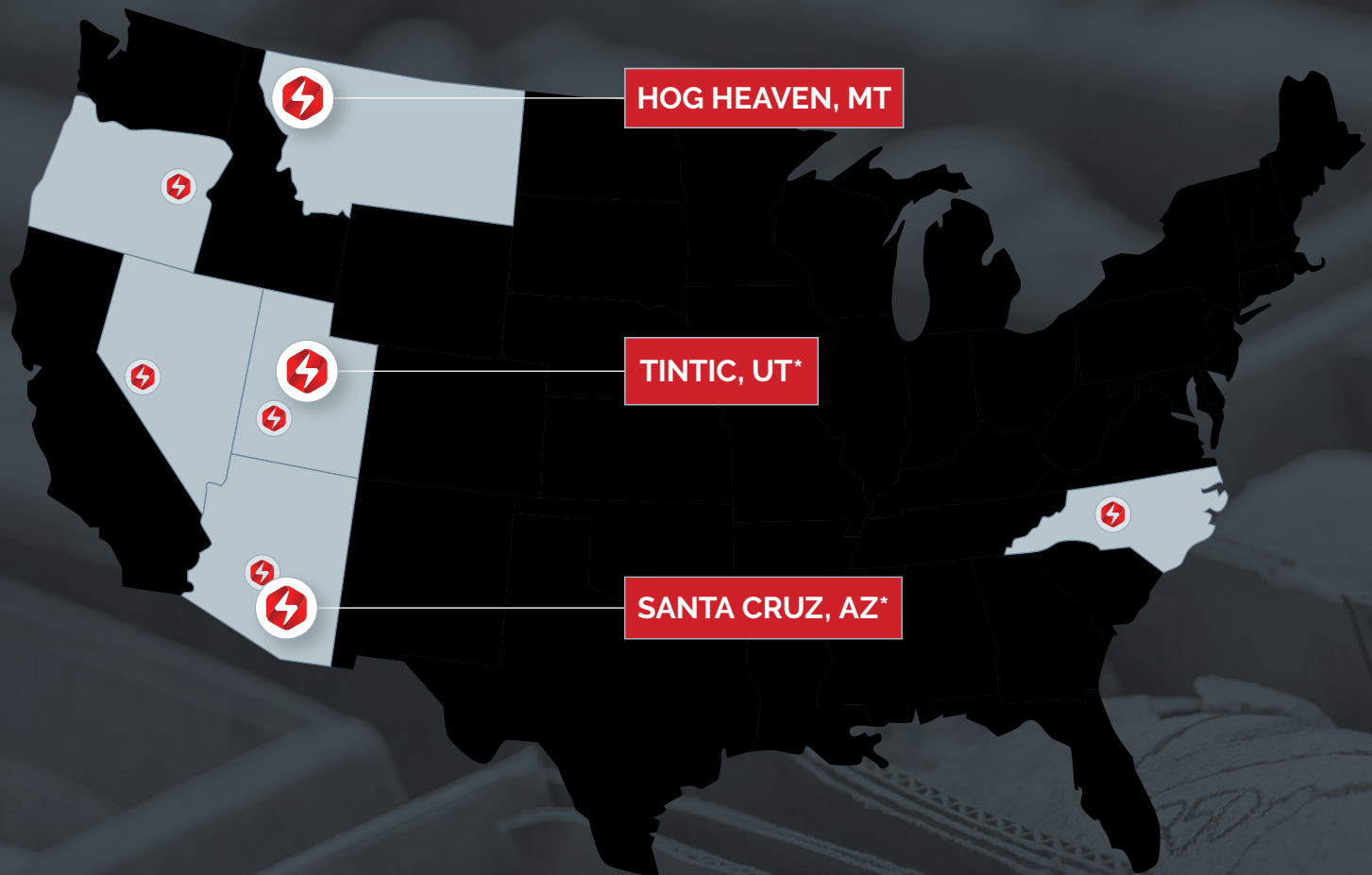
Geologist, Renata Smoke (left) and Director of Business Development, Christian Frost (right) inspecting core samples at the Hog Heaven Copper-Gold-Silver Project, Montana.







## PORTFOLIO OF U.S. ELECTRIC METALS PROJECTS



U.S. FLAGSHIP PROJECTS



OTHER U.S. EXPLORATION PROJECTS

\* MATERIAL PROPERTIES



---

### SANTA CRUZ, Arizona



- Designing a modern underground copper mine with minimal surface footprint, renewable power, and low projected carbon dioxide equivalent emissions to be a leading example of responsibly produced domestic copper
- Advancing studies and test work to support completion of Prefeasibility Study in first half of 2025

---

### TINTIC, Utah



- Drilling program underway to test Typhoon™-identified geophysical anomalies, seeking porphyry source of mineralization at historical mines
- Updated Typhoon™ inversion modeling from CGI validates exploration targets and identifies new anomalies for further investigation

---

### HOG HEAVEN, Montana



- Drilling program underway to search for additional silver, gold, and copper-rich high sulfidation epithermal mineralization, which was the focus of historical mining activities, and porphyry copper mineralization



## IVANHOE ELECTRIC & MA'ADEN'S 50/50 JOINT VENTURE TO EXPLORE IN SAUDI ARABIA

- ⚡ Exclusive access to explore a vast ~48,500-square-kilometer area of the underexplored Arabian Shield in Saudi Arabia
- ⚡ Extensive exploration for copper, gold, silver and other important metals
- ⚡ Deployment of Typhoon™ and CGI commenced in November 2023
- ⚡ First surveys at Umm Ash Shalahib completed in first quarter 2024
- ⚡ Initial surveys identified two high-priority anomalies for follow-up drilling
- ⚡ Exploration drilling to commence in first half of 2024
- ⚡ Supports Vision 2030 by promoting mining as a third pillar of the Saudi Arabian economy





Members of Ivanhoe Electric & Ma'aden exploration  
JV deploying Typhoon™ survey equipment



SAUDI ARABIA











## BOARD OF DIRECTORS



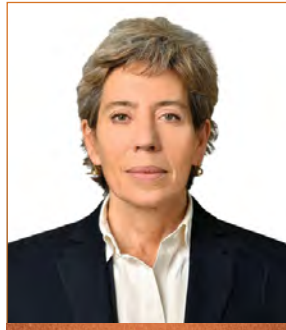
**ROBERT FRIEDLAND**  
Executive Chairman  
of the Board of Directors



**TAYLOR MELVIN**  
President, Chief Executive  
Officer and Director



**RUSSELL BALL**  
Director



**SOFIA BIANCHI**  
Director



**VICTOIRE DE MARGERIE**  
Director



**HIROFUMI KATASE**  
Director



**PATRICK LOFTUS-HILLS**  
Director



**PRIYA PATIL**  
Director



**RONALD VANCE**  
Director





Geotechnicians, Richard Martinez (front) and Jeremiah Dela Cruz (back) processing core at the Santa Cruz Copper Project, Arizona.



---

---

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

(Mark One)

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

**For the fiscal year ended December 31, 2023**

**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 001-41436**

**Ivanhoe Electric Inc.**

**(Exact name of Registrant as specified in its Charter)**

**Delaware**

**32-0633823**

(State or other jurisdiction of  
incorporation or organization)

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

**450 E Rio Salado Parkway, Suite 130**  
**Tempe, Arizona**

85281

(Address of principal executive offices)

(Zip Code)

Registrant's telephone number, including area code **(480) 656-5821**

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value \$0.0001 per share	IE	NYSE American

Securities registered pursuant to Section 12(g) of the Act: **None**

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 (§232.405 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	<input checked="" type="checkbox"/> Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/> Smaller reporting company	<input checked="" type="checkbox"/>
	Emerging growth company	<input type="checkbox"/>

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. YES ☒ NO ☐

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 Exchange Act).  
Yes ☐ No ☒

The aggregate market value of the voting and non-voting common equity held by non-affiliates of the Registrant, based on the closing price of the shares of common stock on NYSE American as of June 30, 2023 (the last business day of the registrant's most recently completed second fiscal quarter) was approximately \$969.4 million.

The number of shares of Registrant's Common Stock outstanding as of February 26, 2024 was 120,306,414.

#### DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive proxy statement to be filed within 120 days of December 31, 2023 in connection with its 2024 Annual Meeting of Stockholders are incorporated by reference into Part III, Items 11-14 of this Form 10-K.

---

---



## Table of Contents

	Page
<a href="#">Cautionary Note Regarding Forward-Looking Statements</a>	2
<a href="#">Glossary of Technical Terms</a>	2
<a href="#">Summary of Risk Factors</a>	5
<b><a href="#">PART I</a></b>	
<a href="#">Item 1. Business</a>	10
<a href="#">Item 1A. Risk Factors</a>	73
<a href="#">Item 1B. Unresolved Staff Comments</a>	99
<a href="#">Item 1C. Cybersecurity</a>	99
<a href="#">Item 2. Properties</a>	100
<a href="#">Item 3. Legal Proceedings</a>	100
<a href="#">Item 4. Mine Safety Disclosures</a>	100
<b><a href="#">PART II</a></b>	
<a href="#">Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities</a>	101
<a href="#">Item 6. Selected Financial Data</a>	105
<a href="#">Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations</a>	106
<a href="#">Item 7A. Quantitative and Qualitative Disclosures About Market Risk</a>	116
<a href="#">Item 8. Financial Statements and Supplementary Data</a>	##
<a href="#">Item 9. Changes in and Disagreements With Accountants on Accounting and Financial Disclosures</a>	103
<a href="#">Item 9A. Controls and Procedures</a>	103
<a href="#">Item 9B. Other Information</a>	104
<a href="#">Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections</a>	104
<b><a href="#">PART III</a></b>	
<a href="#">Item 10. Directors, Executive Officers and Corporate Governance</a>	105
<a href="#">Item 11. Executive Compensation</a>	109
<a href="#">Item 12. Security Ownership of Certain Beneficial Owner and Management and Related Stockholder Matters</a>	109
<a href="#">Item 13. Certain Relationships and Related Transactions, and Director Independence</a>	109
<a href="#">Item 14. Principal Accounting Fees and Services</a>	109
<b><a href="#">PART IV</a></b>	
<a href="#">Item 15. Exhibits, Financial Statement Schedules</a>	110
<a href="#">Item 16. Form 10-K Summary</a>	114
<a href="#">Signatures</a>	115

## Cautionary Note Regarding Forward-Looking Statements

This Annual Report on Form 10-K (this "Annual Report") contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, (the "Securities Act"), and Section 21E of the Securities Exchange Act of 1934, as amended, (the "Exchange Act"), that involve risks and uncertainties, including statements based on our current expectations, assumptions, estimates and projections about future events, our business, financial condition, results of operations and prospects, our industry and the regulatory environment in which we operate. Any statements contained herein that are not statements of historical facts may be deemed to be forward-looking statements. In some cases, you can identify forward-looking statements by terms such as "anticipate," "believe," "could," "estimate," "expect," "intend," "may," "plan," "potential," "predict," "project," "should," "will," "would" or the negative of those terms, or other comparable terms intended to identify statements about the future. The forward-looking statements included herein are subject to risks and uncertainties that could cause actual results to differ materially from those expressed in the forward-looking statements. These risks and uncertainties, all of which are difficult or impossible to predict accurately and many of which are beyond our control, include, but are not limited to those made below under "Summary of Risk Factors" and in Item 1A. Risk Factors in this Annual Report.

You should carefully consider these risks, as well as the additional risks described in other documents we file with the Securities and Exchange Commission ("SEC"). We also operate in a very competitive and rapidly changing environment. New risks emerge from time to time and it is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in, or implied by, any forward-looking statements.

The forward-looking statements included herein are based on current expectations of our management based on available information and are believed to be reasonable. In light of the significant risks and uncertainties inherent in the forward-looking statements included in this Annual Report, the inclusion of such information should not be regarded as a representation by us or any other person that such results will be achieved, and readers are cautioned not to place undue reliance on such forward-looking statements, which speak only as of the date hereof. Except as required by law, we undertake no obligation to revise the forward-looking statements contained herein to reflect events or circumstances after the date hereof or to reflect the occurrence of unanticipated events. You should read this Annual Report and the documents we file with the SEC, with the understanding that our actual future results, levels of activity, performance and achievements may be materially different from what we expect. We qualify all of our forward-looking statements by the cautionary statements referenced above.

## Glossary of Technical Terms

Certain terms and abbreviations used in this prospectus are defined below:

"**Ag**" means the chemical symbol for the element silver.

"**Au**" means the chemical symbol for the element gold.

"**Breccias**" are rocks composed of broken fragments of minerals or rocks cemented together by a finer grained matrix.

"**Coeval**" means having the same age or date of origin.

"**Collar Locations**" are the geographic coordinates of the surface location of a drill hole.

"**Concentrate**" is the product of a physical concentration process, such as flotation or gravity concentration, which involves separating ore minerals from unwanted waste rock. Concentrates require subsequent processing (such as smelting or leaching) to break down or dissolve the ore minerals and obtain the desired elements, usually metals.

"**CRD**" or "**Carbonate Replacement Deposits**" means high-temperature Ag-Pb-Zn deposits in carbonate rocks such as limestone.

"**Cu**" means the chemical symbol for the element copper.

"**DC/IP**" means an induced polarization geophysical survey that uses Direct Current Resistivity to recover conductivity and chargeability distribution.

"**Dilution**" is an estimate of the amount of waste or low-grade mineralized rock which will be mined with the ore as part of normal mining practices in extracting an ore body.

"**Exploration**" is prospecting, sampling, mapping, diamond drilling and other work involved in searching for ore.



**“Feasibility Study”** is a comprehensive technical and economic study of the selected development option for a mineral project, which includes detailed assessments of all applicable Modifying Factors, together with any other relevant operational factors, and detailed financial analysis that are necessary to demonstrate, at the time of reporting, that extraction is economically viable. The results of the study may serve as the basis for a final decision by a proponent or financial institution to proceed with, or finance, the development of the project.

**“Grade”** means the concentration of each ore metal in a rock sample, usually given as weight percent. Where extremely low concentrations are involved, the concentration may be given in grams per tonne (g/t) or ounces per ton (oz/t). The grade of an ore deposit is calculated, often using sophisticated statistical procedures, as an average of the grades of a very large number of samples collected from the deposit.

**“g/t”** means grams per tonne.

**“Hypogene”** means processes occurring at depth; especially, the primary hydrothermal processes that form a mineral deposit.

**“ICP-MS”** means inductively coupled plasma mass spectrometry.

**“Indicated Mineral Resource”** or **“Indicated Resource”** is that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of adequate geological evidence and sampling. The level of geological certainty associated with an Indicated Mineral Resource is sufficient to allow a qualified person to apply Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit. Because an Indicated Mineral Resource has a lower level of confidence than the level of confidence of a Measured Mineral Resource, an Indicated Mineral Resource may only be converted to a Probable Mineral Reserve.

**“Induced Polarization Survey”** means a method of ground geophysical surveying employing an electrical current to determine indications of mineralization.

**“Inferred Mineral Resources”** or **“Inferred Resources”** is that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. The level of geological uncertainty associated with an Inferred Mineral Resource is too high to apply relevant technical and economic factors likely to influence the prospects of economic extraction in a manner useful for evaluation of economic viability. Because an Inferred Mineral Resource has the lowest level of geological confidence of all Mineral Resources, which prevents the application of the Modifying Factors in a manner useful for evaluation of economic viability, an Inferred Mineral Resource may not be considered when assessing the economic viability of a mining project, and may not be converted to a Mineral Reserve.

**“Initial Assessment”** is a preliminary technical and economic study of the economic potential of all or parts of mineralization to support the disclosure of Mineral Resources. The Initial Assessment must be prepared by a Qualified Person and must include appropriate assessments of reasonably assumed technical and economic factors, together with any other relevant operational factors, that are necessary to demonstrate at the time of reporting that there are reasonable prospects for economic extraction. An Initial Assessment is required for disclosure of Mineral Resources but cannot be used as the basis for disclosure of Mineral Reserves.

**“Intrusive Belt”** means means a band of igneous rocks that have formed parallel to and due to the subduction of a plate and can range up to several 100’s of km in length.

**“km”** means kilometer.

**“km<sup>2</sup>”** means square kilometers.

**“kt”** means kilotonnes.

**“kW”** means kilowatts.

**“m”** means meter.

**“m<sup>2</sup>”** means square meters.

**“Ma”** means mega-annum or million years.

**“masl”** is meters above sea level.

**“Mill”** is a processing facility where ore is finely ground and thereafter undergoes physical or chemical treatments to extract the valuable metals.

**“Mineral Reserve”** is an estimate of tonnage and grade or quality of Indicated and Measured Mineral Resources that, in the opinion of the Qualified Person, can be the basis of an economically viable project. More specifically, it is the economically mineable part of a Measured or Indicated Mineral Resource, which includes diluting materials and allowances for losses that may occur when the material is mined or extracted.

**“Mineral Resource”** is a concentration or occurrence of material of economic interest in or on the Earth's crust in such form, grade or quality, and quantity that there are reasonable prospects for economic extraction. A Mineral Resource is a reasonable estimate of mineralization, taking into account relevant factors such as cut-off grade, likely mining dimensions, location or continuity, that, with the assumed and justifiable technical and economic conditions, is likely to, in whole or in part, become economically extractable. It is not merely an inventory of all mineralization drilled or sampled.

**“Modifying Factors”** are the factors that a Qualified Person must apply to Indicated and Measured Mineral Resources and then evaluate in order to establish the economic viability of Mineral Reserves. A Qualified Person must apply and evaluate Modifying Factors to convert Measured and Indicated Mineral Resources to Proven and Probable Mineral Reserves. These factors include, but are not restricted to: mining; processing; metallurgical; infrastructure; economic; marketing; legal; environmental compliance; plans, negotiations, or agreements with local individuals or groups; and governmental factors. The number, type and specific characteristics of the Modifying Factors applied will necessarily be a function of and depend upon the mineral, mine, property, or project.

**“Moz”** means million troy ounces.

**“Mt”** means mega-tonnes or a million tonnes.

**“Mtpa”** means million tonnes per annum.

**“MW”** means megawatts or a million watts.

**“MWh”** means megawatt hours.

**“NI 43-101”** means National Instrument 43-101 - Standards of Disclosure for Mineral Projects adopted by the Canadian Securities Administrators.

**“NSR”** means Net Smelter Return, which refers to the proceeds returned from the smelter and/or refinery to the mine owner, taken as the sale price of the metal products less certain transportation, treatment and refining costs.

**“Ore”** is rock, generally containing metallic or non-metallic minerals and non-ore minerals, that can be mined and processed at a profit.

**“Ore Body”** is a sufficiently large amount of ore that can be mined economically.

**“oz”** means troy ounces or 31.1035 grams

**“Pb”** means the chemical symbol for the element lead.

**“Preliminary Feasibility Study”** or **“Pre-Feasibility Study”** means a comprehensive study of a range of options for the technical and economic viability of a mineral project that has advanced to a stage where a Qualified Person has determined (in the case of underground mining) a preferred mining method, or (in the case of surface mining) a pit configuration, and in all cases has determined an effective method of mineral processing and an effective plan to sell the product. A Pre-Feasibility Study includes a financial analysis based on reasonable assumptions, based on appropriate testing, about the Modifying Factors and the evaluation of any other relevant factors that are sufficient for a Qualified Person to determine if all or part of the Indicated and Measured Mineral Resources may be converted to Mineral Reserves at the time of reporting. The financial analysis must have the level of detail necessary to demonstrate, at the time of reporting, that extraction is economically viable. A Pre-Feasibility Study is less comprehensive and results in a lower confidence level than a Feasibility Study. A Pre-Feasibility Study is more comprehensive and results in a higher confidence level than an Initial Assessment.

**“Probable Mineral Reserve”** is the economically mineable part of an Indicated Mineral Resource, and in some circumstances a Measured Mineral Resource.

**“Proven Mineral Reserve”** is the economically mineable part of a Measured Mineral Resource and can only result from conversion of a Measured Mineral Resource.

**“QA/QC”** means quality assurance/quality control.

**“Qualified Person”** has the meaning ascribed thereto in Subpart 1300 of Regulation S-K.

**“Re”** means the chemical symbol for the element rhenium.

**“Reclamation”** is the process by which lands disturbed as a result of mining activity are modified to support beneficial land use. Reclamation activity may include the removal of buildings, equipment, machinery and other physical



remnants of mining, closure of tailings, leach pads and other features, and contouring, covering and re-vegetation of waste rock and other disturbed areas.

“**Recovery Rate**” is a term used in process metallurgy to indicate the proportion of valuable material physically recovered in the processing of ore. It is generally stated as a percentage of material recovered compared to the material originally present.

“**Refining**” is the final stage of metal production in which impurities are removed from the molten metal.

“**Sampling**” is a naturally occurring area where metals and elements leached from nearby rocks have accumulated at surface, typically in the form of oxide minerals.

“**Specific Gravity**” means density.

“**Smelting**” is an intermediate stage metallurgical process in which metal is separated from impurities by using thermal or chemical separation techniques.

“**Stringers**” are narrow veins or irregular filaments of a mineral or minerals traversing a rock mass.

“**Supergene**” means a process by which mineralization is enriched by the circulation of groundwater and the weathering process; significant in porphyry-copper and iron oxide-copper-gold deposits, where zones of much higher-grade mineralization may be found.

“**Tailings**” is the material that remains after all economically and technically recovered precious metals have been removed from the ore during processing.

“**t**” or “**Tonne**” means a metric ton or 2,204.6 pounds.

“**Ton**” means a short ton which is equivalent to 2,000 pounds, unless otherwise specified.

“**tpa**” means tonnes per annum.

“**Trenching**” is a long, narrow excavation through overburden to expose a vein, structure, or rock surface.

“**Veins**” are fissures, faults, or cracks in a rock that are filled by minerals.

“**VTEM**” means Versatile Time Domain Electromagnetic system that can record the conductivity of rock and can be performed by plane.

“**Waste**” is rock which is not ore. Waste typically refers to that rock which has to be removed during the normal course of mining in order to get at the ore.

“**Zn**” means the chemical symbol for the element zinc.

## **Summary of Risk Factors**

We are subject to a number of risks, including risks that may prevent us from achieving our business objectives or that may adversely affect our business, financial condition and results of operations. You should carefully consider the risks discussed in this Annual Report under the section titled “Risk Factors,” which are summarized below.

### **Risks Related to our Mining Businesses and the Mining Industry**

- We operate no mines, and the development of our mineral projects into mines is highly speculative in nature, may be unsuccessful, and may never result in the development of an operating mine.
- Mineral exploration activities have a high risk of failure and may never result in finding Ore Bodies sufficient to develop a producing mine.
- We have no history of mineral production and may never engage in mineral production.
- We have a history of negative operating cash flows and net losses and we may never achieve or sustain profitability.
- The mineral resource calculations made at our material mineral projects and other projects are only estimates and may not reflect the amount of minerals that may ultimately be extracted from those projects.
- Mineral resource estimates may change adversely and such changes may negatively impact the viability of developing a mineral project into a mine.

- Lack of reliability and inaccuracies of historical information could hinder our exploration plans.
- The prices of the minerals for which we are principally exploring (copper, nickel, vanadium, cobalt, platinum group elements, gold and silver) change on a daily basis, and a substantial or extended decline in the prices of these minerals could materially and adversely affect our ability to raise capital, conduct exploration activities, and develop or operate a mine.
- We do not own all of the mineral subsurface rights at the Santa Cruz and Tintic Projects, and we do not own all of the surface rights at the Tintic Project.
- Our indebtedness and grant of security interests in certain of our assets could adversely affect our business.
- Actual capital costs, operating costs, production and economic returns may differ significantly from those we have anticipated and future development activities may not result in profitable mining operations.
- We are or will be required to obtain, maintain and renew environmental, construction and mining permits, which is often a costly and time-consuming process and ultimately may not be possible to achieve.
- We are subject to environmental and health and safety laws, regulations and permits that may subject us to material costs, liabilities and obligations.
- Land reclamation and exploration restoration requirements may be burdensome and costly.
- The development of one or more of our mineral projects into an operating mine will be subject to all of the risks associated with establishing and operating new mining operations.
- Our future capital and operating cost estimates at any of our mining projects may not be accurate.
- We may face opposition from organizations that oppose mining which may disrupt or delay our mining projects.
- Our operations involve significant risks and hazards inherent to the mining industry.
- A significant portion of any future revenue from our operations is expected to come from a small number of mines, such that any adverse developments at these mines could have a more significant or lasting impact on our results of operations than if our business was less concentrated.
- Joint ventures and other partnerships in relation to our properties may expose us to risks.
- We operate in a highly competitive industry.
- Higher metal prices in past years have encouraged increased mining exploration, development and construction activity, which has increased demand for, and cost of, exploration, development and construction services and equipment.
- The title to properties within some of our mineral projects may be uncertain or defective, which could put our investment in such mineral projects at risk.
- Failure to make mandatory payments required under earn-in, option and similar arrangements related to mineral projects may result in a loss of our opportunity and/or right to acquire an interest in such mineral projects.
- Suitable infrastructure may not be available for exploration or development of mineral properties or damage to existing infrastructure may occur.
- Our future mining operations may require access to abundant water sources which may not be available.
- An increase in prices of power and water supplies, including infrastructure, could negatively affect our future operating costs, financial condition, and ability to develop and operate a mine.
- Our success depends on developing and maintaining relationships with local communities and stakeholders.
- The impacts of climate change may adversely affect our operations and/or result in increased costs to comply with changes in regulations.
- Our subsidiary, Cordoba, is involved in lengthy litigation, which may adversely affect the value of our investment in it and its mineral projects.
- Our subsidiary Cordoba operates in a jurisdiction, Colombia, which has heightened security risks.
- Our subsidiary Kaizen operates in a jurisdiction, Peru, which has recently experienced an increase in political instability and violence.
- Illegal mining activities may negatively impact our ability to explore, develop and operate some mineral projects.



## **Risks Specific to VRB**

- VRB may be unable to obtain sufficient suitable feedstock for vanadium production required to produce its VRB-ESS®.
- We currently purchase certain key raw materials and components from third parties, some of which we only source from one supplier or from a limited number of suppliers.
- Substantial and increasingly intense competition may harm VRB's business.
- Developments in alternative technology may adversely affect the demand for VRB's battery products.
- VRB manufactures and markets vanadium-based battery systems. If a viable substitute product or chemistry to vanadium-based battery systems emerges and gains market acceptance, our business, financial condition and results of operations will be materially and adversely affected. Furthermore, our failure to keep up with rapid technological changes and evolving industry standards within the battery market may cause our products to become obsolete and less marketable, resulting in loss of market share to our competitors.
- VRB may experience significant delays in the design, production and launch of its battery projects, which could harm our business, prospects, financial condition and operating results.
- VRB batteries rely on software and hardware that is highly technical, and if these systems contain errors, bugs or vulnerabilities, or if we are unsuccessful in addressing or mitigating technical limitations in our systems, our business could be adversely affected.
- VRB may not be able to substantially increase its manufacturing output in order to fulfill orders from its customers.
- VRB's failure to cost-effectively manufacture our batteries in quantities which satisfy our customers' demands and product specifications and their expectations for product quality and reliable delivery could damage our customer relationships and result in significant lost business opportunities for us.
- Changes in the policies of the Government of the People's Republic of China ("PRC") or its laws, or intervention or control by the PRC Government may materially affect VRB and its assets.
- Any future revocation of approvals or any future failure to obtain approvals applicable to our business or any adverse changes in foreign investment policies of the PRC government may have a material adverse impact on our business, financial condition and results of operations.
- The PRC government exerts substantial influence over the manner in which we must conduct our business activities.
- PRC regulations of loans to PRC entities and direct investment in PRC entities by offshore holding companies may delay or prevent us from making loans or additional capital contributions to VRB.
- Uncertainties with respect to the PRC legal system could limit available legal protections.
- VRB may be negatively impacted by the state of PRC-United States relations.

## **Risks Related to Intellectual Property**

- If we are unable to successfully obtain, maintain, protect, enforce or otherwise manage our intellectual property and proprietary rights, we may incur significant expenses and our business may be adversely affected.
- We may not be able to protect our intellectual property rights in the PRC.
- We may be exposed to infringement or misappropriation claims by third parties, which, if determined adversely to us, could cause us to lose significant rights and to be unable to continue providing our existing product offerings.

## **Risks Related to Our Business Generally**

- We will require substantial capital investment in the future and we may be unable to raise additional capital on favorable terms or at all.
- Currency fluctuations may affect our results of operation and financial condition.
- Our insurance may not provide adequate coverage in the event of a loss.
- We are dependent on the leadership of Robert Friedland, our founder and Executive Chairman, and the services of our executive management team and key employees.

- Our directors and officers may have conflicts of interest as a result of their relationships with other mining companies that are not affiliated with us.
- We may have difficulty recruiting and retaining employees.
- Any acquisitions we make may not be successful or achieve the expected benefits.
- Our information technology systems may be vulnerable to cyber-attack or other disruption, which could place our systems at risk for data loss, operational failure or compromise of confidential information.
- We may be subject to claims and legal proceedings that could materially and adversely impact our business, financial condition or results of operations.
- We are subject to the risk of labor disputes, which could adversely affect our business.
- Our activities and business could be adversely affected by the effects of health epidemics, including the COVID-19 pandemic, in regions where we conduct our business operations.
- While our equity ownership in our listed company Cordoba may be significant, we may not be able to exert control or direction over the company or its business.

#### **Risks Related to Government Regulations and International Operations**

- We have subsidiaries, mineral projects, investments in mineral projects or exploration activities in the United States, Canada, Australia, Colombia, Peru, Ivory Coast and Saudi Arabia where the governments extensively regulate mineral exploration and mining operations, imposing significant actual and potential costs on us.
- Our activities outside of the United States are subject to additional political, economic and other uncertainties not necessarily present for activities taking place within the United States.
- Our foreign mining projects and investments are subject to risk typically associated with operating in foreign countries.
- Uncertainty in governmental agency interpretation or court interpretation and the application of applicable laws and regulations in any jurisdictions where we operate or have investments could result in unintended non-compliance.
- Proposed changes to United States federal mining and public land law could impose, among other things, royalties and fees paid to the United States government by mining companies and royalty holders.
- We are subject to and may become liable for any violations of anti-corruption and anti-bribery laws.
- Changes to United States and foreign tax laws could adversely affect our results of operations.

#### **Risks Related to our Common Stock**

- Future sales and issuances of our common stock or rights to purchase common stock, including pursuant to our equity incentive plans, could result in additional dilution of the percentage ownership of our stockholders and could cause the price of our common stock to decline.
- If a substantial number of our shares of common stock are sold, or it is perceived that they will be sold, in the public market, the market price of our common stock could decline.
- Ma'aden holds certain top-up rights that could lead to further dilution or adversely affect our stock price.
- The price of our common stock may be volatile and fluctuate substantially, which could result in substantial losses for purchasers of our common stock.
- If securities or industry analysts do not publish research or reports about us, or if they downgrade our common stock, the price of our common stock could decline.
- The market price of our common stock is subject to fluctuations and may not reflect our long-term value at any given time, and we may be subject to securities litigation as a result.
- Our amended and restated certificate of incorporation and amended and restated bylaws contain provisions that may make the acquisition of our company more difficult.
- Our Board of Directors is authorized to issue and designate shares of our preferred stock in additional series without stockholder approval.



- Our amended and restated certificate of incorporation designates specific state or federal courts as the exclusive forum for certain litigation that may be initiated by our stockholders, which could limit stockholders' ability to obtain a favorable judicial forum for disputes with us.
- We do not currently intend to pay dividends on our common stock and consequently, the ability to achieve a return on investment will depend on appreciation in the price of our common stock.
- We may incur significant additional costs and expenses, including costs and expenses associated with obligations relating to being a public company, which will require significant resources and management attention and may divert focus from our business operations, particularly after we are no longer eligible to report under smaller reporting company standards.
- This Annual Report was prepared pursuant to the standards applicable to a smaller reporting company, and the reduced disclosure requirements applicable to smaller reporting companies may make our common stock less attractive to investors.
- If we are unable to implement and maintain effective internal controls over financial reporting, investors may lose confidence in the accuracy and completeness of our financial reports.
- Non-U.S. holders may be subject to United States federal income tax on gain on the sale or other taxable disposition of shares of our common stock.
- A significant number of the members of our Board of Directors and executive officers and certain of the experts named in this Annual Report are non-U.S. residents, and you may not be able to enforce civil liabilities against these persons.

#### **Transition from Emerging Growth Company and Smaller Reporting Company Status**

Due to the market value of our equity securities that was held by non-affiliates on June 30, 2023 exceeding \$700 million, we have become a "large accelerated filer" as defined under the Exchange Act, and have ceased to be an "emerging growth company" and a "smaller reporting company". Accordingly, for purposes of this Annual Report, we no longer qualify for the accommodations granted to an emerging growth company and are required to comply with the requirements applicable to a large accelerated filer. Due to a transitional period approved by the SEC for former smaller reporting companies, this Annual Report continues to take advantage of the reduced disclosure obligations relating to a smaller reporting company. We anticipate that the proxy statement for our 2024 annual meeting of stockholders will also take advantage of the reduced disclosure obligations related to a smaller reporting company.

## Part I

### Item 1. Business

#### Overview

We are a United States domiciled minerals exploration company with a focus on developing mines from mineral deposits principally located in the United States. We seek to support American supply chain independence by finding and delivering the critical metals necessary for electrification of the economy, with a focus on copper. We believe the United States is significantly under explored and has the potential to yield major new discoveries of these metals.

We are committed to the sustainable development of our projects by embedding Environmental, Social and Governance (“ESG”) criteria in our decision-making framework from the earliest stages of project exploration and development. We continue to build upon our team’s strong ESG track record for leveraging best practices to establish Ivanhoe Electric as a leader in the mining sector. Key considerations that will influence our decision making include, but are not limited to, using clean and renewable energy in our future mining operations, following best practices to meet health, safety and environmental standards, optimizing our water resources, protecting local cultural heritage and biodiversity, minimizing our environmental footprint, as well as ensuring workforce diversity and hiring from local communities. Most importantly, the minerals that are the focus of our exploration and development efforts play a critical role by supporting electrification and enabling the clean energy transition.

#### Our United States Mineral Projects

Our two material mineral projects are the Santa Cruz Project in Arizona and the Tintic Project in Utah.

##### *Santa Cruz Project*

The Santa Cruz Project is a copper exploration project situated in a prolific mining region that hosts some of the largest copper mines in the United States. The Project encompasses 5,975 acres on private land and includes associated water rights. The project location provides excellent infrastructure, including access to rail, interstate highways, and electric transmission lines.

The Initial Assessment for the Santa Cruz Project, completed in September 2023, focuses on a small surface footprint, underground copper mine with an average of 5.5 million tonnes mined annually, exclusively from the high-grade exotic, oxide and enriched domains of the Santa Cruz and East Ridge Deposits. The Initial Assessment estimates life of mine (“LOM”) copper production of 1.6 million tonnes over a 20-year mine life, with projected cash costs of \$1.36 per pound of copper produced.

We are advancing environmental, technical, and economic studies for an underground high-grade copper mining operation with a focus on minimizing the surface footprint of the mine while at the same time incorporating leading technologies to improve efficiencies and costs. We are designing a technologically advanced mine that we expect to result in low carbon dioxide emissions per pound of copper produced and be a leading example of responsibly produced domestic copper.

##### *Tintic Project*

Tintic is an exploration project located 95 kilometres (“km”) south of Salt Lake City in a historically significant silver producing district that also produced significant amounts of copper and gold. We believe the Tintic district has the potential to host a world-class copper-gold porphyry deposit. We own a majority of the surface land and mineral rights constituting the Tintic Project and we have option agreements in place to own the remaining surface land and mineral rights at Tintic.

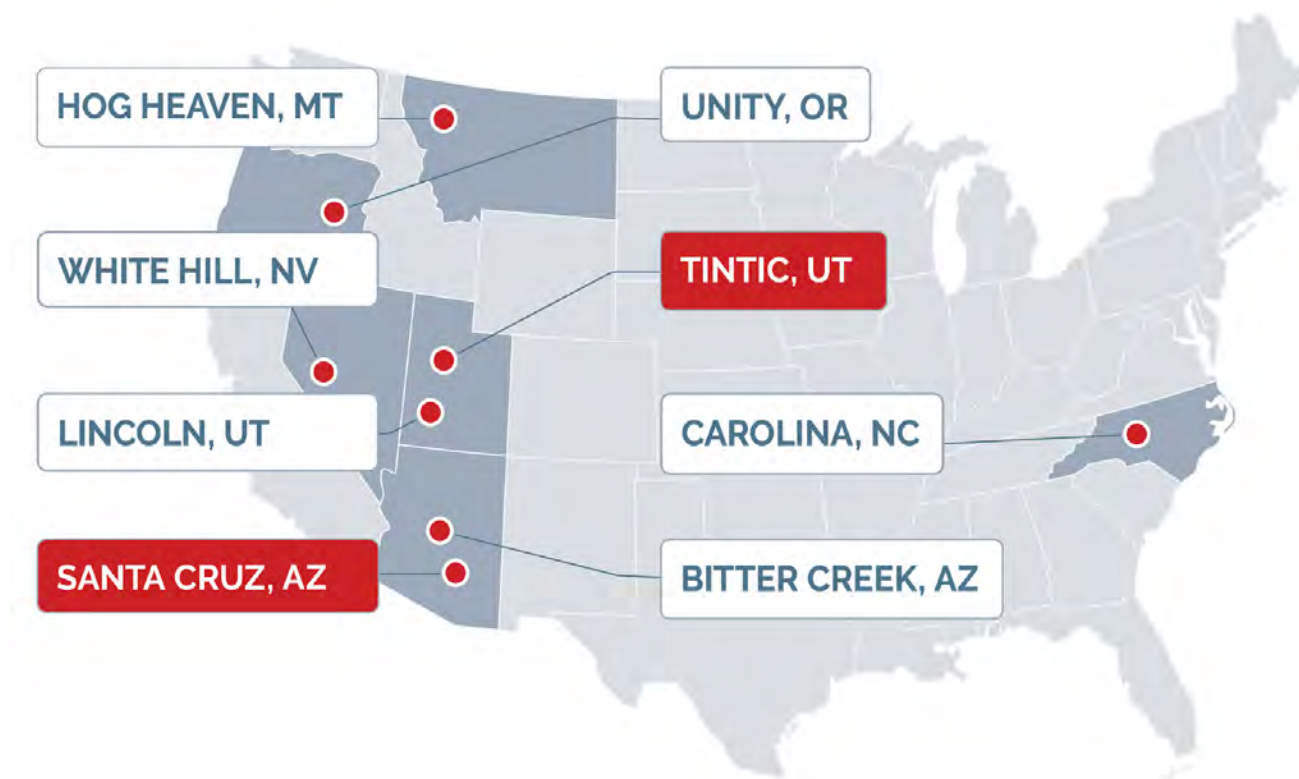
Drilling in 2023 has advanced our understanding of the geology of this complex area and is guiding our ongoing exploration in 2024.

Our other mineral projects in the United States include the Hog Heaven Copper-Silver-Gold Project (“Hog Heaven”), located in Montana, where we have been actively drilling since June 2023. We also hold a portfolio of exploration projects throughout the United States, including projects in North Carolina, Nevada, and Oregon.

For purposes of Subpart 1300 of Regulation S-K (“S-K 1300”), we are defined as an exploration stage issuer because our two material properties, Santa Cruz and Tintic, are at the exploration stage and do not have any declared Mineral Reserves. Our other United States mineral properties are also in the exploration stage.



Map: United States Mineral Projects



#### **Ma'aden Ivanhoe Electric Exploration and Development Limited Company**

In 2023, we established an exploration joint venture with the Saudi Arabian Mining Company (“Ma’aden”) (“Joint Venture”), The Joint Venture is owned 50/50 by Ivanhoe Electric and Ma’aden and has an initial term of five years, which may be extended up to 10 years upon mutual agreement of the parties. The Joint Venture is operating through the newly established limited liability company established under Saudi Arabian law (“Saudi JVCo”). Ma’aden has made available approximately 48,500 km<sup>2</sup> of land under an exploration license (or license application) within Saudi Arabia for exploration by the Joint Venture. We contributed \$66.4 million of the proceeds from the sale of our common shares to Ma’aden to fund Saudi JVCo and the Joint Venture, and provide Saudi JVCo with a royalty-free license to use Typhoon™ within Saudi Arabia for the purpose of mineral exploration. The license will remain exclusive to the Joint Venture in Saudi Arabia and effective during the term of the Joint Venture. Saudi JVCo has purchased three new generation Typhoon™ units from the Company’s former parent, I-Pulse, for an aggregate contract price not to exceed \$13 million. The first new machine was delivered in the first quarter of 2024. The Joint Venture has also entered into a services agreement with Computational Geosciences Inc. (“CGI”), our 94% owned subsidiary, pursuant to which CGI is responsible for the supply of the services for the analysis of data and processing of the full spectrum of geophysical datasets produced by the Typhoon™ systems.

The Joint Venture is governed by a board of directors and technical committee comprised of an equal number of representatives from each company. The technical committee supervises the exploration activities of the Joint Venture including an initial “land identification stage” where the land Ma’aden has made available will be reviewed and reduced to the most prospective areas for Typhoon deployment. This stage will be followed by generative exploration and drilling stages aimed at identifying mineral resources of an economically viable scale. We are the operator during the exploration phase. Ma’aden will assume operatorship if an economically viable deposit is found and is designated by the Joint Venture for further development. We will also provide training and development to an agreed number of employees of the Joint Venture, on mineral exploration, geology, and the operation of the Typhoon™ units. The Joint Venture is not terminable, other than upon the occurrence of an event of default, by either party until the end of the exploration phase.

## Other International Mineral Projects

Our other mineral projects outside of the United States include the Alacran Project in Colombia, the Ivory Coast Project in Ivory Coast, and the Pinaya Project in Peru.

The Alacran Project (also known as the San Matias Project) is owned by our publicly-traded subsidiary Cordoba Minerals Corp. (“Cordoba”). At December 31, 2023, we owned 62.8% of Cordoba’s issued and outstanding shares. The Alacran Project is being developed jointly between Cordoba and JCHX Mining Management Co., Ltd. (“JCHX”).

Alacran is located in the Municipality of Puerto Libertador, Department of Córdoba, Colombia, and is approximately 200 km north of the city of Medellín. The Alacran Project hosts the El Alacrán, Costa Azul, Montiel East, and Montiel West deposits across various mining titles.

A new Feasibility Study was announced on December 18, 2023, “NI 43-101 Technical Report, Feasibility Study, Alacran Project, in Colombia.” Initial capital cost is estimated to be approximately \$420.4 million for the construction of a conventional truck-shovel open pit mine. The Project is anticipated to hold an after-tax Net Present Value (“NPV”) of \$360 million with an Internal Rate of Return (“IRR”) of 23.8% and a payback period of 3 years. The Project’s mine life is projected to be 14.0 years in addition to the estimated two years of construction and pre-production mining, during which, freshly mined ore will be stockpiled alongside historical tailings. The estimated LOM cash costs for copper, net of by-product credits, is \$1.35/lb with by-product credits at \$1.31/lb, and a total estimated LOM cash cost at \$2.66/lb (cash costs excludes sustaining capital).

The Ivory Coast Nickel-Copper Project, in Ivory Coast is focused on the Samapleu-Grata deposits and is operated through a joint venture, the Samapleu Nickel Corporation Inc., with our partner, Sama Resources. At December 31, 2023, we owned 30% of the joint venture with the option to earn up to a 60% interest.

A new report titled “NI 43-101 Technical Report, Mineral Resource Estimate for the Samapleu and Grata Deposits Project” with an effective date of June 27, 2023 was released August 14, 2023. The Project now includes the Grata deposit nearly doubling the mineral resources compared with the 2020 preliminary economic assessment.

The Pinaya Gold-Copper Project, which is wholly-owned by our subsidiary Kaizen, covers approximately 101 km<sup>2</sup> of granted title, plus an additional 28 km<sup>2</sup> under application and includes more than 10 km of underexplored strike length in southeastern Peru. The Project is an intermediate stage exploration project and includes a NI 43-101 Mineral Resource Estimate titled Pinaya Gold-Copper Project, Caylloma and Lampa Provinces, Peru, NI 43-101 Technical Report with an effective date of April 26, 2016. On February 6, 2024, we completed an arrangement pursuant to which we acquired all of the remaining issued and outstanding common shares of Kaizen.

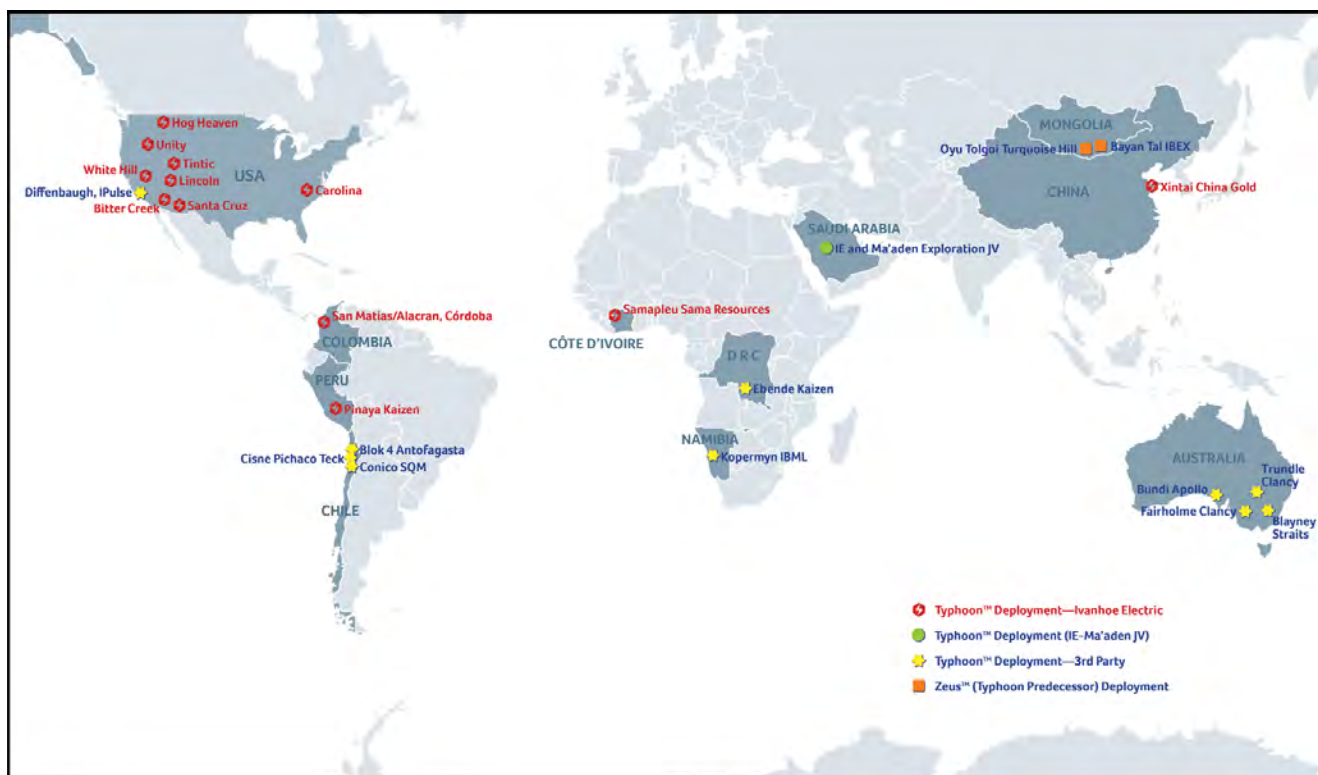
## Typhoon and Computational Geosciences

In addition to our portfolio of mineral projects, we own, through a wholly-owned subsidiary, patents to a proprietary exploration technology known as Typhoon™. We also own a 94% controlling interest in a data inversion business, Computational Geosciences Inc. (“CGI”). CGI was founded in 2010 to commercialize innovative technology developed at the University of British Columbia, Canada to improve and enhance mineral exploration.

The Typhoon™ technology allows us to cost effectively and efficiently generate geophysical images of large-scale mineral deposits to depths of one and a half kilometers or more. CGI software technology consists of sophisticated codes to process geophysical data and build three-dimensional (“3D”) subsurface images that could indicate the presence of various sulfide metals and minerals.

Typhoon™ can and has been used successfully to accelerate and de-risk the exploration process enabling a higher frequency of resource discovery and lowering total exploration costs. Typhoon™ has proven to be an important exploration tool during its deployment at Santa Cruz and Tintic. In July 2022, we completed a 26.5 km<sup>2</sup> (6,500-acre) Typhoon™ 3D induced polarization and resistivity geophysical survey at Santa Cruz which identified multiple large-scale anomalies. The Texaco Ridge Exploration Area was identified in a Typhoon™ survey in September 2022. Ivanhoe Electric drilled 10 holes totaling 8,606 meters (“m”) with a single rig at Texaco Ridge during the first half of 2023. The intention of this drilling was to step out into areas beyond the drilled Texaco Deposit that showed high mineralization potential based on Typhoon™ survey results. Hole SCC-122 at Texaco Ridge intersected broad primary sulfides with an intercept of 327 m @ 0.81% total copper (from 564 m), using a 0.39% total copper cut-off. This intercept includes several zones at the same 0.8% total copper cut-off grade as the nearby Texaco mineral resource. Typhoon™ has also been utilized at many of our other projects. Current and historical deployment of Typhoon™ by us, High Power Exploration Inc. (“HPX”) and third-party clients is shown on the map below.

Map: Current and historical deployment of Typhoon™ by us, HPX, and third-party clients.



## VRB Energy

VRB Energy, Inc. (“VRB”) is primarily engaged in the design, manufacture, installation, and operation of large-scale energy storage systems using vanadium redox batteries. VRB’s major product is VRB-ESS®.

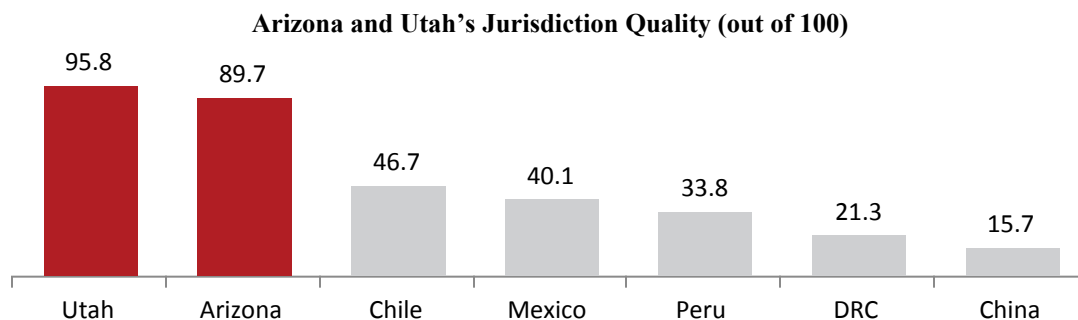
Vanadium redox batteries are a type of rechargeable flow battery that employs vanadium ions as the charge carriers. We believe they are safe, scalable and have the lowest lifecycle cost of energy compared to other types of batteries, making them ideal for grid-scale energy storage. VRB’s goal is to deliver the best technology at the lowest cost to large-scale utility energy storage projects globally. VRB has over 500 MWh of energy storage capacity installed or in development and has completed over one million hours of testing and operation. Ongoing research and development and project experience have allowed VRB to produce larger, more cost-effective and efficient systems in each successive battery generation. VRB intends to produce VRB-ESS® using vanadium recycled from industrial waste. In July 2021, BCPG Public Company Limited (“BCPG”), one of Asia-Pacific’s largest renewable energy companies, invested \$24 million in convertible bonds issued by VRB. As of December 31, 2023, we owned approximately 90.0% of the outstanding shares of VRB.



## Mineral Projects

Our portfolio of highly prospective mineral projects, predominantly focused on copper and other metals needed for the clean energy transition, has been assembled by Robert Friedland and his team over the past decade.

Our two material mineral projects are the Santa Cruz and Tintic Projects, which are situated in the high-quality copper producing jurisdictions of Arizona and Utah, respectively. According to the Fraser Institute's Annual Survey of Mining Companies, Utah and Arizona rank as some of the most attractive copper mining investment jurisdictions compared to other major copper mining jurisdictions around the world.



Source: Fraser Institute 2022 Policy Perception Index

### *Quality Assurance/Quality Control*

Throughout all of our mineral exploration properties, quality assurance and quality control (“QA/QC”) measures are in place to ensure the reliability and trustworthiness of our exploration data. These measures include written standard operating procedures and independent verifications of aspects such as drilling, surveying, sampling, assaying, data management, and database integrity. Appropriate documentation of QC measures and regular analysis of QC data is essential as a safeguard for project data and form the basis for the QA program implemented during exploration.

Analytical QC measures involve internal and external laboratory procedures implemented to monitor the precision and accuracy of the sample preparation and assay data. These measures are also important to identify potential sample sequencing errors and to monitor for contamination of samples.

We submit a blank, standard, or duplicate sample on every seventh sample. Sampling and analytical QA/QC protocols typically involve taking duplicate samples and inserting QC samples (certified reference material (CRM) and blanks) to monitor the assay results' reliability throughout the drill program.

Samples are securely shipped to reputable analytical laboratories with global quality management systems that meets all requirements of the international standards ISO/IEC 17025:2017 and ISO 9001:2015. The independent labs that we use have robust internal QA/QC program to monitor and ensure quality of assay and other analytical results.

## United States

### *Santa Cruz Project, Arizona, USA (the “Santa Cruz Project”)*

As used herein, references to the “Santa Cruz Initial Assessment” or “IA” is to the “S-K 1300 Initial Assessment & Technical Report Summary, Santa Cruz Project, Arizona”, by qualified persons SRK Consulting (U.S.), Inc., KCB Consultants Ltd., Life Cycle Geo, LLC, M3 Engineering and Technology Corp., Nordmin Engineering Ltd. (“Nordmin”), Call & Nicholas, Inc., Tetra Tech, Inc., INTERA Incorporated, Haley & Aldrich, Inc., and Met Engineering, LLC (collectively, the “Santa Cruz Qualified Persons”), dated September 6, 2023 and still current as of December 31, 2023. It was prepared in accordance with the requirements of S-K 1300. None of the Santa Cruz Qualified Persons is affiliated with us or any other entity that has an ownership, royalty or other interest in the Santa Cruz Project. The Technical Report Summary on the Santa Cruz Project, Arizona, U.S.A. is included as Exhibit 96.1 hereto. Scientific and technical information in this section is based upon, or in some cases extracted from these reports.

*Location, Infrastructure, and Access.* Our exploration stage Santa Cruz Project is located in Pinal County, Arizona, 11km to the west of Casa Grande and approximately a one-hour drive, on paved roads, south of Phoenix. The Santa Cruz Project encompasses approximately 78.25 km<sup>2</sup> of land. Santa Cruz was discovered in the 1970s but was undeveloped due to market conditions as well as fragmented title and ownership. The Santa Cruz Project centroid is approximately -111.88212, 32.89319 (WGS84) in Township 6 S, Range 4E, Section 13, Quarter C.

*Map: Location of the Santa Cruz Project within the state of Arizona.*



*Title.* The Santa Cruz exploration area covers 75.66 km<sup>2</sup>, including 25.79 km<sup>2</sup> of private land, 2.6 km<sup>2</sup> of Stockraising Homestead Act (“SRHA”) lands, 238 unpatented claims, or 19.32 km<sup>2</sup> of U.S. Bureau of Land Management (“BLM”) land, and 16 mineral exploration permits, or 27.95 km<sup>2</sup>, with the Arizona State Land Department (“ASLD”).

In May 2023, we acquired 5,975 acres of land constituting the surface rights and associated water rights for the Santa Cruz Project in Casa Grande, Arizona, pursuant to the terms of the Purchase and Sale Agreement (“PSA”) with seller Wolff-Harvard Ventures LLC (“Legends Property Group”). At closing, we paid a total of \$34.3 million to the seller, which included \$5.1 million of previously paid deposits. We also issued a secured promissory note to the seller in the principal amount of approximately \$82.6 million over a period of 4.5 years. The promissory note includes an annual interest rate of prime plus 1%. As at December 31, 2023, \$48.3 million of principal is remaining to be paid on the promissory note.

In February 2022, Ivanhoe Electric acquired the surface title to 20 acres in the southeast area of the Santa Cruz Project known as Skull Valley. And in May 2022, we acquired the surface title to 100.33 acres in the northeast area of the Project known as CG100. At closing for CG100 we paid \$300,000. On the first anniversary of the closing date we paid \$300,000. At the second anniversary of the closing date, we will pay \$300,000. And on the third anniversary of the closing date, we will pay the final installment of \$600,000 to release the deed from escrow.

In 2021 we executed an agreement with Central Arizona Resources (“CAR”) for the right to acquire 100% of CAR’s option over the DR Horton Energy (“DRHE”) mineral title and CAR’s Surface Use Agreement (“SUA”) with Legends Property Group. The agreement with DRHE provides that we (by way of assignment from CAR) have the right, but not the obligation, to acquire 100% of the mineral title in the fee simple mineral estate, 39 Federal unpatented mining claims, and three small, approximately 10 acre surface parcels, by paying \$27,870,500 in cash or in shares of our common stock at the election of the owner by August 16, 2024. As of December 31, 2023, we had made payments totaling \$17,870,500 under the option. These mineral rights are expected to be formally acquired upon the completion of scheduled payments by Ivanhoe Electric to the current mineral title holder in August of 2024. We now hold, through our wholly-owned subsidiary Mesa Cobre Holding Corp., the option to acquire all the mineral titles contiguous with the acquired surface lands for a unified land and mineral package encompassing the entire Santa Cruz Project.

The mineral rights to Skull Valley were acquired in February 2022 along with the surface title. The mineral rights to CG100 were acquired in May 2022 along with the surface title.

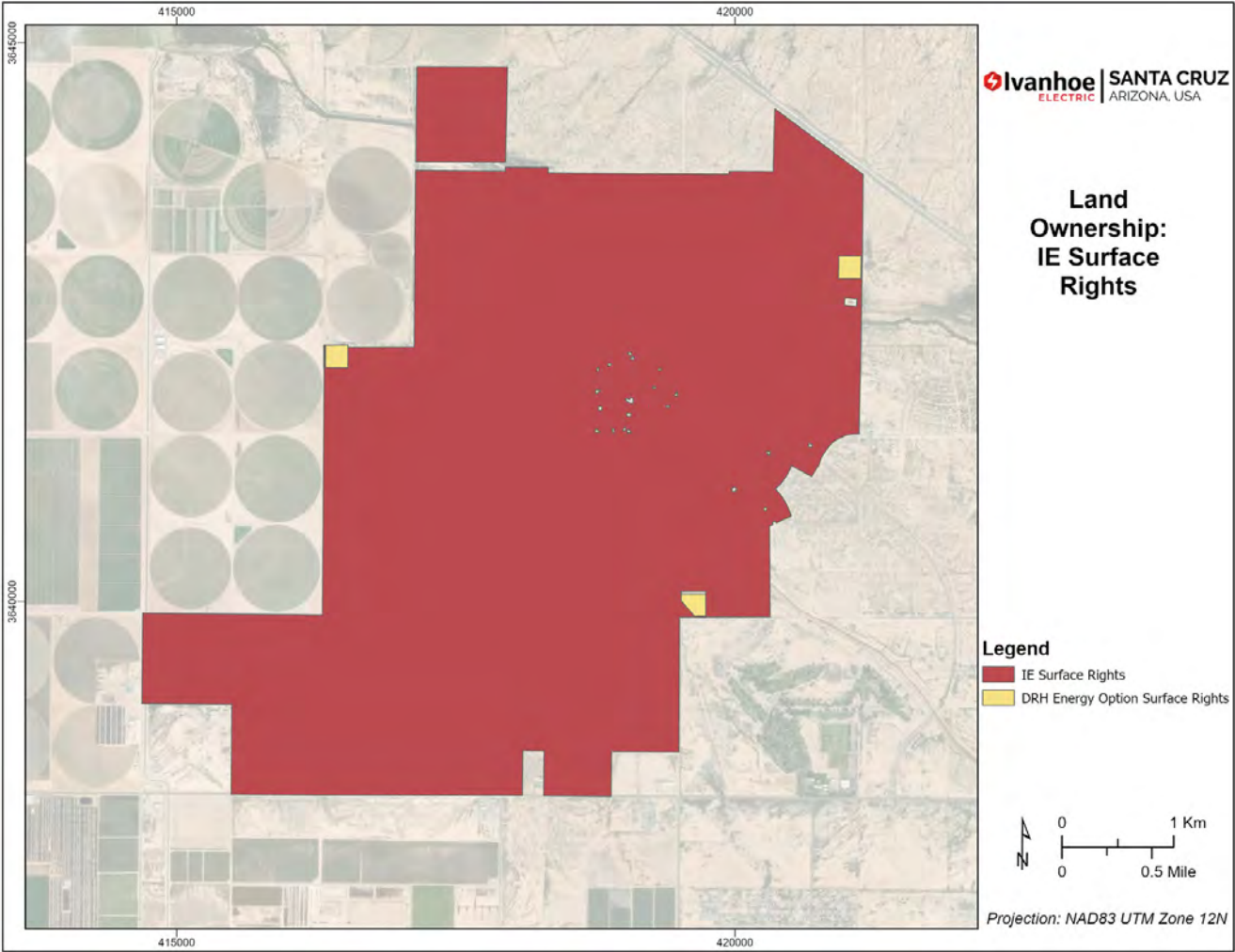
In November 2023, Ivanhoe Electric acquired 16 mineral exploration permits with ASLD, adding an additional 27.95 km<sup>2</sup> of mineral control to the project. These permits are granted for 5 year terms provided annual renewals, renewal applications, and work commitment documentation or in-lieu fees are submitted. At the end of the 5-year term, Ivanhoe Electric can submit for a new mineral exploration permit and be “first in line” to receive another 5-year mineral exploration permit term. These permits grant us the exclusive right to explore for minerals during the permit term. Revenue generated by ASLD for these permits is used to support several public entities, including K-12 public education and State universities.

To retain an unpatented claim on federal land in the USA, a \$165 maintenance fee per claim is due annually by September 1st. Based on the current landholding this would amount to \$39,720 in annual payments for claim retention.

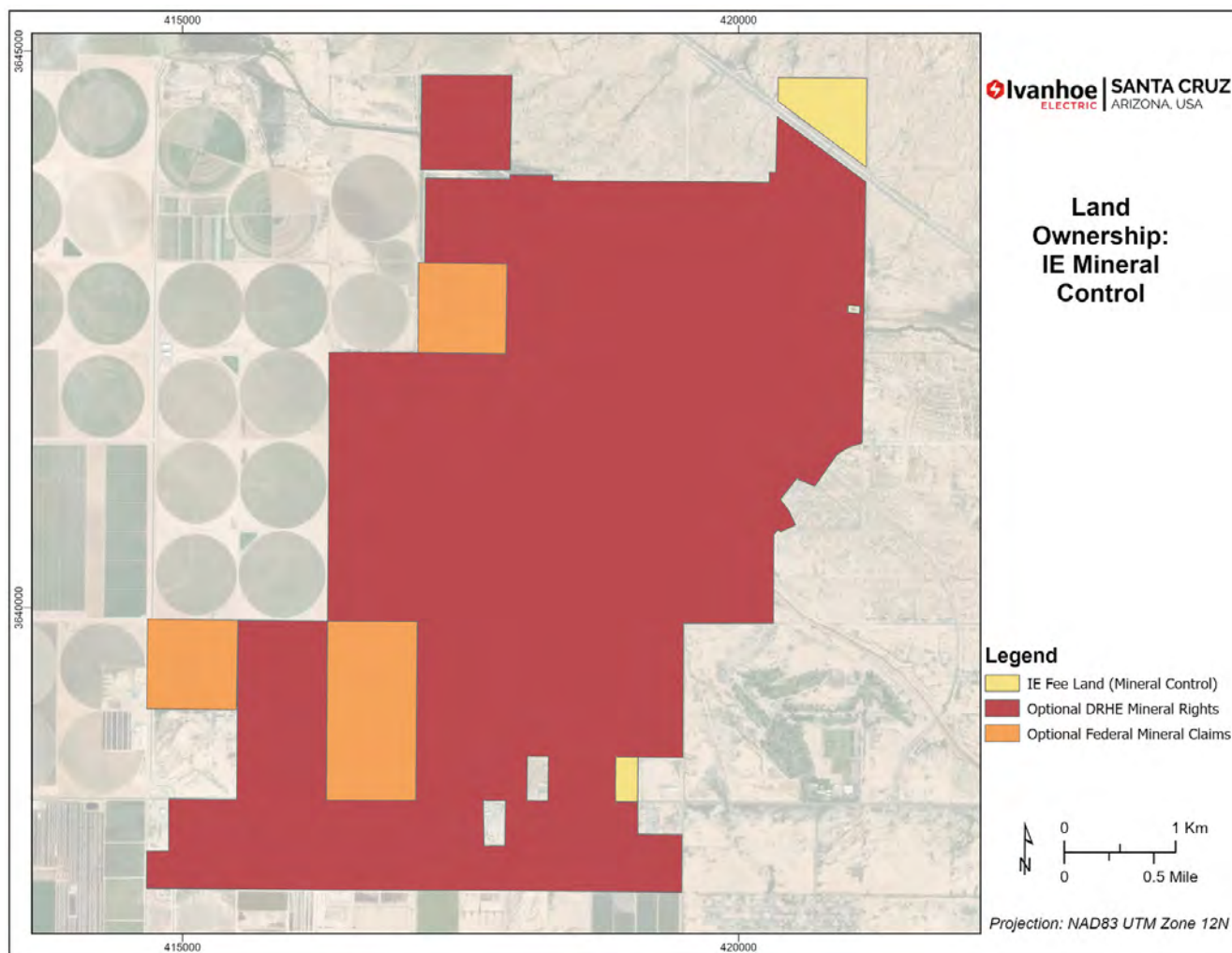
Royalty interests on the Santa Cruz Project include royalties in favor of ASARCO Santa Cruz, Inc. and Freeport Copper Company of a combined 5% NSR derived from DRHE portions of the project area and in favor of Simmons Devcor Company of a 10% NSR on specific parcels (capped to \$7 million with consumer price index calculation). In addition, six other NSR royalties in favor of several individuals encumber specified parcels of the project area with NSR royalty rates of 2%, 1%, 0.5%, 0.075%, 0.015% and 0.0125%. No royalty encumbers the entire known mineral resources at the Santa Cruz Project, other than the ASARCO Santa Cruz, Inc. and Freeport Copper Company royalty. The Simmons Devcor Company royalty and the several individual royalties aggregating to 2.09% encumber specified parcels of the project. NSR royalties are only payable upon production and sale of product. There are no advance royalties.



Map: Ivanhoe Electric Surface Rights of the Santa Cruz Project.



Map: Ivanhoe Electric Mineral Rights of the Santa Cruz Project.



*History.* The first discovery of copper mineralization in the area occurred in February 1961 by geologists from the American Smelting and Refining Company (“ASARCO”). They proceeded with preliminary geophysical surveys that same year, including IP, resistivity, seismic reflection, and magnetics. Upon positive results from the geophysical surveys, a small drill program of six holes was funded, with the last hole being the first to intersect the significant mineralization that became known as the ‘West Orebody’ and, in time, the Sacaton open pit mine which lies approximately 8 km to the northeast of the center of the Santa Cruz Project.

ASARCO expanded exploration efforts across the Casa Grande Valley and in 1964 the first hole was drilled on the Santa Cruz Project. By May 1965, seventeen drill holes were completed without similar success, and ASARCO reduced its land position. Subsequent reviews in 1970-1971 deemed the Santa Cruz Project worth renewed exploration activity. Following the initiation of the Santa Cruz Joint Venture (“SCJV”) between ASARCO Santa Cruz, Inc. and Freeport McMoRan Copper & Gold Inc. in 1974, additional ground was acquired around the Santa Cruz North deposit. By this time, various joint ventures, as noted below, had staked considerable ground over and around what would eventually be the Casa Grande West (now Santa Cruz) deposit.

In 1973, David Lowell put together an exploration program called the Covered Area Project (“CAP”) that was funded first by Newmont Mining, then, in succession, by a joint venture between Newmont and Hanna Mining, then Hanna with Getty Oil Corp. and Quintana Corp.; though both Quintana and Newmont would pull out of the project before any discoveries were made. By 1974 over 120 holes were drilled at 20 projects across Southwestern Arizona, with a focus on the Santa Cruz system. Drilling under the CAP program continued through to 1977, at which point Hanna Mining took over as operator under a joint venture with operation funding from Getty Oil Corp. Between 1977 and 1982, Hanna-Getty advanced a tight spaced drill program that delineated an estimated 500 Mt of 1% Cu at Casa Grande West, and countless exploration holes in the surrounding Casa Grande Valley.

In 1986, the Bureau of Mines obtained Congressional approval and funding to study in situ copper mining. In 1988, the Santa Cruz deposit was selected for this research project sponsored by a joint venture program between landowners ASARCO Santa Cruz Inc. and Freeport McMoRan Copper & Gold Inc., and the US Department of the Interior, Bureau of Reclamation. The in-situ testing began in February 1996, but research funding was halted in October 1997 due to a change from Congress.

*Property Condition and Stage of Development.* The Santa Cruz Project is an exploration stage project without mineral reserves. No mining activity has ever taken place on the land constituting the Santa Cruz Project. There is no mine in production at the project. There is currently no significant equipment, infrastructure or facilities at the Santa Cruz Project, and no mine development or operating equipment at the project site.

Permitting and encumbrances. Current exploration is conducted on private land. Royalties are discussed above, under “Title”. Current permits are listed in the Table below.

*Table. Current permits for the Santa Cruz Project.*

<b>Permit Name</b>	<b>Agency</b>	<b>Status</b>	<b>Renewal Date</b>	<b>Requirements</b>	<b>Violations</b>
<i>Dust Control Permit DUSTW-22-0292</i>	Pinal County Air Quality Control District	Approved	05/11/2024	Bi-weekly inspections; limit vehicle access to work areas; reduce vehicle speeds; water disturbed areas; apply stabilizers as needed; concurrent reclamation; install track-out devices as needed	No Violations
<i>NOI AZPDES Stormwater General Construction Permit AZCN96111</i>	Arizona Dept. of Environmental Quality	Approved	06/30/2025	Stormwater Pollution Prevention Plan in place; monthly inspections	No Violations
<i>Temporary Use Permit DSA-22-00200</i>	City of Casa Grande	Approved	11/08/2025	Submit SFHA Permit and Non-SFHA Temporary Use Permit	No Violations
<i>Floodplain Use Permit FUP2206-165</i>	Pinal County	Approved	N/A	Existing grades within the area of disturbance shall be restored per the reclamation plan.	No Violations
<i>Exploration Drilling Reclamation Plan</i>	Arizona State Mine Inspector	In Review	TBD	Maximum extent of surface disturbance to be left unreclaimed at any one time during exploration operations is 20.0 acres.	N/A
<i>Special Flood Hazard Area Permit – Exploration Drilling</i>	City of Casa Grande	In Review	TBD	TBD	N/A
<i>Temporary Use Permit – Non-SFHA</i>	City of Casa Grande	In Prep	TBD	TBD	N/A
<i>Floodplain Use Permit</i>	Pinal County	In Prep	TBD	TBD	N/A

The Migratory Bird Treaty Act prohibits “Take” without prior authorization by the U.S. Fish and Wildlife Service (“USFWS”). Santa Cruz has implemented beneficial practices in accordance with USFWS Nationwide Standard Conservation Measures which include employee education, preconstruction surveys, nest monitoring, and avoidance of active nests. This may affect access points and the ability to perform work on the property.

Existing and past land uses in the Project area and immediately surrounding areas include agriculture, residential home development, light industrial facilities, and mineral exploration and development. Some dispersed recreation occurs in the area. The climate is dry, and most of the Project area is flat, sandy, and sparsely vegetated. Portions of the Project area are in the 100-year flood plain of the North Branch of Santa Cruz Wash. Within the Project area, approximately 85 acres of land located 1.2 km north of the intersection of N. Spike Road and W. Clayton Road was used during an in situ leaching project in 1991. A Phase 1 Environmental Site Audit (“ESA”) was conducted on the Project area.



There is a large private land package covering the Project area and area of known mineralization. The ability to operate on private land has the potential to reduce lengthy permitting timelines that result from federal permitting processes. The precise list of permits required to authorize the construction and operation of this Project will be determined as the mining and processing methods are designed.

The permit approval process for some permits includes review and approval of the process design. Thus, the project design must be substantially advanced to support the application for those permits. These technical permits typically represent the “longest lead” permits. Technical permits with substantial technical design are needed as part of the applications. The anticipated issuing agencies include:

- a. Mined Land Reclamation Plan (ASMI)
- b. 45-513 Groundwater Withdrawal Permit (Arizona Department of Water Resources (ADWR))
- c. Recycled Water Discharge Permit (Arizona Department of Environmental Quality (ADEQ))
- d. Aquifer Protection Permit(s) (ADEQ)
- e. Air Quality Operating Permit (PCAQCD)
- f. General Plan Amendment (City of Casa Grande)
- g. Zone Change or Planned Area of Development (PAD) Amendment (City of Casa Grande)
- h. Site Plan Approval (City of Casa Grande)

*Geological Setting, Mineralization and Deposit Types.* The Santa Cruz Project lies along a northwest to southeast trending, approximately 600 km long porphyry copper belt that includes many productive deposits such as Mineral Park, Bagdad, Globe-Miami, and the neighboring Sacaton. These deposits lie within the Basin and Range province that covers most of the southwestern United States and northwestern Mexico. The porphyry copper deposits within this trend are the product of igneous activity during an approximately 80 Ma to 50 Ma orogenic event that involved northeast-directed subduction and a northwest-southeast-striking magmatic arc. During Basin and Range tectonic extension, porphyry copper systems were dismembered, tilted and buried beneath basinal deposits that now fill the Casa Grande Valley. Prior to concealment, the porphyry systems of Arizona experienced supergene enrichment events that make them economically significant deposits.

The Santa Cruz system (comprising the Santa Cruz, Texaco, Park-Salyer, and Sacaton deposits) represents one or more large, Laramide-aged porphyry copper systems that were subsequently enriched by supergene processes. Supergene enrichment is a mineral deposition process in which near-surface oxidation produces acidic solutions that leach metals, carry them downward, and reprecipitate them, thus enriching sulfide minerals already present. Sometime following the development of supergene mineralization, the Santa Cruz system was dismembered, displaced, and eventually buried as a result of Basin and Range extensional tectonism.

Mineralization at the Santa Cruz Project is generally divided into three main types:

- Primary hypogene sulfide mineralization: chalcopyrite, pyrite, and molybdenite hosted within quartz-sulfide stringers, veinlets, veins, vein breccias, and breccias as well as fine to coarse disseminations within vein envelopes associated with hydrothermal porphyry-style mineralization. Hypogene mineralization appears to be the most concentrated within the Southwest Exploration Area, Texaco Ridge Exploration Area, and Texaco Deposit areas based on Ivanhoe Electric drill holes.
- Secondary supergene sulfide mineralization: dominantly chalcocite which rims primary hypogene sulfides and completely replaces hypogene mineralization. Other sulfides that fall within this category include lesser bornite and covellite as well as djurleite and digenite which have been identified by historic XRD analyses. Supergene sulfide mineralization developed as sub-horizontal domains, known as “chalcocite blankets”, within the phreatic zone (below the paleo water table). They result from the weathering, oxidation, and leaching of sulfides under oxidizing conditions in the vadose zone (above the water table) and the transport and re-precipitation of copper sulfides in a more reducing environment below the water table.
- Secondary supergene “oxide” mineralization: chrysocolla (copper silicate) with lesser diopside, tenorite, cuprite, copper wad, and native copper, and as copper-bearing smectite group clays. This mineralization style resides immediately above supergene sulfide mineralization near the paleo water table. Superimposed in-situ within the copper oxide zone is atacamite (copper chloride) and copper sulfates (e.g., antlerite, chalcantite). Atacamite accounts for much of the copper grades within the oxide zone and requires formation of a brine to precipitate.

*Exploration and Drilling.* We completed a twin hole program in 2021 to validate the historical drill data and produce an initial Mineral Resource Estimate in 2021 (December 8, 2021) and accompanying Technical Report Summary (June 7, 2022).

Our exploration in 2021 – 2022 included:

- a. Geophysical surveys – ground gravity, ground magnetics, Typhoon™ three-dimensional Perpendicular Pole Dipole Induced Polarization (“3D PPD IP”), refraction, and passive seismic.
- b. Drilling – a combination of diamond drill and rotary drilling totaling 88 holes and approximately 55,291 m.

Combined with the historical exploration, there are over 170 drill holes totaling over 133 km length within the Santa Cruz Project area. This exploration comprises the drilling data used for the mineral resource estimate.

Our exploration in 2023 included drilling – a combination of diamond drill, rotary, and sonic drilling totaling 94 holes and approximately 68,294 m.

*Sampling, Analysis and Data Verification.* Nordmin and Met Engineering are not aware of any drilling, sampling, or recovery factors that could materially impact the accuracy and reliability of the results. In the opinion of Nordmin and Met Engineering, the drilling, core handling, logging and sampling procedures meet or exceed industry standards and are adequate for the purpose of Mineral Resource estimation.

The authors of the IA consider the QA/QC protocols in place for the Santa Cruz Project to be acceptable and in line with standard industry practice. Based on the data validation and the results of the standard, blank, and duplicate analyses, the authors are of the opinion that the assay and specific gravity databases are of sufficient quality for Mineral Resource estimation for the Santa Cruz Project.

*Mineral Resources.* The December 31, 2022, Mineral Resource Estimate (“MRE”) set forth in the IA was prepared by Nordmin and includes a detailed geological and structural re-examination of the Santa Cruz, East Ridge, and Texaco Deposits. Nordmin has also confirmed that the MRE remained accurate as of December 31, 2023

The Santa Cruz Deposit MRE benefits from approximately 116,388 meters of diamond drilling in 129 drill holes, the East Ridge Deposit MRE has 18 holes totaling 15,448 m, and the Texaco Deposit MRE has 23 drill holes totaling 21,289 m. All drill holes were completed from 1964 to 2022.

Diamond drill hole samples were analyzed for total Cu and acid soluble Cu using Atomic Absorption Spectroscopy (“AAS”). A decade after initial drilling, ASARCO re-analyzed select samples for cyanide soluble Cu (AAS) and molybdenum (multi-element ICP). The Company currently analyzes all samples for total Cu, acid soluble Cu, cyanide soluble Cu, and molybdenum. Due to the re-analyses to determine cyanide soluble Cu within historic samples, there are instances where cyanide soluble Cu is greater than total Cu. It has been determined that the historic cyanide soluble assays are valid as they align with recent assays in 2022 drill holes.

*Table: In Situ Santa Cruz Project Mineral Resource Estimates as at December 31, 2023 and December 31, 2022, at 0.70% Cu cut-off for Santa Cruz, 0.80% Cu cut-off for Texaco, and 0.90% Cu Cut-off for East Ridge*

Classification	Deposit	Mineralized Material (ktonne)	Total Cu %	Total Soluble Cu %	Total Cu (ktonne)	Total Soluble Cu (ktonne)
<b>Indicated</b>	Santa Cruz (0.70% COG)	223,155	1.24	0.82	2,759	1,824
	Texaco (0.80% COG)	3,560	1.33	0.97	47	35
	East Ridge (0.90% COG)	—	—	—	—	—
<b>Inferred</b>	Santa Cruz (0.70% COG)	62,709	1.23	0.92	768	576
	Texaco (0.80% COG)	62,311	1.21	0.56	753	348
	East Ridge (0.90% COG)	23,978	1.36	1.26	326	302
<b>Total</b>						
<b>Indicated</b>	<b>All Deposits</b>	<b>226,715</b>	<b>1.24</b>	<b>0.82</b>	<b>2,807</b>	<b>1,859</b>
<b>Inferred</b>	<b>All Deposits</b>	<b>148,998</b>	<b>1.24</b>	<b>0.82</b>	<b>1,847</b>	<b>1,225</b>

Source: Nordmin, 2023

#### Notes on Mineral Resources

- k=thousand; t=tonne; Cu=copper; M=million; lb=pounds; CoG or COG=cut-off grade; and d=day.
- The mineral resources in this estimate were independently prepared, including estimation and classification, by Nordmin Engineering Ltd. and in accordance with the definitions for mineral resources in S-K 1300.
- Mineral resources that are not mineral reserves do not have demonstrated economic viability. This estimate of mineral resources may be materially affected by environmental, permitting, legal, title, taxation, sociopolitical, marketing, or other relevant issues.
- Verification included multiple site visits to inspect drilling, logging, density measurement procedures and sampling procedures, and a review of the control sample results used to assess laboratory assay quality. In addition, a random selection of the drill hole database results was compared with the original records.
- The mineral resources in this estimate for the Santa Cruz, East Ridge, and Texaco deposits used Datamine Studio RMTM software to create the block models.
- The mineral resources are current to December 31, 2022 and December 31, 2023.
- Underground-constrained mineral resources for the Santa Cruz deposit are reported at a CoG of 0.70% total copper, Texaco deposit are reported at a CoG of 0.80% total copper and East Ridge deposit are reported at a CoG of 0.90% total copper. The CoG reflects total operating costs to define reasonable prospects for eventual economic extracted by conventional underground mining methods with a maximum production rate of 15,000 t/d. All material within mineable shape-optimized wireframes has been included in the mineral resource. Underground mineable shape optimization parameters include a long-term copper price of \$3.70/lb, process recovery of 94%, direct mining costs between \$24.50 to \$40.00/processed tonne reflecting various mining method costs (long hole or room and pillar), mining general and administration cost of \$4.00/t processed, onsite processing and solvent extraction and electrowinning (“SX/EW”) costs between \$13.40 to \$14.47/t processed, offsite costs between \$3.29 to \$4.67/t processed, along with variable royalties between 5.00% to 6.96% net smelter royalty (“NSR”) and a mining recovery of 100%.
- Specific gravity was applied using weighted averages by deposit sub-domain.
- All figures are rounded to reflect the relative accuracy of the estimates, and totals may not add correctly.
- Excludes unclassified mineralization located along edges of the Santa Cruz, East Ridge, and Texaco deposits where drill density is poor.
- Reported from within a mineralization envelope accounting for mineral continuity.
- Total soluble copper means the addition of sequential acid soluble copper and sequential cyanide soluble copper assays. Total soluble copper is not reported for the primary domain.

The Santa Cruz Project did not have any Mineral Reserves as at December 31, 2023 or 2022.



*Mineral Processing and Metallurgical Testing.* Metallurgy and processing test work were directed by Met Engineering LLC and conducted at McClelland Labs in Sparks, Nevada. McClelland Labs is recognized by the International Accreditation Service (“IAS”) for its technical competence and quality of service and has proven that it meets recognized standards. The studies are ongoing. Study focus has been on:

- Confirming total copper recovery of the leach-float flow sheet proposed by historical operator, CGCC, circa 1980, on Exotic, Oxide and Chalcocite mineral domains.
- Investigating heap leaching of Exotic, Oxide and Chalcocite mineral domains. The test program for heap leaching is in progress and is reported as such in section 10. Some early results are described below. Column leach testing will complete in the fourth quarter of 2023.

Agitation leach tests undertaken in mid-2022 verified historical test results and after adjusting the particle size distribution, acid-soluble copper recovery of 92% was achieved. Ivanhoe Electric subsequently conducted a leach-float test program in which the same mill composite sample used in prior testing was subjected to the standard leach procedure developed earlier in the year. Three standard leach tests were conducted, each subjected to different grind sizes. The studies support achieving up to 94% total copper recovery with the leach-float circuit at the Santa Cruz deposit. Further, the studies support that a smelter saleable concentrate could be produced without any penalties grading 48% total copper and 23% sulfur.

One column cell test has been completed and is in the phase of water rinsing and removing leach residue for analysis. The seven remaining column cell tests are operating normally and are all in the final stage of secondary sulfide leaching. There were no solution flow issues in any of the eight column cells. There were no significant operational issues on any of the column cells. Estimated copper recoveries and extraction rates on the two column cells cured with a chloride dopant were 98% and 94% copper and 70 and 63 days, respectively.

There are some factors to follow up on with future testing to ensure all processing factors are effectively investigated. These are confirmation of corrosion resistant materials and linings for the thickeners in the counter-current-decantation system for pregnant leach solution recovery and studying sulfide flotation with expected process water chemistry at the site. Otherwise, there are no deleterious elements that could have a significant effect on economic extraction.

*Mining Methods.* The Project is currently not being mined. Mineral resources are stated for three deposits: Santa Cruz, Texaco, and East Ridge. For mine planning work, only the Santa Cruz and East Ridge deposits were evaluated.

The Santa Cruz deposit is located approximately 430 to 970 meters below the surface. Based on the mineralization geometry and geotechnical information, an underground longhole stoping (“LHS”) method is suitable for the Oxide and Chalcocite-enriched domains within the deposit. The Santa Cruz deposit will be mined in blocks where mining within a block occurs from bottom to top with paste backfill (“PBF”) for support. A sill pillar is left in situ between blocks.

Within the Santa Cruz deposit, there is an Exotic domain located approximately 500 to 688 meters below the surface and to the east of the main deposit. The Exotic domain consists of flatter lenses that are more amenable to drift and fill (“DAF”) mining. Cemented waste rockfill will be used for support. The backfill will have sufficient strength to allow mining of adjacent drifts without leaving pillars.

The East Ridge deposit is approximately 380 to 690 meters below the surface and to the north of the main Santa Cruz deposit. The East Ridge deposit consists of two tabular lenses and will be mined using DAF with cemented waste rock backfill for support.

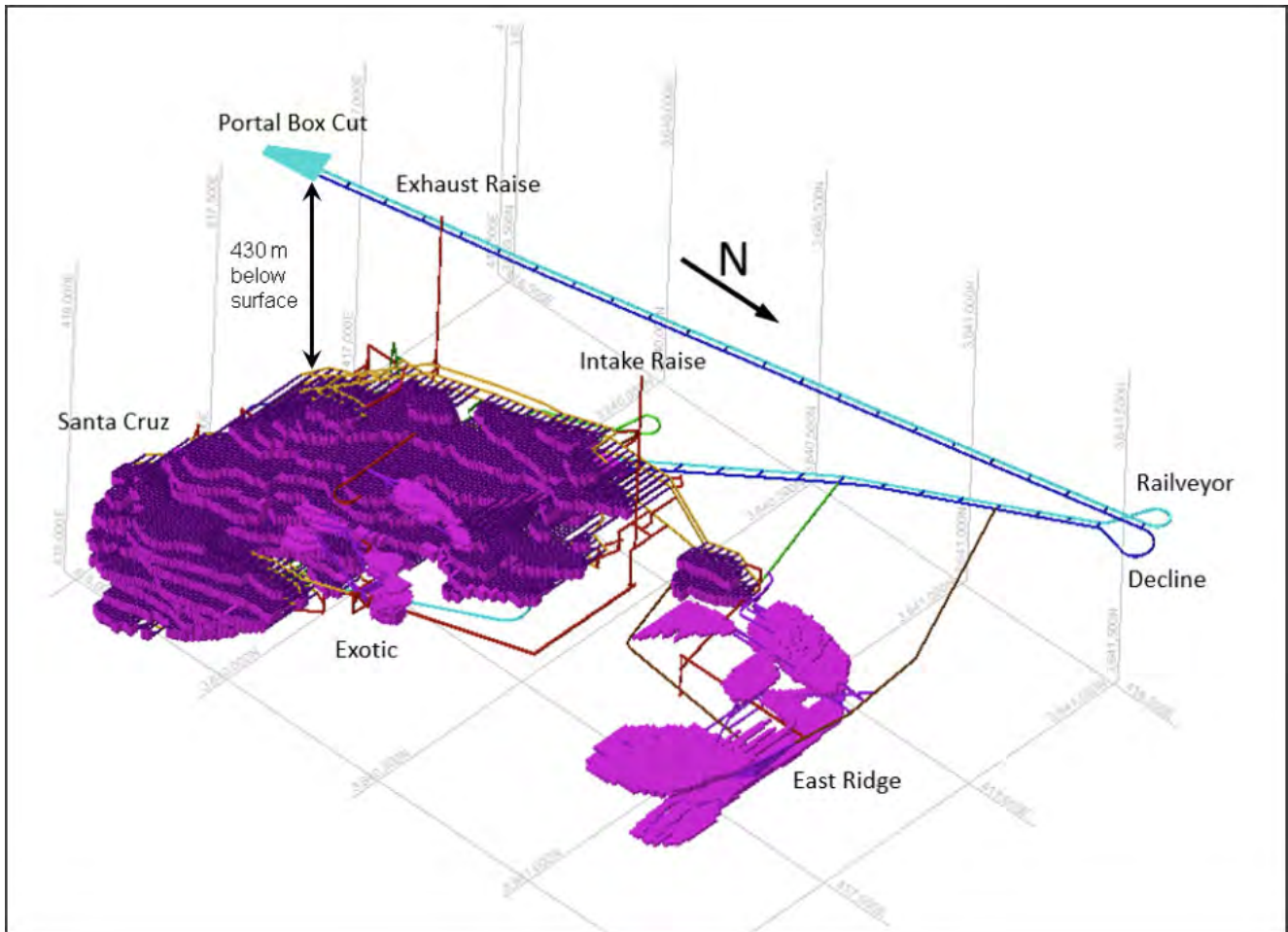
The mine will be accessed by dual decline drifts from surface, with one drift serving as the main access and the other as a railveyor drift for material handling. Mineralization is transported from stopes via loader to an ore pass system and then to surface by the railveyor. Main intake and exhaust raises will be developed with conventional shaft sinking methods to provide air to the mine workings. The mine will target a combined production of 15,000 t/d from the Santa Cruz and East Ridge deposits.

Portal box cut is assumed in the IA to start in 2026. Decline and railveyor activities begin in 2027 through to 2028 to access the top portion of the mine. Decline and railveyor resumes in 2033 to access the bottom of the mine. Stoping begins in 2029 with a 1 year ramp-up period until the mine and plant are operating at full capacity. The currently defined mine life is approximately 3 years of construction and 20 years of production.

Using historical data and the results of recent hydrogeologic testing, the hydrogeological conceptual site model was updated and the groundwater flow model was developed and finalized. The groundwater flow model was used to evaluate multiple passive and active dewatering scenarios for the proposed mine plan. With an active dewatering scenario pumping approximately 3,000 gallons per minute (“gpm”) for the first two years of life of mine (“LoM”), the model shows that the

annual average residual passive inflows for the first 10 years of the mine are at or below 12,000 gpm. From year 11 through 25 of LoM, the residual passive inflows range from approximately 15,000 to 18,000 gpm.

*Figure: Completed Mine Plan*



The table below summarizes the total tonnage and grades within the mine plan.

*Table: Mine Plan Summary*

<b>Classification</b>	<b>Domain</b>	<b>Tonnage (kt)</b>	<b>Total Soluble Cu (%)</b>	<b>Acid Soluble Cu (%)</b>	<b>Cyanide Soluble Cu (%)</b>
Indicated	Total	74,713	1.64	1.07	0.39
Inferred	Total	25,530	1.60	0.99	0.48
Indicated + Inferred	Total	100,244	1.63	1.05	0.41

Source: SRK, 2023

Note: 4.94 Mt of marginal material at a grade of 0.56% is not included in this table.

This work is preliminary in nature, it includes inferred mineral resources that are considered too speculative geologically to have modifying factors applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that this economic assessment will be realized.

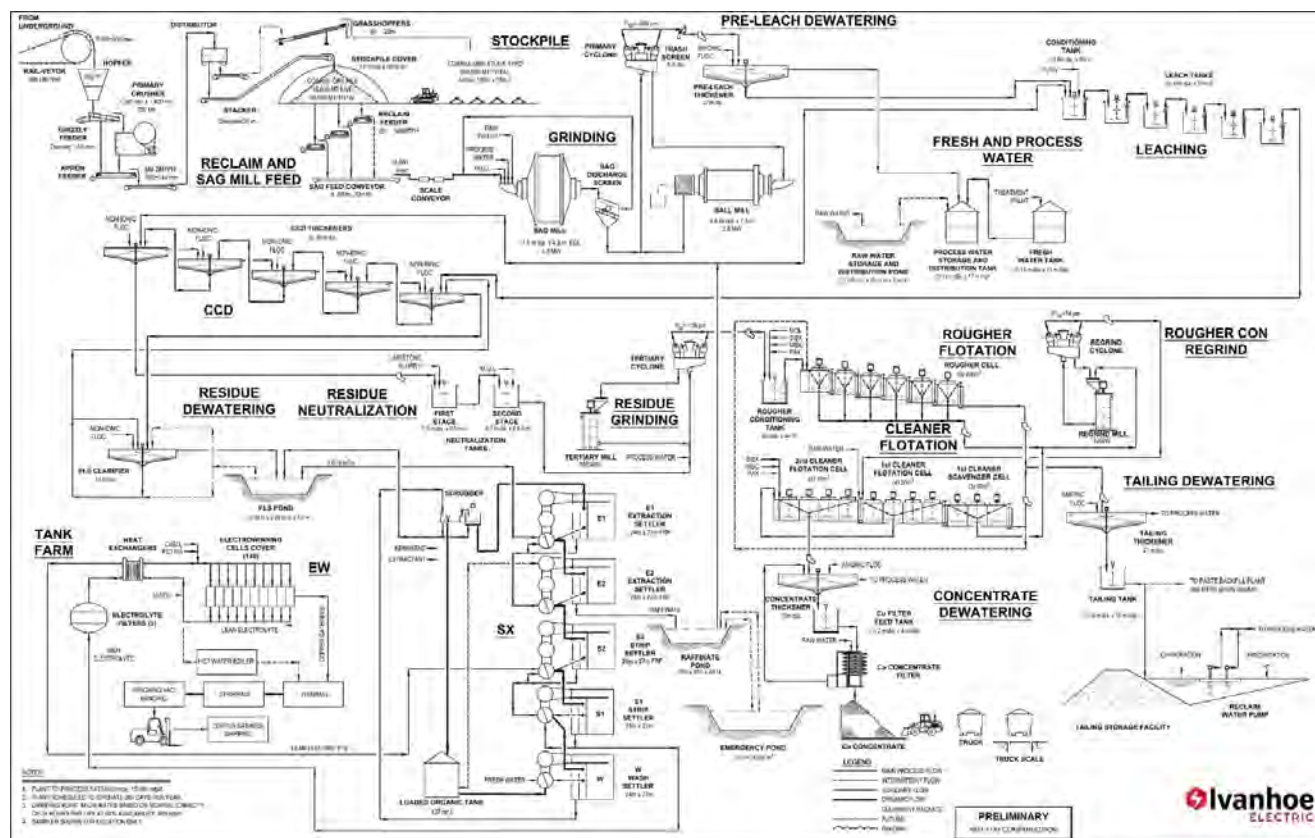
*Recovery Methods.* The Santa Cruz processing facility will recover copper by conventional weak sulfuric acid agitated leaching of the oxide mineralized material, and by sulfide flotation of the residue produced after leaching. Leached oxide copper will be processed through SX/EW to produce high purity copper cathodes. Sulfide copper and by-product precious metals will be recovered in copper flotation mineral concentrate. Copper concentrates will be of suitable quality to be sold to a domestic or international copper smelters.

The process design is based on metallurgical tests results from The Hanna Mining Company's research center (circa 1980) and new IA-level mineral process testing initiated by Ivanhoe Electric in 2022 and 2023.

The following process flow diagram illustrates sequence of operations to recover copper in the Santa Cruz plant. This flowsheet provides the basis for the process description that follows.



Figure. Santa Cruz IA processing flowsheet showing the production of both copper cathode from copper oxide mineralization and copper concentrate from copper sulfide mineralization.



Source: M3, 2023

The nominal capacity of the mill process is 5.475 million tonnes per year (“Mt/y”). Process availability factors include both the mechanical availability and the use of this mechanical availability. For the design, an availability factor of 92% is used throughout the plant because the primary and secondary grinding lines have a single ball mill in each.

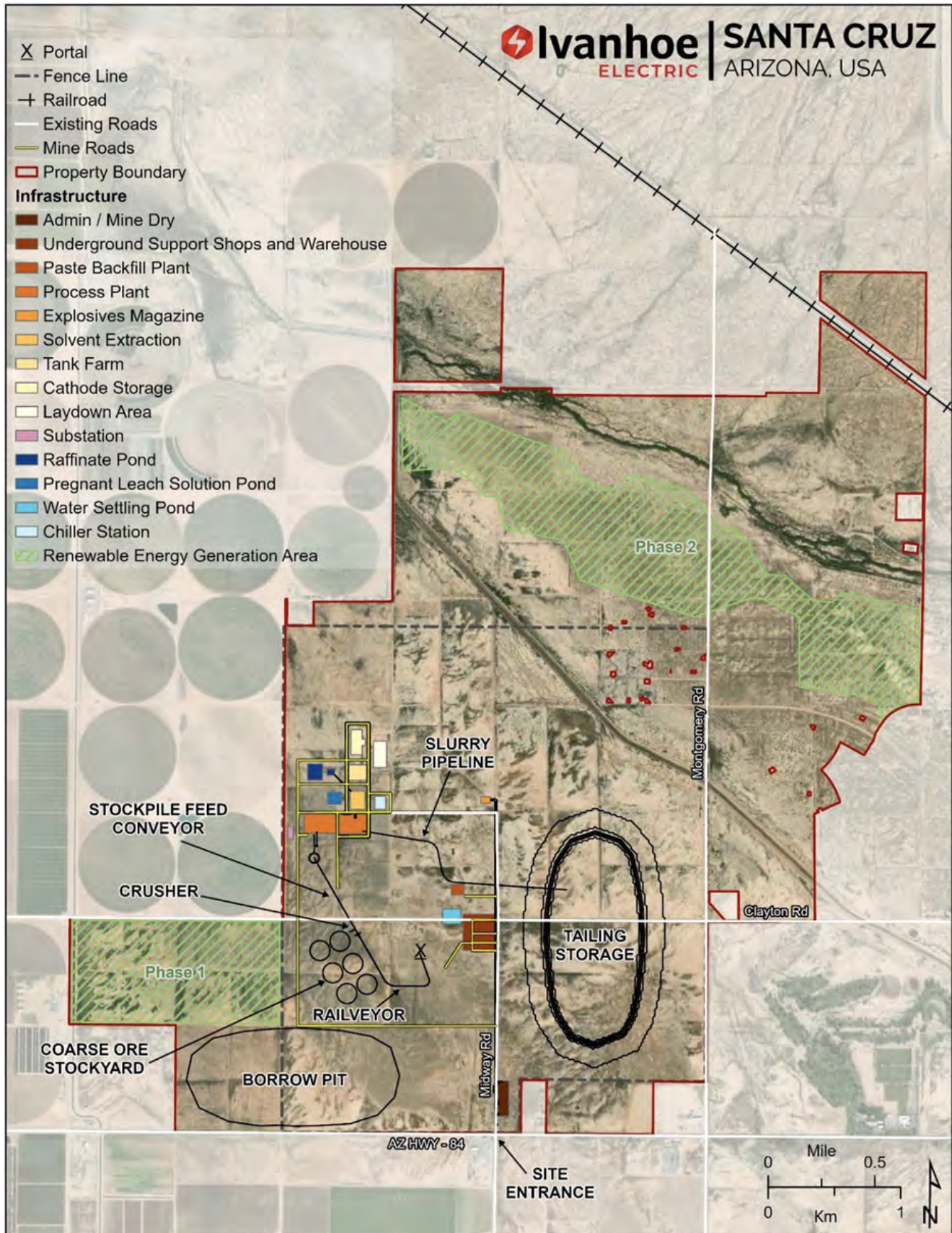
The current mine plan developed for the Project is based on a 365-day calendar year. The yearly mine production tonnage will vary from 4.0 million tonnes (“Mt”) at the start of production to a high of 5.9 Mt in Year 5 of production.

The mass balance was developed for the Santa Cruz process using MetSim mass balance software. The process simulation used overall recoveries of 96% for the acid soluble copper as cathode copper and 93% for the sulfide copper into concentrate. These recoveries are based on 1980 studies and supported by mineral process testing in 2023 on recent drill core samples and include process losses attributed to Pregnant Leach Solution wash efficiency (2023 liquid solid separation test results) and cleaner scavenger flotation losses (1980 and 2023 test programs).

**Project Infrastructure.** The Santa Cruz project has excellent existing infrastructure including access to roads and interstate highways, railroads, power lines, and an abundant supply of water from dewatering operations and water rights associated with the private land acquired by Ivanhoe Electric. The Project owns sufficient fee simple land to allow for all surface infrastructure including the process facility, Tailings Storage Facility (“TSF”), offices borrow pit, and other related mine structures.

Interstate highways near the Project (<10 km) are Interstate 8 and Interstate 10. The Union Pacific/Southern Pacific (“UPSP”) rail borders the northern edge of the Santa Cruz Project and the BNSF rail has a spur and terminal in Phoenix, Arizona.

Figure. Santa Cruz IA site layout, requiring approximately one-third of the total land package for the mine, plant, process, tailings storage facilities and on-site generation of solar power.





*Tailings Storage Facility.* A significant portion of the mined material will be returned underground as backfill in the mine. Backfill is used to fill voids created during mining. By returning tailings as paste backfill underground, the size and impact of the surface Tailings Storage Facility (“TSF”) will be reduced.

The TSF is proposed to be located on relatively flat terrain directly east of the plant site and sited to avoid: the underground ore body outline; mine’s infrastructure; and the 1% annual exceedance probability (“AEP”) (1 in 100-yr return period) floodplain from Federal Emergency Management Agency (“FEMA”) (2007) flood hazard mapping. The TSF is sized to store all the tailings estimated to be produced over the mine life and not used for underground backfill (56.7 Mt, without additional contingency) on surface. The tailings will be retained by a perimeter embankment (up to 50 meters high) constructed primarily of compacted, structural fill sourced from on-site borrow areas. The TSF impoundment will be lined with a low-permeability liner, which will be raised within the perimeter embankment for seepage control. During operations, tailings slurry water and precipitation which collects in the TSF will be reclaimed to the mine for use in the mining process or treated (if required) and discharged. At closure, the TSF impoundment will be regraded to prevent ponding and covered with a soil cover and vegetated to limit infiltration and resist erosion. Closure channels will be constructed to shed water off the impoundment surface and over the embankment slopes.

*Power.* Power consumption for the Santa Cruz Project is anticipated to average 450,000 megawatt hours per year (“MWh/y”). Initially the source of power for the Project will be provided from a 69 kilovolt (“kV”) power line operated by Pinal County Electric District 3 (“ED3”). Several other higher voltage transmission lines border the property within close proximity.

Power for the Project could be provided from a number of sources, or combination of sources, ranging from grid supply to microgrid renewable energy supply. The goal of the mine development is to achieve much of the energy supply from renewable sources, such as solar or geothermal, either at the start or through a phased in approach during the mine operation. The base case of the project is that the mine will operate using 70% renewable power within the first three years of operations.

*Water.* The water balance for the Santa Cruz Project indicates that there will be a surplus of water from the Project from dewatering of the underground operations. The mining and processing operations will consume approximately 3.5 million cubic meters (“Mm<sup>3</sup>”) of water per year, while water supplies from dewatering will range from 20 million to over 30 million cubic meters per year (“Mm<sup>3</sup>/y”). The amount of water for distribution to local stakeholders during operations will average 27 Mm<sup>3</sup>/y. The water balance excludes the water rights associated with the surface title of the Project.

*Market Studies and Contracts.* A flat copper price of \$3.80/lb has been selected for this study. In the opinion of SRK, this price is generally in-line with pricing over the last 3 years and forward-looking pricing is appropriate for use during an Initial Assessment of the Project with an estimated mine life of 20 years. As the Project progresses, more detailed market work in the form of market studies will be completed to support further study efforts. SRK cautions that price forecasting is an inherently forward-looking exercise dependent upon numerous assumptions. The uncertainty around timing of supply and demand forces has the potential to create a volatile price environment and SRK fully expects that the price will move significantly above and below the selected price over the expected life of the Project.

Cathode is assumed to be 100% payable with no premium or discount applied for the purposes of the study. This approach assumes that the cathode has not received registration or certification that would result in a premium; nor is the cathode assumed to contain any deleterious or penalty elements.

Concentrate terms for the study are generic terms and do not reflect the presence of any deleterious or penalty elements within the concentrate. The following table presents the concentrate terms applied for this study.

*Table: Concentrate Terms*

Item	Unit	Value
Payability	%	96.5
Treatment Charge	\$/dmt	65
Refining Charge	\$/lb	0.065
Transport Cost	\$/wmt	90

Source: SRK, 2023

As the Project is an early-stage greenfield project, there are a large number of contracts required for the development and operation of the site. None of the major required contracts have been executed at the time of this study.

*Environmental, Closing and Permitting.* The Project is located on private land. Permitting is primarily with the State of Arizona, Pinal County, and City of Casa Grande. While the Project will be required to obtain several permits to operate it is on private land and is not anticipated to be subject to lengthy federal permitting timelines.

Baseline studies are underway for resources of concern and studies will continue as the Project develops. There are no known occurrences of federally listed threatened and endangered species and there are no planned impacts to potential federally regulated waters of the US. Portions of the Project site is a known nesting area for burrowing owls protected under the Migratory Bird Treaty Act and US Fish and Wildlife beneficial practices to avoid and minimize impacts to birds have been and will continue to be implemented as the Project develops.

The utilization of a renewable microgrid will allow the Santa Cruz Project to produce copper with one of the industry's lowest carbon intensities. Such intensities highlight Ivanhoe Electric commitment to implementing cutting-edge mining techniques, conserving energy, and utilizing renewable energy.

Aside from the pending reclamation plan for exploration activities at the Site, Ivanhoe Electric has no current obligations to tender post mining performance or reclamation bonds for the Project. Once the facility achieves the level of design necessary to advance to mine development and operation, Ivanhoe Electric will need to submit and gain approval of an Arizona Department of Environmental Quality (“ADEQ”)-approved Aquifer Protection Permit (“APP”) and an Arizona State Mine Inspector (“ASMI”)-approved Reclamation Plan. The closure approach and related closure cost estimates must be submitted following approval and before facility construction and operation.

Ivanhoe Electric plans to create an all-encompassing environmental, social, and governance framework designed to effectively address any community concerns and ensure that the Santa Cruz Project operates in a socially responsible manner.

### ***Capital and Operating Cost Estimates***

*Mining Capital Cost Estimate.* The mining capital cost estimate is based on first principal cost model build-up and budgetary quotes. The initial mining capital costs plus sustaining mining capital costs are equal to \$960.48 million, which includes an estimated capital of \$878.08 million plus 9.4% contingency of \$82.40 million.

Development costs are derived from the mining schedule prepared by SRK. The prepared mining schedule includes meters of development during pre-production, this schedule of meters was combined with unit costs, based on site specific data, to estimate the cost of this development operation. The following table provides the breakdown of the estimated initial capital costs.

*Table: Estimated Mining Initial Capital Cost*

<b>Item</b>	<b>US\$ Million</b>
Capital Development Cost	166.99
Equipment Purchase and Rebuilds	241.24
Mine Services	17.96
Owner Cost	32.75
Contingency	38.76
<b>Total</b>	<b>497.70</b>

Source: SRK, 2023

The Santa Cruz Project will require sustaining capital to maintain the equipment and all supporting infrastructure necessary to continue operations until the end of its projected production schedule. The sustaining capital cost estimate developed includes the costs associated with the engineering, procurement, construction and commissioning.

The estimate indicates that the Project requires sustaining capital of \$462.78 million to support the projected production schedule through the LoM, as shown below.



Table: Estimated Mining Sustaining Capital Cost

Item	US\$ Million
Capital Development Cost	60.79
Equipment Purchase and Rebuilds	322.64
Mine Services	0
Owner Cost	35.71
Contingency	43.63
<b>Total</b>	<b>462.78</b>

Source: SRK, 2023

*Process Capital Cost Estimate.* The initial capital cost for the Santa Cruz plant and infrastructure facilities totals \$563.7 million as summarized in the table below. This capital cost includes all process areas facilities in the Santa Cruz plant proper starting with the primary crushing, and continuing through grinding, agitated leaching, solvent extraction and electrowinning, leach residue neutralization, leach residue grinding, rougher flotation, concentrate regrinding, cleaner flotation, concentrate dewatering and tailing dewatering and pumping to the TSF. The initial capex includes the ventilation chiller for the underground mine, the main plant substation, fresh and process water ponds, and the batch plant, and the surface ancillary buildings.

Table: Estimated Initial Plant Capital Cost Summary

Description	Hours	Total Cost (US\$ Million)	% of Total Capital Cost
Directs	1,290,000.00	345.4	61.3
Indirects		72.0	12.8
Contingency		111.3	19.7
Owner's Costs		35.0	6.2
Escalation		—	0.0
<b>Total Capital Cost (TCC)</b>		<b>563.7</b>	<b>100.0</b>

Source: M3, 2023

No sustaining capital costs have been included for the Santa Cruz process plant. The mine life is 20 years, and the capital equipment will be designed to last for the duration of the Project. Preventative maintenance and periodic rebuilds/ relining is captured in the annual maintenance cost estimation. The only place where sustaining capital is expected is in the TSF for annual embankment enlargement which was estimated separately.

*Tailings Capital Cost Estimate.* The initial capital cost for the Santa Cruz tailings facilities totals \$75.1 million as shown below. The estimated sustaining capital costs total \$486.8 million as shown below. The key elements of the tailings capital cost estimation methodology include:

- Material take offs by year were provided by KCB
- Earthworks, lining, and piping rates from standard schedule
- Borrow-to-fill provided by budgetary quotation – Turner Mining Group

Table: Estimated TSF Initial Capital Cost

Item	US\$ Million
Directs	48.8
Indirects	11.3
Contingency	15.0
<b>Total</b>	<b>75.1</b>

Source: M3, 2023

Table: Estimated TSF Sustaining Capital Cost

Item	US\$ Million
Sustaining	382.2
Closure	104.6
<b>Total</b>	<b>486.8</b>

Source: M3, 2023

*Mining Operating Cost Estimate.* The required mining equipment fleet, required production operating hours, and manpower to arrive at an estimate of the mining costs that the mining operations would incur was estimated. The mining costs were developed from first principles and compared to recent actual costs.

A maintenance cost was allocated to each category that required equipment maintenance. A summary of the LoM unit mine operating costs is presented below.

Table: Mining Operating Costs

LoM Tonnes Mined (000)		107,134*
Category	US\$000	US\$/t Mined
Operating Development	481,021	4.49
Production (Drilling, Blasting, Loading, Hauling and Backfill)	1,139,843	10.64
Other mining costs (Services, Maintenance, Rehab and Definition Drilling)	458,564	4.28
Mine engineering and administration	592,085	5.54
Contingency (9.5%)	254,664	2.39
<b>Total</b>	<b>2,926,177</b>	<b>27.33</b>

\* LoM Tonnes mined includes 100,244 kt of process material, 4,942 kt of marginal material and 1,948 kt of waste.

Source: SRK, 2023

*Processing Operating Cost Estimate.* The process plant operating costs are summarized by the categories of labor, electric power, liners (wear steel), grinding media, reagents, maintenance parts, and supplies and services, as presented below.

Table: Process Plant OPEX Summary by Category

Operating and Maintenance	Average Annual Cost (US\$000)	\$/t Processed (US\$)	LoM Operating Cost (US\$000)	%
Labor	11,119	2.11	222,383	16.8
Electrical Power	23,297	4.43	465,939	35.1
Reagents	18,447	3.51	368,947	27.8
Wear Parts (Liners & Grinding Media)	6,811	1.30	136,221	10.3
Maintenance Parts	5,993	1.14	119,865	9.0
Supplies and Services	623	0.12	12,557	0.9
<b>Total (US\$000)</b>	<b>66,296</b>	<b>12.61</b>	<b>1,325,912</b>	<b>100.0</b>

Source: M3, 2023

TSF operating costs are included in the processing operating costs and include labor, power, reagents, and maintenance.

*G&A Operating Cost Estimate.* The general and administrative (“G&A”) and laboratory costs are summarized below.

Table: G&A Operating Cost Summary

Item	\$/t processed	LoM Operating Cost (\$000)
Lab Opex	0.24	24,798.00
G&A Opex	2.39	251,543.00
<b>Total</b>	<b>2.63</b>	<b>276,341.00</b>

Source: M3, 2023

Total modeled initial capital costs are estimated at \$1.15 billion, as summarized below:

Table. Modeled Initial Capital\*

Initial Capital Cost	Value (\$000)
Underground Capital Development Cost	167.0
Underground Equipment Purchase	240.4
Underground Rebuilds	0.8
Underground Services	18.0
Underground Owner Cost	10.9
Underground Related Contingency Costs	34.8
Underground Capitalized Opex	35.6
Mill and Surface Capital	563.7
TSF	75.1
<b>Total</b>	<b>1,146.3</b>

Source: SRK, 2023

\* Initial capital estimates and expenditure schedule were developed external to the model. No additional contingency has been included in the model.

Total modeled sustaining capital costs are estimated at \$0.98 billion, as summarized below:

Table. Modeled Sustaining Capital\*

Sustaining Capital	Value (\$000)
Underground Mining	462.8
Tailings	486.6
Closure	27.0
<b>Total</b>	<b>976.4</b>

Source: SRK, 2023

\* Sustaining capital is modeled on an annual basis and is used in the model as developed in previous sections. No contingency amounts have been added to the sustaining capital within the model. General closure costs are modeled as sustaining capital and are captured as a one-time payment the year following cessation of operations. For the tailings impoundment, closure costs run several years past the end of the mine life, this cost has been captured by extending the model life beyond the end of the mine life.

*Economic Analysis.* Economic analysis, including estimation of capital and operating costs is inherently a forward-looking exercise. These estimates rely upon a range of assumptions and forecasts that are subject to change depending upon macroeconomic conditions, operating strategy and new data collected through future study or operations and therefore actual economic outcomes often deviate significantly from forecasts.

As permitted by Subpart 1300 and Item 601 of Regulation S-K, the new IA includes an economic analysis of the Santa Cruz Project without taking into consideration inferred mineral resources and also includes an economic analysis of the Santa Cruz Project including the inferred mineral resources. It should be noted that the new IA is preliminary in nature, and is based on mineral resources. Unlike mineral reserves, mineral resources do not have demonstrated economic viability. It should also be noted that the version of the economic analysis that includes inferred mineral resources includes inferred



mineral resources that are considered too speculative geologically to have modifying factors applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that this economic assessment will be realized.

The new IA anticipates that the Santa Cruz Project will consist of an underground mine and processing facility producing both copper concentrate and copper cathode.

The economic analysis metrics are prepared on annual after-tax basis in US\$. The results of the analysis are presented in the table below. The results indicate that, at a copper price of US\$3.80/lb., the Project without inferred material returns an after tax net present value (“NPV”) at 8% of US\$0.5 billion calculated from the start of construction, an after tax internal rate of return (“IRR”) of 14% and a payback period from the start of construction of 10 years. When the inferred material is included in the economic analysis, the after tax NPV @ 8% increases to US\$1.3 billion, the after tax IRR increases to 23% and the payback period decreases to 7 years from the start of construction.

This assessment is preliminary in nature and is based on mineral resources. Unlike mineral reserves, mineral resources do not have demonstrated economic viability. This assessment also includes inferred mineral resources that are considered too speculative geologically to have modifying factors applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that this economic assessment will be realized.

The economic model is based on mine plans that were prepared as outlined in previous sections. Inferred resources account for approximately 21% of the tonnage contained within the mine plan. The economic results of the Project both without inferred resources and including inferred resources are presented within this section. However, the removal of the inferred material from the mine plan is a gross adjustment and no recalculation of fixed capital and operating costs has been completed for the scenario without inferred mineral resources.

As the stage of study for the Santa Cruz Project is initial assessment, no reserves are estimated for use in this analysis. The economic evaluation was completed using resource material that includes material in the inferred category. To evaluate the risk associated with the use of inferred material in the mine plan, a model was completed where the inferred material was removed from the mine plan. SRK notes that this model result should be viewed with caution as the removal of the inferred material is a gross adjustment and no corresponding adjustments to capital, operating cost or mill performance were made.

The book value of the Santa Cruz property and its associated plant and equipment as at December 31, 2023 was \$167.0 million.

*Table: Indicative Economic Results*

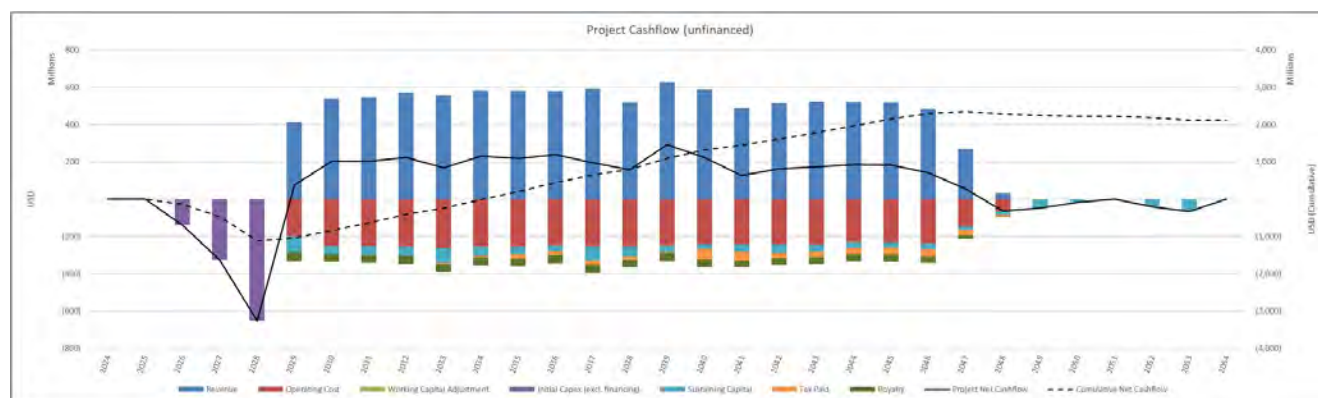
<b>LoM Cash Flow (Unfinanced)</b>	<b>Units</b>	<b>Value (without Inferred)</b>	<b>Value (with Inferred)</b>
<b>Total Revenue</b>	\$ million	10,031.62	12,865.90
<b>Total Opex</b>	\$ million	(4,616.93)	(4,617.00)
Operating Margin	\$ million	5,414.70	8,248.90
Operating Margin Ratio	%	54	64
Taxes Paid	\$ million	(426.56)	(984.80)
Free Cash Flow	\$ million	3,241.07	5,350.07
<b>Before Tax</b>			
Free Cash Flow	\$ million	2,549.49	5,216.71
NPV at 8%	\$ million	583.40	1,642.51
IRR	%	15	25
<b>After Tax</b>			
Free Cash Flow	\$ million	2,122.93	4,231.91
NPV at 8%	\$ million	457.66	1,316.60
IRR	%	14	23
Payback	Years	10	7

Source: SRK, 2023

Within the constraints of this analysis, the Project appears to be most sensitive to material classification, mined grades, commodity prices and recovery assumptions within the processing plant.

A summary of the cash flow on an annual basis is presented below.

Figure: Annual Cash Flow Summary (Without Inferred Material)



Source: SRK, 2023

*Conclusions and Recommendations by the Qualified Persons.* Under the assumptions presented in the IA, and based on the available data, the mineral resource estimates show reasonable prospects of economic extraction.

The recommended program is for the Company to complete a pre-feasibility study (“PFS”) level technical report. The work program required to complete a PFS will consist of associated infill and exploration drilling, analytical and metallurgical test work, hydrogeological and geotechnical drilling, geological modeling, mine planning, and environmental baseline studies to support permitting efforts.

#### Proposed Plan of Exploration and Development

As recommended by the authors of the IA, we are advancing the Santa Cruz project to complete a PFS technical report. We are completing infill drilling to allow for drill results to be incorporated into an updated resource model that would allow for the Indicated Mineral Resource to be developed into an initial Probable Mineral Reserve with a focus on the initial 5 years of production. We are targeting the Santa Cruz deposit high-grade exotic copper domain, the southern East Ridge oxide domain, the Texaco deposit and Texaco Ridge exploration area, and the Primary Domains.

We will explore different mining orientations for the Santa Cruz long hole stoping areas. There are areas that require long ore drives to access. Exploring different orientations can potentially lead to shorter ore drives and consequently shorter hauls to the ore passes. We are optimizing the stope size when additional geotechnical information is available. Larger stopes allow for more efficient mining and lower operating costs. And we are also evaluating recovering the sill pillar between the upper and lower blocks. The sill pillar is mineralized and it is left in-situ in the current mine plan. Additionally, we are also evaluating more efficient materials handling methodologies. By developing a centralized materials handling system that can utilize ore passes inside the mineralized rock, production efficiencies can be optimized to reduce loader tramming and rehandling times, thereby lowering operating costs. We are also continuing to investigate renewable power options for the Project to develop costs and timelines for installing solar and other green power generating facilities on or near the site.

### *Tintic Project, Utah, USA (the “Tintic Project”)*

As used herein, references to the “Tintic Technical Report Summary” is to the “S-K 1300 Technical Report Summary & Exploration Results Report, Tintic Project, Utah” dated February 23, 2024 and current as of December 31, 2023, by qualified persons SRK Consulting (U.S.) Inc. It was prepared in accordance with the requirements of S-K 1300. SRK Consulting (U.S.) Inc. is not affiliated with us or any other entity that has an ownership, royalty or other interest in the Tintic Project. The Technical Report Summary on the Tintic Project, Utah, U.S.A. is included as Exhibit 96.2 hereto. Scientific and technical information in this section is based upon, or in some cases extracted from these reports.

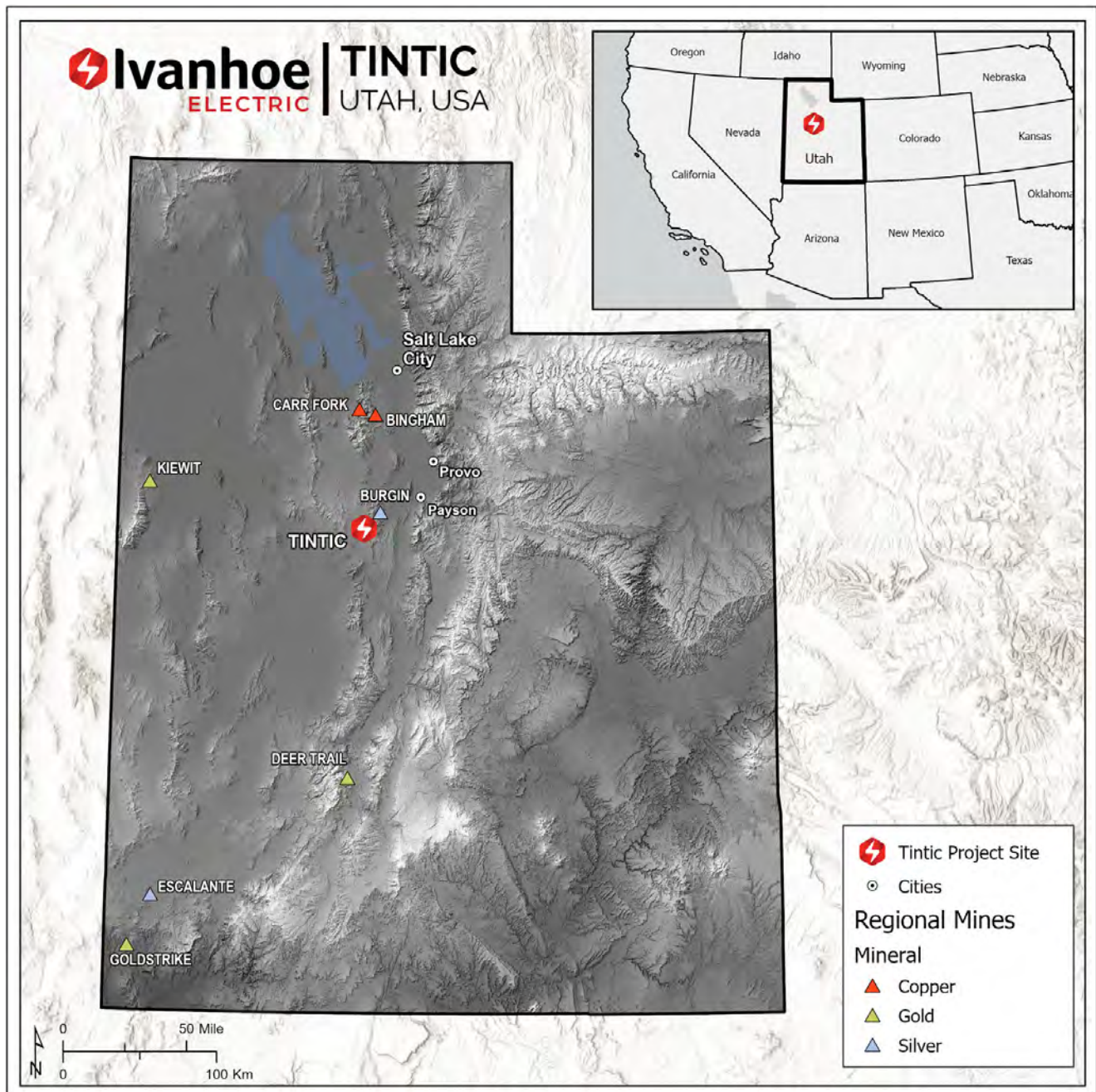
*Location, Map, and Access.* The exploration stage Tintic Project is a gold, silver, and base metal Carbonate Replacement Deposit (“CRD”), skarn, fissure vein, and copper-gold porphyry exploration project located in the historical Tintic Mining District of central Utah, USA. The Tintic District is the site of significant historical production and over 125 years of exploration activity. The Tintic Project is located near the City of Eureka, approximately 95 km south of Salt Lake City, and can be accessed from U.S. Highway 6, approximately 30 km west of the Interstate 15 junction. The center of the Ivanhoe Electric exploration potential area claims and applications lies approximately at 39° 55’ N latitude and 112° 06’ W longitude. It is crossed by many historical mine roads and defunct railroad paths, which provide access to most of the property. The exploration area covers approximately 81.97 km<sup>2</sup> of private patented claims, unpatented claims, and state leases consolidated by Ivanhoe Electric into a cohesive package of interests.

The Tintic Project area hosted historic mining communities and activities, but only two communities remain today at Eureka and Mammoth. The historic mining area straddles the Tintic Mountains divide between the Utah and Juab Counties. The county line occurs at the watershed divide.

*Infrastructure.* The Tintic Project is managed out of the city of Eureka (population approximately 660), which is approximately 2 km north of the northeastern Tintic Project property boundary. Eureka offers limited services. Equipment and other services are generally obtained from the towns of Tooele or Payson/Spanish Fork, which are each a 45-minute drive. We have established a permanent presence in the Tintic District and are currently headquartered out of Eureka with office facilities. We have also developed a secure core logging and storage facility at the mouth of the Mammoth Valley.

Water for the Tintic Project can be sourced from the city of Eureka’s maintenance yard at a cost of \$0.01 per gallon (~3.8 liters). The exploration area also contains several small ephemeral springs that are productive in the early spring but does not contain any streams or rivers owing to the arid nature of the climate. The Rocky Mountain Power Company provides electric utilities to the Eureka community and a high-power transmission line services Eureka, Mammoth, and Silver City. Gas is supplied by a local company. Limited supplies and personnel are available from Eureka; however, the main source is the Salt-Lake City-Ogden- Provo metropolitan area, a corridor of contiguous urban and suburban development stretched along a 190 km segment of the Wasatch Front with a population of 2.7 million.

Figure: Location of the Tintic Project within the state of Utah.



*Title.* Currently, Ivanhoe Electric holds various types of claims and leases through our wholly-owned subsidiary Tintic Copper & Gold Inc. (TCG), which is a successor to the merger of HPX Utah Holdings Inc. and Continental Mineral Claims Inc. (CMC). IE has consolidated all interests under TCG as of April 30, 2021. Our holdings can be broadly categorized into i) patented claims and ii) other claims and applications, which consist of the following claims, lease agreements, and permit applications:

- 486 Patented claims (owned or subject to purchase and sale by TCG) comprising 19.62 km<sup>2</sup>;
- 152 Patented claims and 1 fee parcel (subject to various lease or lease and option agreements by TCG) comprising 9.11 km<sup>2</sup>;
- 474 Unpatented mining lode claims (owned by TCG) comprising over 38.79 km<sup>2</sup>;
- 14.45 km<sup>2</sup> of SITLA (Utah School and Institutional Trust Lands Association) mineral leases, in three agreements; and
- 6 Hardrock Prospecting Permit ("HRPP") applications on Bankhead-Jones lands in the Tintic Valley, comprising 61 km<sup>2</sup> (through CMC).



To retain an unpatented claim on federal land in the USA, a \$165 maintenance fee per claim is due annually by September 1st. Based on the current landholding this would amount to \$78,210 in annual payments for claim retention.

In October 2017, Ivanhoe Electric (HPX at the time) signed a purchase and sale agreement with Mr. Spensst M. Hansen (“Hansen”) to acquire 100% of his patented claims and a portion of his unpatented claims. The last payment installment was made on April 19, 2022, making Ivanhoe Electric the current owner.

In January 2018, Ivanhoe Electric (HPX at the time) signed an agreement with Applied Minerals Inc. for an option to purchase metallic mineral rights, which granted exploration access to the Dragon claims during the option period. The terms of the agreement indicate that (i) Ivanhoe Electric would be required to pay \$350,000 lump sum at the completion of an initial 40-day due diligence, (ii) further installments of \$150,000 are required to be paid in December each year until December 2027, (iii) at any time before December 2027, Ivanhoe Electric may elect to purchase 100% of the rights to minerals for \$3,000,000, except for clay and iron oxide, and (iv) Applied Minerals Inc. retains the surface rights with joint operating conditions allowing Ivanhoe Electric reasonable access. In March 2020, the agreement was amended to allow Ivanhoe Electric an early exercise of the purchase of the metallic mineral rights for \$1,050,000, while retaining Ivanhoe Electric’s exploration and reasonable access through the claims. Ivanhoe Electric immediately exercised this right and was deeded the metallic mineral rights to the subject claims.

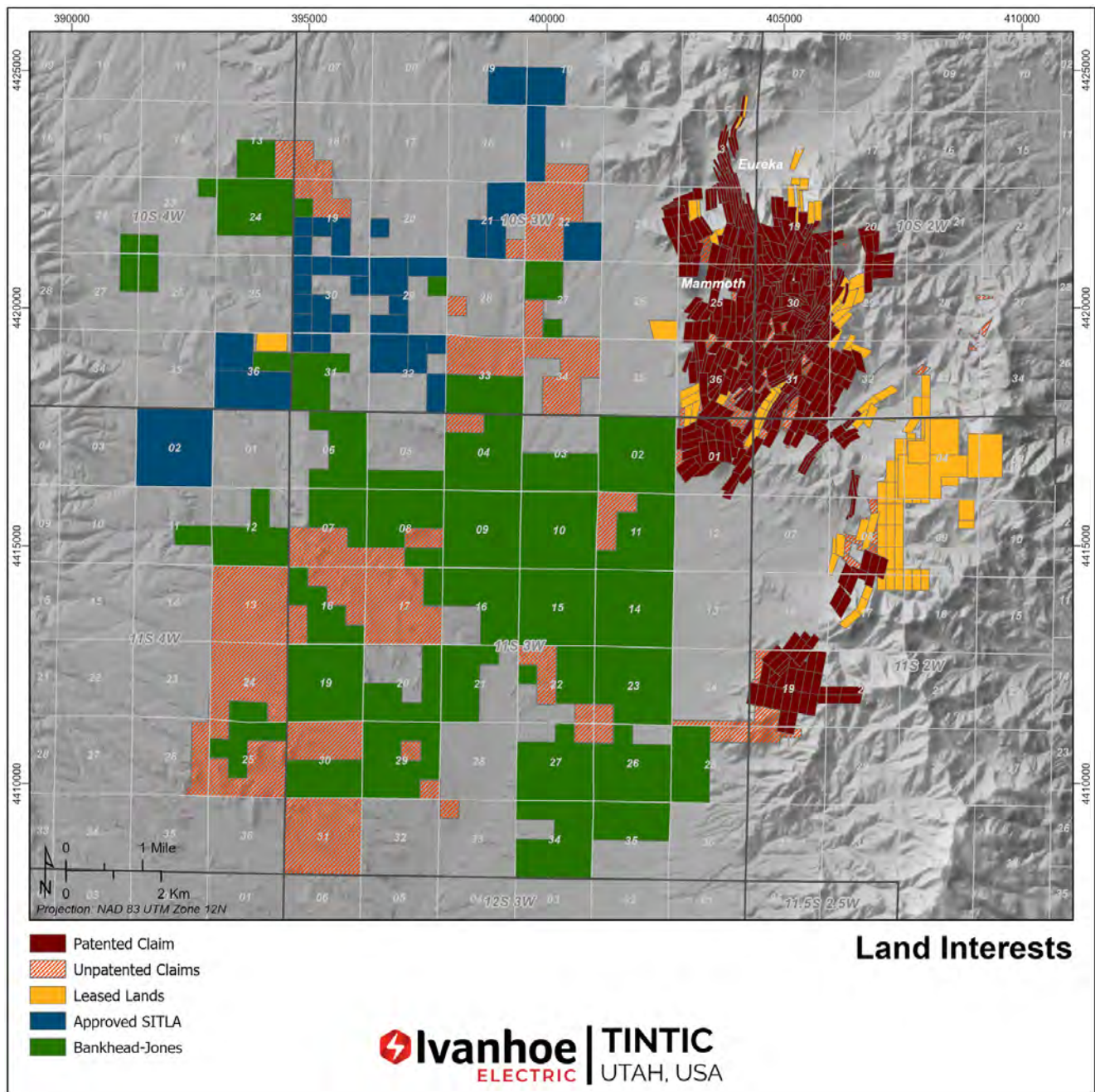
In August 2018, Ivanhoe Electric signed a further purchase and sale agreement with Hansen to acquire the patented claims on the Mammoth, North Star, and Gemini properties. Payments were made over a five-year period with escalating payments as defined in the Definitive agreement. The last payment installment was made on August 7, 2023, making Ivanhoe Electric the owner of the patented claims.

In addition to the Hansen and Applied Minerals Inc. agreements, Ivanhoe Electric entered into an additional 22 agreements, totaling to 27 agreements, for the acquisition of claims, mineral and surface rights with numerous parties using various legal structures. All these agreements are summarized in a simplified form in the table below.

Table. Summary of Tintic Land Agreements

Vendor	Deal Type	Status	Lease / Option Payment Frequency	Lease / Option Payment (\$)	Start Date	Term	Expiration Date
Hansen Porphyry	Purchase and Sale	Closed	—	—	19-Oct-17	5 years	—
Applied Minerals Inc. (Dragon)	Exploration with Option to Purchase	Closed	—	—	22-Dec-17	Option Executed in 2020	—
Okelberry (Hansen)	Lease	Executed	none	none	1-Jun-15	10 years with extensions	1-Jun-25
Gleed G Toombes	Purchase and Sale	Closed	—	—	1-Mar-18	Closed	—
Okelberry 1	Lease	Executed	annually	\$ 5,000.00	13-Apr-18	Renewable Annually	13-Apr-24
Hansen Camp (MMC)	Lease	Terminated	—	—	12-Jun-18	5 years with extension	—
New United Sunbeam Mining Company	Lease	Executed	annually	\$ 10,000.00	21-Jul-18	10 years with extensions	21-Jul-28
Hansen Mammoth	Purchase and Sale	Closed	—	—	4-Oct-18	5 years	—
Hansen Gemini	Purchase and Sale	Closed	—	—	4-Oct-18	5 years	—
Hansen North Star	Purchase and Sale	Closed	—	—	4-Oct-18	5 years	—
SITLA	Lease	Executed	annually	\$ 3,570.00	1-Dec-18	10 years	1-Dec-28
Lawrence Lee	Lease with Option to Purchase	Executed	annually	\$ 5,000.00	5-Dec-18	10 years	5-Dec-28
Okelberry 2	Lease	Executed	annually	\$ 15,000.00	14-Feb-19	Renewable Annually	14-Feb-25
Grand Central Silver Mines	Purchase and Sale	Closed	—	—	4-Apr-19	Closed	—
Duquette/McHatton	Lease with Option to Purchase	Closed	—	—	9-May-19	5 years	—
Adrian Vashon - Jassamine Claim	Lease with Option to Purchase	Executed	annually	\$ 5,000.00	27-Jun-19	5 years	27-Jun-24
Oldroyd	Purchase and Sale	Closed	—	—	14-Jun-19	Closed	—
Todd Wilhite	Lease with Option to Purchase	Executed	annually	\$ 15,000.00	9-Jul-19	7 years	9-Jul-26
Silver City Mines	Lease with Option to Purchase	Executed	annually	\$ 10,000.00	20-Aug-19	10 years	20-Aug-29
Unpatented Claims	Maintenance Fees	—	annually	\$165/claim	—	—	—
Tintic Gold	Lease with Option to Purchase	Executed	annually	\$ 100,000.00	20-Jul-20	7 years	20-Jul-27
Crown Point	Lease with Option to Purchase	Executed	annually	\$ 15,000.00	1-Aug-20	5 years with extensions	1-Aug-25
Steve Richins	Lease with Option to Purchase	Executed	on execution of option	\$ 75,000.00	27-Oct-20	5 years	27-Oct-25
BLM	Prospecting Permits	Pending	annually	14,840.00	—	—	—

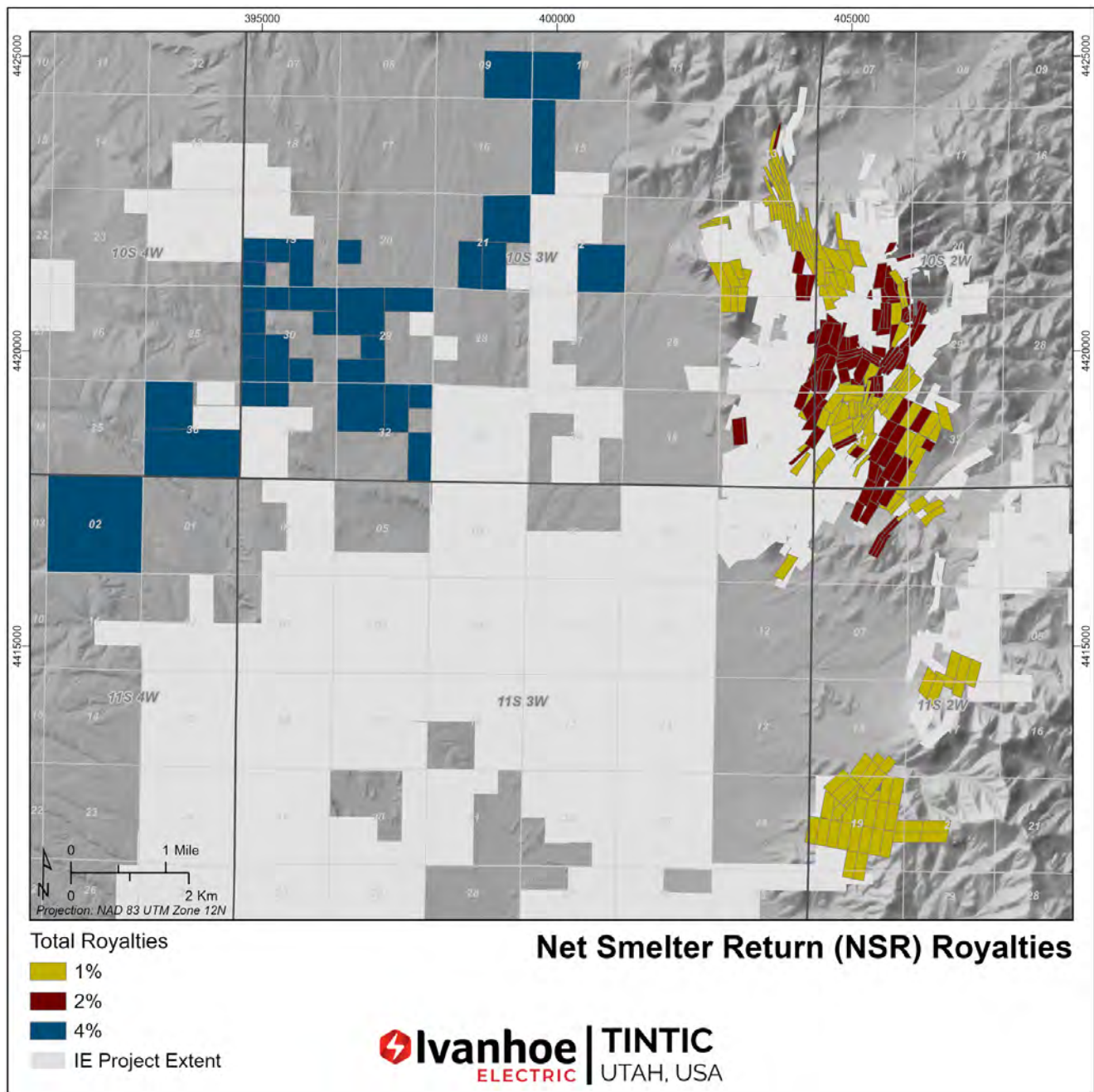
Figure: Map of our claims and leases at the Tintic Project.



SRK, 2023

**Royalties.** Significant portions of the patented and unpatented mining lode claims are subject to NSR royalty agreements, ranging between 1% and 4%, which would be payable upon production and sale of product, i.e., there are no advance royalties. Ivanhoe Electric has purchased certain royalty interests already and formed an opinion on others. As part of its land consolidation effort, Ivanhoe Electric is continually clarifying and negotiating the relevant royalty terms to sensibly lessen the royalty burden.

Figure: Map of our royalties at the Tintic Project.



SRK, 2023

*Property Condition and Stage of Development.* The Tintic Project is an exploration stage project without mineral reserves or mineral resources. There is no mine in production at the Tintic Project and no mining activity by us has ever taken place on the land constituting the Tintic Project.

There is currently no significant equipment, infrastructure or facilities at the Tintic Project, and no mine development or operating equipment at the project site. Historical mine equipment, shafts, and adits are ubiquitous throughout the area. In 2021, we completed some basic rehabilitation on the Sioux-Ajax Tunnel to facilitate access and mapping. This included creating a tag system, installing a communications system, and washing the walls. Further rehabilitation is not currently planned or budgeted for and IE has prohibited access to the Sioux-Ajax Tunnel since March 2022. There is no mining or operating infrastructure at the Tintic Project that would be intended to be used in future mine operations.

*History.* Mineralization in the Tintic District was discovered in 1869, and by 1871 significant mining camps were established in the nearby city of Eureka, and the now defunct towns of Silver City and Diamond. Mineral extraction focused on high-grade Ag-Pb-Zn oxide carbonate replacement deposits (“CRD”) hosted in Paleozoic limestone both at



surface and underground, with lesser production from steeply dipping Au-Ag-Pb-Zn-Cu fissure veins. The Tintic precious and polymetallic mining district saw nearly continuous mining operations from 1871 through to 2002 with variations in the level of activity and commodity extracted. Total historic production from deposits located within our acquired property, predominantly in the Tintic mining districts, totals approximately 1.89 Moz Au, 136 Moz Ag, 104 kt Cu, 416 kt Pb and 6 kt Zn.

The main precious and base metal bearing minerals in the Tintic District are enargite, tetrahedrite, galena, sphalerite, pyrite, marcasite, and native gold, silver, and copper. However, many more mineral species are present, including exotic tellurium-bearing species. There are clear metalliferous domain changes from the Southwest to the Main Tintic Districts. Cu-Au dominance transitions into Pb-Ag, then into Pb-Au and finally into Pb-Zn in the northern portion of the Main Tintic District. This zonation leads us to believe that the Main Tintic district likely contains the porphyry source of the polymetallic bearing fluids.

*Permitting and encumbrances.* Royalties are discussed above, under “Royalties”. In March 2021, Tintic Copper & Gold Inc. submitted a Notice of Intention (“NOI”) to Conduct Exploration to the Division of Oil, Gas and Mining of the Department of Natural Resources of the State of Utah. This permit (E/023/0130) was approved in July 2021, and has been amended multiple times by TCG, with the most recent amendment approved in July 2023. The current permit allows for up to 16.8 acres of surface disturbance, and 61 drill holes totaling 61,500m (201,720 ft). The approved permit will allow the recommended drilling program to be undertaken. Reclamation bonding is required by the state of Utah, and is assessed at \$578,200.00, covering 100% of permitted surface disturbance and up to 16 open holes (20,000 m). Bonding is fulfilled through an insurance surety instrument.

There are two Recognized Environmental Conditions (“REC”) present on the Tintic project lands in the form of old mill sites. We do not anticipate doing any work in these areas, and therefore do not expect to trigger any potential environmental liability.

See “— Mining and Mineral Project Exploration Laws”.

*Geological Setting, Mineralization and Deposit Types.* The host rocks at Tintic are Pre-Cambrian through Paleozoic sediments and carbonate rocks and were emplaced to their current position primarily during the Sevier orogeny (Cretaceous), forming a series of folds and thrusts, including a synform which forms the key host sequence in the Main Tintic District.

The ‘Deep Creek-Tintic’ mineral belt is an east trending zone of basement highs marked by Cenozoic calderas and associated metal endowment all along the belt. The East Tintic Mountains, where the belt terminates, host the Tintic District, the second biggest mining district in Utah after the Bingham District, located approximately 65 km north of the Tintic Project. The Bingham stock lies approximately at the intersection of the Wasatch hinge line and the ‘Bingham-Park City’ mineral belt, coinciding with the Cheyenne suture zone and the Uinta arch, concentrating tectonic and igneous activity. The Tintic District lies at the eastern margin of the ‘Deep Creek-Tintic’ mineral belt where it terminates against two or more north-south trending range front faults. Metallic minerals at Tintic and Bingham are hosted along northeast striking, steeply dipping, thrust faults, related to the Sevier orogeny. Intrusions along the Uinta arch in the Wasatch intrusive belt are high potassium calc-alkaline and metaluminous I-type granitoids similar to the igneous intrusions at Tintic. Eocene to early Oligocene intrusions, the source of mineralizing fluids, were emplaced in an extensional stress regime with northwest-southeast least principal stress. Basin and Range extension began around 18 Ma, forming high-angle normal faults which resulted in block tilt and the present Basin and Range topography. Fluid inclusion studies from plutons in the Wasatch Mountains indicate a 15-20° eastward tilt of the range and paleomagnetic data from the Oquirrh Mountains are consistent with an 11 eastward tilt related to the Basin and Range. The East Tintic Mountains were uplifted and rotated 10-20 east, similar to the Oquirrh Mountains.

The Tintic District has been broadly divided into four sub-districts: North, East, Main and Southwest. The following describes the stratigraphy, structure, volcanism, mineral deposit types and zoning patterns, including mineralization and alteration, observed in the four sub-districts, and summarizes the effects of Basin and Range extension on the Tintic District. The East Tintic Mountains are underlain by a basement sequence of more than 800 meters of phyllitic slate, quartzite and dolomite from the Neoproterozoic Big Cottonwood Formation, outcropping along the axis of the North Tintic anticline. A sequence of more than 3,700 meters of Paleozoic (ranging from Cambrian to Mississippian periods) carbonate and clastic sedimentary strata lies unconformably on top. This sequence is characterized by a thick basal Cambrian Tintic Quartzite, succeeded by a thick sequence of dominantly limestone and dolomite. During the Sevier orogeny, from Late Jurassic to Late Cretaceous, the East Tintic Mountains were uplifted and deformed in a series of north-trending, north-plunging asymmetrical folds cut by coeval thrust faults, high-angle strike-slip and tear faults. Three major folds deform the Neoproterozoic and Paleozoic sequence in the Tintic district.

Our interests in the Tintic District are focused on the southern portion of the Main District where Paleozoic sedimentary rocks and late Eocene — Oligocene volcanic rocks are intruded by the Silver City intrusive complex. Over 2,000 m of Paleozoic stratigraphy is exposed at the property ranging from the early Cambrian Tintic Quartzite at the western flank through the Mississippian Humbug Formation on the east. The rocks above the Tintic Quartzite are predominantly comprised of limestone and dolomite with a few units that have a greater siliciclastic component. Thin-skinned thrusting during the Sevier orogeny resulted in a complex pattern of faults and folds in the Paleozoic stratigraphy dominated by the east-west Sioux-Ajax fault through Mammoth and a large, east-verging asymmetric anticline-syncline pair that is cut by northeast trending faults. The thrust faults that underlay this folding have been identified in mines in the East Tintic District and locally at surface when not covered by later volcanic rocks. North of the Sioux-Ajax fault, the ‘ore runs’ of the Main District occur as sub-horizontal bodies connected by chimneys or pipes where crossed by faults in the shared subvertical limb of the anticline-syncline pair and along the axis of the Tintic syncline at the eastern margin. Exposure of Paleozoic rocks south of the Sioux-Ajax fault is limited to a less than 2 km<sup>2</sup> area between the Silver City intrusive complex to the southwest and overlying volcanic rocks to the southeast; it does not show the magnitude of folding found to the north of the fault. Instead, the beds here dip moderately to the northeast and are cut by steep reverse faults referred to as fissures when mineralized which continue south to the contact with the intrusion. These fissures and the subvertical chimneys and pipes tend to be more Cu-Au rich than the sub-horizontal Ag-Pb-Zn rich ‘runs’ north of the fault. Where these fissures intersect the contact with the Silver City intrusive complex, deposits of massive Fe-oxide and halloysite occur such as the Dragon Mine.

Mineralization in the Tintic District is typical of a porphyry-epithermal magmatic hydrothermal system. Known deposits predominantly occur as CRDs and epithermal veins with a few small porphyry deposits including the SWT porphyry in the Southwest District and the Big Hill porphyry in the East District. Exploration prospects identified by us on the Tintic Project include CRDs in the Paleozoic stratigraphy, areas with porphyry exploration potential in the Silver City intrusive complex and at depth below the CRDs, and skarns at intrusive contacts in the carbonate rocks.

*Exploration and Drilling.* We commenced exploration on the Tintic Project in late 2017 with an airborne geophysical survey followed by on-the-ground exploration in early 2018. Surface exploration work included a ground geophysical survey and a geological baseline work program consisting of soil and rock grab sampling, age dating, petrology, mapping, prospecting, and identification of key intrusive and alteration phases. Additional work through 2018 and into 2019 included the re-logging of deep historical drill holes at the Dragon prospect and the compilation and 3D digitization of historical mines, underground workings, and mineralized zones termed ‘ore runs’. Exploration work in 2022 and 2023 included reverse circulation (“RC”) and diamond core drilling, and a ground gravity survey along with small programs of soil samples, mapping, and surface sampling.

In late 2021, we completed a small exploration drill program consisting of two RC holes and a fan of four diamond drill holes. An additional twelve diamond drill holes were completed in 2022 and 2023 with one hole (TTD-017) started, but not completed. The total count to December 31, 2023 is 16 completed diamond drill holes with drilling ongoing into 2024.

Table. Summary of Ivanhoe Electric's drilling on the Tintic Project from 2021 to 2023

Hole number	Year	Northing (m)	Easting (m)	Elevation (m)	Hole Type	Azimuth	Dip	Length (m)
TTR-001	2021	4416600	402919	1,803	RC	0	-90	251.46
TTR-002	2021	4416793	402924	1,809	RC	0	-90	332.23
TTD-003	2021	4420614	405078	2,166	Diamond	120	-60	469.08
TTD-004	2021	4420614	405078	2,166	Diamond	120	-50	435.55
TTD-005	2021	4420614	405078	2,166	Diamond	120	-80	371.26
TTD-006	2021	4420614	405078	2,166	Diamond	94	-45	379.45
TTD-007	2022	4417970	405385	1,989	Diamond	315	-60	997.00
TTD-008	2023	4418692	404339	1,938	Diamond	140	-75	747.83
TTD-009	2023	4419697	405490	2,119	Diamond	20	-50	1,400.86
TTD-010	2023	4420482	406305	2,216	Diamond	285	-50	794.31
TTD-011	2023	4420638	404648	2,052	Diamond	157	-65	827.68
TTD-012	2023	4420588	403430	1,942	Diamond	150	-59	548.64
TTD-013	2023	4420106	406113	2,241	Diamond	315	-63	581.41
TTD-013A	2023	4420106	406113	2,241	Diamond	315	-63	1,519.43
TTD-014	2023	4419697	405490	2,119	Diamond	118	-58	1,319.78
TTD-015	2023	4419697	405490	2,119	Diamond	70	-58	1,395.07
TTD-016	2023	4417509	404485	1,882	Diamond	130	-77	1,435.61
TTD-017*	2023	4420638	404648	2,052	Diamond	63	-64	213.36

\*Drilling was ongoing for TTD-017 at December 31, 2023.

Typhoon™ has also completed a 72 km<sup>2</sup> fully 3D IP survey, with effective penetration depths averaging over 1.5 km, which revealed never before seen porphyry Copper-Gold exploration potential areas that are ready to drill. A new ground gravity survey was conducted in 2022 over an area of approximately 20 km<sup>2</sup>.

We have also compiled a drill hole database from over 125 years of exploration and development operations in the Tintic Project district by dozens of historical owners and operators. A total of 489 drill holes were completed historically on the Tintic Project by several prior owners and operators. However not all of the details are available.

Our current database contains known collar locations for 442 diamond, RC and rotary air blast drill holes totaling approximately 72,212 m. The accuracy and certainty of collar locations are variable, due to the many sources of information. Some collar coordinates were derived from georeferenced maps and figures, and abandoned mine-grid translations, each of which have uncertainties attached to them regarding their positions. Forty-seven holes have collar locations recorded in undocumented or unknown mine-grid datums and will be added to the database when their locations can be deduced. 193 drill holes are collared on the Applied Minerals "Dragon" halloysite mine property (12,635 m total), and consist primarily of geotechnical, geological, and mineral data pertinent to the clay and iron-oxide mining operations there. While the authors of the Tintic Technical Report note that drill hole positions should be treated with caution when utilized for geological modelling, due to the varied level of accuracy, they note that they can be utilized for regional scale geological modelling, which we have completed in Leapfrog Geo™.

Assay results have been compiled from 221 drill holes across the Tintic Project district. Records of analytical methods for assay data are limited and the assay database consists of variable element analyses. These range from comprehensive 43 element ICP-MS data from analyses performed on drill hole core from the Big Hill diamond drill hole program conducted from 2008 to 2014 in the East Tintic sub-district, to Cu-Au only results from RC drilling in the Treasure Hill area. In the opinion of the authors of the Tintic Technical Reports, historical drill hole analytical results should be treated with caution and only utilized for indicative purposes until twin drilling is completed to verify position, orientation and grade, as no supporting QA/QC information is available for the respective drill holes.

*Sampling, Analysis, and Data Verification.* All drill core, soil, and rock grab samples collected by us during exploration programs undertaken to date have been prepared by ALS Global-Geochemistry Analytical Lab ("ALS") at Twin Falls, Idaho or Elko, Nevada and analyzed Reno, Nevada or Elko, Nevada. ALS is a reputable analytical laboratory with a global quality management system that meets all requirements of the international standards ISO/IEC 17025:2017 and ISO 9001:2015. We believe that ALS has a robust internal QA/QC program to monitor and ensure quality of assay and other analytical results.

SRK is not aware of any drilling or sampling factors that could materially impact the accuracy and reliability of the results. In the opinion of SRK, the drilling, core handling, logging and sampling procedures meet or exceed industry standards and are adequate for the purpose of mineral exploration.

The author of the Technical Report Summary considers the QA/QC protocols in place for the Tintic Project to be acceptable and in line with standard industry practice. Based on the data validation and the results of the standard, blank, and duplicate analyses, the author is of the opinion that the assay and geochemistry databases are of sufficient quality for mineral exploration for the Tintic Project.

The Tintic Project did not have any Mineral Resources or Mineral Reserves as at December 31, 2023 or 2022.

*Mineral Processing and Metallurgical Testing.* No mineral processing or metallurgical testing has been conducted by Ivanhoe Electric for the Tintic Project.

The book value of the Tintic property and its associated plant and equipment as at December 31, 2023 was \$30.8 million.

#### Proposed Plan of Exploration

The following exploration work is recommended on the Tintic Project:

- a. On the ground exploration, including mapping and geochemical sampling; and
- b. Surface drilling to continue to test geophysical anomalies and follow up the drilling results to date.

The \$12M budget includes payments on optioned land and surface drilling.



## Non-Material Properties

We have been active with several of our other mineral projects in the United States including the Hog Heaven Copper-Silver-Gold Project (“Hog Heaven”), located in Montana, where we have been actively drilling since June 2023. Exploration work in 2023 also included drilling on Lincoln, in Utah, and Carolina, in North Carolina. Geophysical Typhoon™ surveys were completed in 2023 on White Hill, in Nevada, Unity, in Oregon, and Carolina. We also hold a portfolio of exploration projects throughout the United States including projects in Arizona, Nevada, California, Utah, Montana, and Oregon.

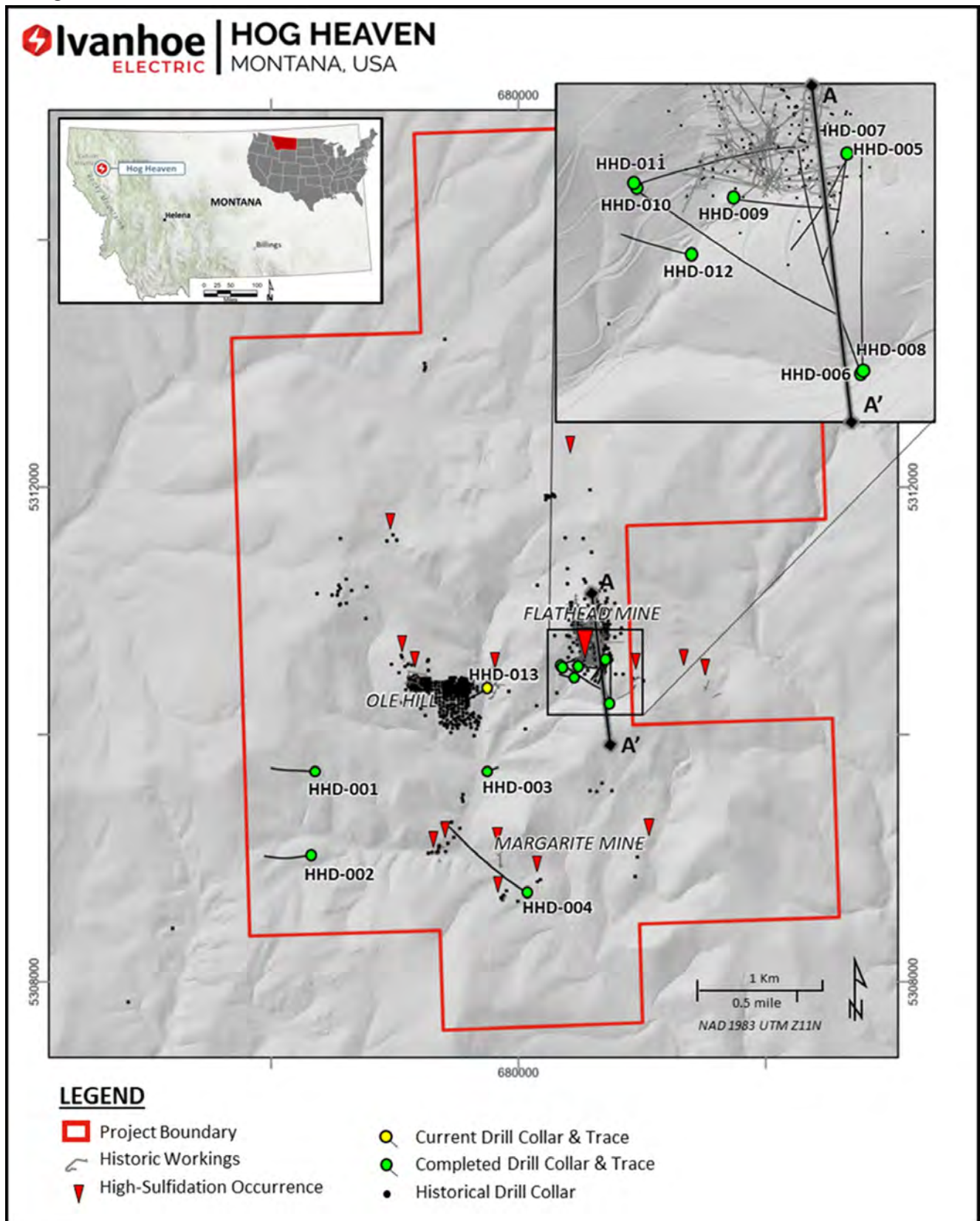
Figure: Map of our US Mineral Exploration Projects



*Hog Heaven Project, Montana, USA (the “Hog Heaven Project”).* The Hog Heaven Project is located on private land approximately 80 km south-southwest of the town of Kalispell, Montana. It is in the historical Hog Heaven District which consists of several high-sulfidation epithermal mineral deposits and prospects, as well as several historical mines, including the Flathead Mine. We believe the Hog Heaven District is underexplored at depth, with a substantial alteration footprint and multiple mineralized centers.

Brixton Metals Corporation (“Brixton”) owns the Hog Heaven Project through its subsidiary Brixton USA, covering an area of 24.32 km<sup>2</sup> through the following interests: 2.59 km<sup>2</sup> of deeded fee simple land both surface and minerals and 14.06 km<sup>2</sup> of fee simple mineral rights held by Brixton USA. The balance, 7.67 km<sup>2</sup>, is held via lease of three parcels owned by the Chester Company Ltd.

Figure: Hog Heaven plan map showing Ivanhoe Electric drill hole locations, historical mine workings, and historical drilling.



We entered into an earn-in agreement on February 26, 2021 with Brixton as well as a subsidiary of Brixton, pursuant to which we may earn up to a 75% interest in the Hog Heaven Project by making cash payments totaling \$4,500,000 and incurring an aggregate of \$40,000,000 in exploration expenditures by 2032. We own 1.8% of the outstanding shares of Brixton, which we acquired from Newstar Advantage Ltd., an entity affiliated with Mr. Friedland (“Newstar”) on October 1, 2021 for Cdn\$2.0 million. Newstar acquired shares and warrants of Brixton in a private placement for a purchase price of Cdn\$2.0 million. Brixton used the funds to purchase a portion of a royalty on the Hog Heaven Project owned by Pan American Silver Corp. on which the Company had an earn-in.

Under our earn-in agreement with Brixton, we have the right to earn a 51% interest in the Hog Heaven Project by making a total of \$4,500,000 in cash payments and incurring \$15,000,000 in exploration expenditures at stage 1. We may also earn an additional 24% interest (for a total 75% interest) in the Hog Heaven Project by incurring an additional \$25,000,000 in exploration expenditures at stage 2. In order to complete stage 1, in addition to incurring \$15,000,000 in exploration expenditures, we are required to make \$500,000 in cash payments each year for four years, and \$1,000,000 in cash payments on or before each of the fifth and sixth anniversaries of the date of the earn-in agreement. As of December 31, 2023, we had incurred \$11.0 million in exploration expenditures and made \$1,500,000 in cash payments.

In order to complete stage 2, which is at our sole discretion, we would be required to incur an additional \$25,000,000 in expenditures of which we must incur \$10,000,000 by February 26, 2030 and \$15,000,000 by February 26, 2032. For purposes of this earn-in, a joint venture company, Brixton JVC, a Nevada corporation, was established. We earn into the Hog Heaven Project by acquiring stock of Brixton JVC. Pursuant to the earn-in agreement, we are the operator of the Hog Heaven Project. We also control and direct all exploration, development and other related activities while we are earning-into the Hog Heaven Project.

From the date that stage 2 is complete until the date that Brixton JVC makes a decision to commence the development and construction of an operating mine at the Hog Heaven Project, we and Brixton must each fund the activities and operations of Brixton JVC pro rata to our respective interests in the Hog Heaven Project, provided that, if requested by Brixton, we are required to fund its pro rata portion of the costs of the activities and operations of Brixton JVC, with such amount accruing with interest calculated at the annual rate equal to the U.S. Federal Reserve Secured Overnight Financing Rate plus seven percent. At the date a construction decision is made, the amounts we previously funded to Brixton will become due and payable to us, and shall be paid within 12 months of the date a construction decision is made, failing which Brixton would be subject to dilution pursuant to a standard dilution calculation.

If a party’s interest in Brixton JVC is diluted below 10%, then the interest of such party in Brixton JVC will be cancelled and its shareholding interest converted into a 2.0% NSR. In addition, one NSR royalty at a rate of 1.5%, three Net Profit Interest (“NPI”) royalties with rates of 5% and 10%, and one Net Revenue Interest (“NRI”) royalty with a rate of 10% (capped at \$1,314,702) exist on various portions of the property. The three sections of Chester Company Ltd. lands are subject to a long-term lease that requires a \$12,500 annual lease payment.

The ongoing drill program, which began in June 2023, is designed to search for additional silver, gold, and copper-rich high-sulfidation epithermal mineralization, which was the focus of historical mining activities. Our program is also intended to search for porphyry copper mineralization at depth.

Ivanhoe Electric’s current exploration drill program at Hog Heaven, as first reported in our October 2023 news release, has now completed twelve drill holes totaling 10,905 meters and is on-going. Exploration drilling has stepped out to the west and southwest, where mineralization remains open.

In November 2023, we conducted a Typhoon™ geophysical survey covering approximately 10 km<sup>2</sup> of land, which was designed to cover the core areas of known prospectivity. We expect to receive our Typhoon™ survey results in March 2024.

*Lincoln Project, Utah, USA (the “Lincoln Project”).* The Lincoln Project is located in southwest Utah. The closest towns include Milford, Minersville, and Beaver. It is approximately 330 km from Salt Lake City. We operate the Lincoln Project through our wholly-owned subsidiary Lincoln Cave Exploration Inc. (“LCE”). The project area consists of 34 patented claims and 121 unpatented Federal mining lode claims optioned from Grand Central Silver Mines Inc. (“GCSM”). There are another 330 unpatented Federal mining lode claims covering 22.87 km<sup>2</sup> and SITLA leases covering 11.86 km<sup>2</sup>.

GCSM is selling the mineral titles to LCE for cash payments totaling \$3,000,000 over six years and retains a 2% NSR royalty, of which one half (1%) can be purchased by LCE for \$1,000,000, and a further quarter (0.5%) can be purchased for \$1,500,000 within ten years of the effective date (July 23, 2021). LCE holds a right of first refusal on the sale of GCSM’s royalty.

The Lincoln Project area encompasses numerous historic small underground workings with little record of production. Almost no modern exploration has occurred on the Lincoln Project.

Leveraging the CGI 3D inversion modeling of our 2022 Typhoon™ 3D-style pole-dipole DCIP survey we completed 6 diamond drill holes totaling 4,020.17 m. Partial assays are still pending as of December 31, 2023, but no significant results are expected.

*Carolina Mining, North Carolina, USA (the “Carolina Joint Venture” or “Carolina”).* We entered into a binding letter of intent in November 2021 to form a joint venture with the Carolina Mining Company (“CMC”), a private company based in Charlotte, North Carolina. Once the joint venture agreement has been executed, we will have the obligation to spend up to \$1,000,000 over two years to acquire private mineral rights and surface access with the rights to drill test a series of electromagnetic (“EM”) conductors defined by CMC’s VTEM survey flown in 2021. Once these funds have been expended, we then will have the right to earn 51% in the joint venture formed with CMC by spending an additional \$5,000,000 over a 3-year period and the further right to increase our interest in the joint venture to 85% by spending an additional \$20,000,000 over 5 years or by completing a Feasibility Study.

CMC owns mineral rights and surface access to two historic mining sites that operated in the early to late 1800s. These include the Silver Valley mine, a volcanogenic massive sulfide (VMS) deposit discovered in 1880 with limited zinc, lead, silver, and gold production due to the difficulty of Smelting and recovering precious metals from zinc-rich ores and Conrad Hill, a deposit mined in the early 1830s that produced high grade gold (>1 oz/t) from a series of orogenic quartz veins carrying significant copper values.

In 2021, CMC flew a Geotech VTEM survey over a 16 km by 19 km area to explore for additional massive sulfide mineralization in the Ordovician volcanic-sedimentary rocks of the Carolina Slate Belt. This resulted in defining seven EM conductors ranging in strike length from 300 meters to 1300 meters. Inversion modelling by CGI showed two of the EM conductors extend from 200 meters below surface to depths >700 meters and are potentially tens of meters in thickness. Inversion modelling was not possible on the remaining EM conductors due to the proximity to cultural interference by cast iron water pipes and power lines located along most North Carolina County roads.

Starting in late September 2022, a 3-week program of ground Typhoon™ EM was carried out over three of the VTEM anomalies to better define their geometry and depth extent. CGI 3D inversion modeling was completed in January 2023 over one of the EM grids that provided targeting detail for drill testing in 2023. A 1.4 km by 1.4 km 3D IP survey was also conducted over the Conrad Hill Mine property.

The EM conductors are located on fee-simple private land in Davidson County, North Carolina that include both surface and mineral title. Options to purchase mineral rights and surface access for exploration and mining are being negotiated with the individual owners based on overall acreage and strike extent of the EM conductors within their land holdings. All the land that constitutes the Carolina Joint Venture will be subject to a 1.5% NSR and a further 2.0% NSR should CMC take dilution of their 15% interest in the Carolina Joint Venture.

The Typhoon™ EM survey on the Parks property, just north of the Pinerose property, revealed a significant conductivity anomaly that could be drilled ahead of any potential deal. Two EM targets were identified and drilled based off two different modeling methods: an inversion from CGI and a standard plate model approach. Drilling was carried out from Q2 2023 and consisted of three drill holes which tested the two geophysical interpretations from the Typhoon™ EM survey. The target from the CGI inversion model was drilled first with CMC-001, which failed to reach the target due to poor ground conditions but drilling succeeded on the second attempt with CMC-002. Drill results showed that numerous pyrrhotite laminations, with rare chalcopyrite, were responsible for the conductivity anomaly. CMC-003 targeted the plate model anomaly further west yielding similar results. These drill intercepts highlight the potential for sulfide accumulation in the volcanoclastic sediments of the targeted formation but did not intersect economic mineralization.

Further drilling is planned for Q1 of 2024 to test chargeability features identified at Conrad Hill and Red Hill, as well as conductivity features on the Parks property.

*White Hill Project, Nevada, USA (the “White Hill Project”).* Our White Hill Project is located in the Gillis Range, Mineral County, Nevada, approximately 32 km east of Hawthorne and 160 km southeast of Reno, Nevada. The project is situated within the Fitting Mining District and comprises 1,030 federal mineral claims covering 86.12 km<sup>2</sup> managed by the Bureau of Land Management. The project hosts demonstrated copper-bearing mineralization associated with skarns.

We entered into an agreement with the project owner, Exiro Minerals USA Corp. (“Exiro”) on February 22, 2023 which give us the right to earn an 80% interest in the White Hill Project by incurring \$10.0 million of expenditures and making payments to Exiro totaling \$4.95 million (\$3.55 million in cash and \$1.4 million in our common stock) within six years of signing the agreement. During the earn-in period, we have the exclusive right to operate, control and direct all



exploration and mineral development activities at the White Hill Project. There are no minimum expenditures required in any given year, and we have the right to cease making payments at any time, resulting in us earning no interest in the project.

Should we earn into 80% of the project, the joint venture will form, and we will then be responsible for the next \$30 million of development expenditures to advance the project. After that expenditure, each joint venture partner will contribute pro rata to the joint venture or be subject to standard dilution provisions related to its project interest. In the event that Exiro is to be diluted to less than 10%, it will retain a 10% project interest and we will carry Exiro's funding obligation through to commercial production. At commercial production, Exiro will become obligated to repay such funded amounts to us within 12 months of commercial production. No royalties are to be granted as part of this agreement. We also have a right of first refusal over Exiro's interest in the joint venture.

We undertook a Typhoon™ survey in May and June of 2023 covering 28 km<sup>2</sup> and completed surface mapping in November 2023. The results of the Typhoon™ are guiding our plans for drilling in 2024. Currently, we anticipate drilling 3-5 diamond drill holes in 2024.

*Bitter Creek Project, Arizona, USA (the "Bitter Creek Project").* Our Bitter Creek Project is located in Yavapai County, Arizona, United States, approximately 20 km east of Wickenburg. The project area is accessible via a 40-minute drive from Wickenburg. We operate the Bitter Creek Project through a wholly-owned subsidiary, Bitter Creek Exploration, Inc. The Bitter Creek Project consists of 364 lode mining claims that are valid through to September 1, 2024. The total area of the project is 35.21 km<sup>2</sup> comprised of three exploration permits totaling 6.87 km<sup>2</sup> and 348 unpatented claims. The Bitter Creek Project has hosted two historic mines and several exploration projects.

We initially commenced field work and staking in late 2019 which carried through into 2020. This field work included prospecting, soil sampling (33 samples), stream sediment sampling (122 samples), rock grabs (110 samples) and heavy mineral sampling (48 samples). In 2021, a contractor flew an airborne electromagnetic and magnetic survey over the entirety of the Bitter Creek Project area. In spring 2022, we conducted a Typhoon™ 3D IP survey, which revealed a large chargeability anomaly. Interpretation and integration with surface mapping and sampling is guiding our plans for an initial drill program in 2024.

*Unity Project, Oregon, USA (the "Unity Project").* Our Unity Project is located in Baker County, eastern Oregon southwest of Baker City, just outside the community of Unity and at the southern end of the Wallowa Whitman National Forest. The Unity Project is approximately 515 km southeast of Portland, Oregon, 225 km northwest of Boise, Idaho and is accessible by paved road. We operate the Unity Project through CMC, our wholly-owned subsidiary.

The Unity Project comprises 458 unpatented claims filed with the BLM. The Unity Project is centered on a Tertiary porphyry system of the same age as the Bingham Canyon Copper-Gold Mine in Utah owned by Rio Tinto as well as our Tintic Project in Utah. A 2% NSR royalty on all minerals encumbers the project. Three-quarters of the royalty (1.5% NSR) can be bought back for \$12,000,000 within 12 months of the public announcement of the start of construction of a mine. We retain a right of first refusal for the remaining 0.5% of the NSR. Consultants, Seven Devils Exploration Ltd., will operate the first \$5,000,000 in project expenditures with a 7.5% management fee.

We acquired the claims comprising the Unity Project in June 2018 through an agreement for staged payments payable to two vendors totaling \$5,000,000 over six years. In June of 2023, the agreement was amended to allow for additional exploration, spreading the payments out an additional 2 years. As of December 31, 2023 we had paid \$1,000,000 to the vendors. Option payments of \$250,000 on the fifth anniversary, \$1,500,000 on the sixth anniversary of the agreement and \$2,250,000 on the seventh anniversary are required to complete the acquisition of the claims.

No exploration work had been conducted at the project area since the 1980s until we optioned the property in 2018 and we expanded the claim holdings. In 2018, we flew a helicopter-borne magnetic and radiometric survey over the Unity and Pole Creek claim blocks and the area between them. In 2021, we followed up the geophysical surveys with surface geologic mapping and sampling.

Starting in July 2022 a program of Typhoon™ 3D-style pole-dipole DCIP was carried out over an area approximately 3 km wide and 5 km long. CGI 3D inversion modeling is complete and will be used to guide a drill program in 2024.

Permits for the Unity Project are managed by the US Forest Service ("USFS") Wallowa-Whitman National Forest unit, and by Oregon Department of Geology and Mineral Industries ("DOGAMI"). The operations plan was submitted to the USFS in 2021, approved in 2022 for an IP Survey, and subsequent drilling on up to seven (7) drill pads, with 2 holes permitted per pad up to 1,500 meters depth each. This plan was then submitted to DOGAMI in 2022 and approved in 2023. Follow up mapping, sampling, and analysis of the IP survey resulted in an amendment adding an additional 7 pads, which

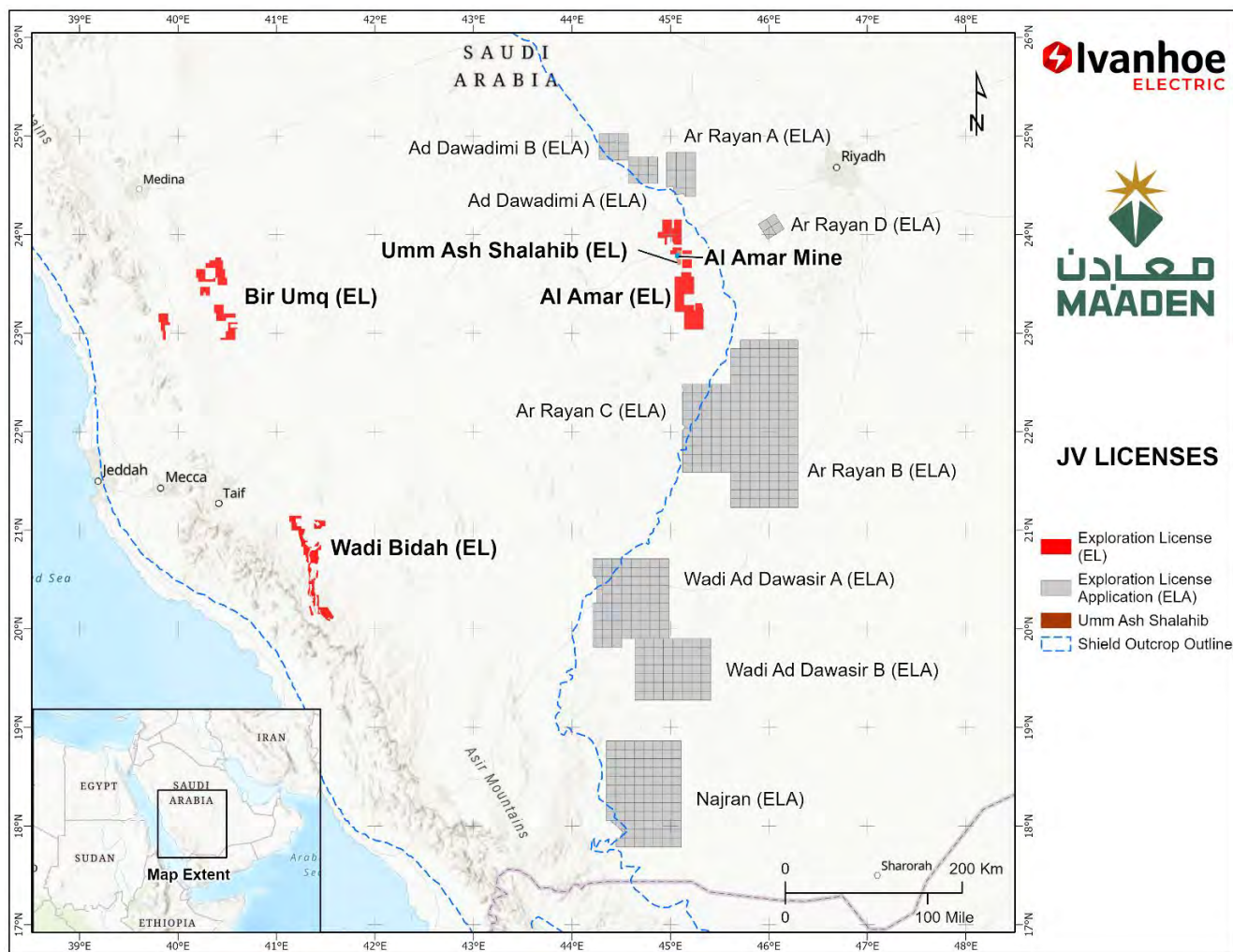
was approved by USFS in fall 2023, and is expected to be approved by DOGAMI by May 2024. Total proposed disturbance would be approximately 3.1 acres, with up to 39,900 meters of drilling on 28 holes.

## International

### Saudi Arabian Joint Venture

We established with Ma'aden a Saudi Arabian exploration Joint Venture through the limited liability company, Saudi JVCo, to unlock the significant mineral potential in Saudi Arabia. The Joint Venture has exclusive access to explore approximately 48,500 km<sup>2</sup> of underexplored land on the Arabian Shield that Ma'aden will make available to the Joint Venture.

*Map: Location of the Ivanhoe Electric Ma'aden Joint Venture within the country of Saudi Arabia.*



The Arabian Shield is considered highly prospective for both VMS and epithermal styles of mineralization. A notable VMS deposit in the Arabian Shield is the Jabal Sayid copper mine operated as a joint venture between Barrick Gold Corporation and Ma'aden that produced 68,492 tonnes of copper in 2022. Ma'aden's Mahd Ad Dhahab 'Cradle of Gold' gold mine is an example of an epithermal deposit on the shield that has been mined since pre-Islamic times.

The Al Amar Belt is considered highly prospective for VMS and epithermal deposit types with historical work identifying zinc, copper, lead, silver and gold mineralization. Twenty-four exploration licenses that make up the Al Amar Belt cover 1,934 km<sup>2</sup>. Saudi JVCo. commenced exploration activities at the Umm Ash Shalahib exploration license, which largely surrounds Ma'aden's existing Al Amar gold-copper-zinc mine (which is not part of the Joint Venture). The area comprises steep hills with flat valleys (wadis) providing good access. As of December 31, 2023, over 25 km<sup>2</sup> of the 65 km<sup>2</sup> Umm Ash Shalahib Exploration License area has been surveyed by Typhoon™ and is expected to be fully completed by the end of March 2024.

*Ivory Coast Nickel-Copper Project, Ivory Coast (the “Ivory Coast Project”).* The Ivory Coast Project is located approximately 650 road km northwest of Abidjan, Ivory Coast. As of December 31, 2023, our interest in the Ivory Coast Project was held through our 22.7% equity interest in Sama Resources Inc. (“Sama”) and our 30% interest in the Sama Nickel Corporation Inc. (“Sama Nickel”) joint venture described below. We expect to complete our earn-in by Q2 2024 and acquire a 60% interest in the Ivory Coast Project, following such time we will consider alternatives to advance the project.

The Ivory Coast Project consists of three exploration permits owned by Sama Nickel, a subsidiary of Sama, which is the joint venture vehicle in which we are partnering with Sama to advance the Ivory Coast Project, which cover a total of 517 km<sup>2</sup>, as well as two additional exploration permits held in a joint venture with Société pour le Développement Minier de la Côte d’Ivoire, a parastatal organization established by the Ivory Coast and which together cover 318 km<sup>2</sup>.

In March 2018, we entered into a binding term sheet for an earn-in and joint venture agreement with Sama which was subsequently formalized in March 2021 (the “Sama Earn-In and JV Agreement”). Pursuant to the terms of the Sama Earn-In and JV Agreement, we have the ability to earn a 30% shareholding interest in the Ivory Coast Project by incurring expenditures of Cdn\$15,000,000 over a maximum of six years. By incurring additional expenditures of Cdn\$10,000,000 within the same time period, including the financing of a PEA and the acquisition of an exploitation permit on part of the Ivory Coast Project, we will be titled to earn an additional 30% shareholding interest in the Ivory Coast Project, such that our aggregate shareholding interest therein shall be 60%. In August 2021, we reached the initial Cdn\$15,000,000 expenditure threshold and as a result we acquired a 30% shareholding interest in Sama Nickel. We anticipate completing the required expenditures to earn an aggregate shareholding interest of 60% by Q2 2024.

In April 2018, pursuant to an investment agreement, Sama granted to us a right to nominate to the Sama board of directors two (2) directors as long as our shareholding interest of Sama remains above 10% but less than 50%, and four (4) directors if our shareholding rises to greater than 50%. As of the date of this Annual Report, Mr. Eric Finlayson and Mr. Quentin Markin are our director representatives on the board of Sama. Other than as shareholders of Sama, we do not have any interest in Sama’s gold projects in Liberia.

An updated Mineral Resource Estimate titled “NI 43-101 Technical Report, Mineral Resource Estimate for the Samapleu and Grata Deposits Project” has an effective date of June 16, 2023, and incorporates drilling carried out at the Samapleu and Grata deposits from 2010 until mid-2022. The Mineral Resources in this Estimate were independently prepared, including estimations and classification, by Todd McCracken of BBA International Inc. (“BBA”).

The Mineral Resource estimate for the Ivory Coast Project is set forth below, under the heading “Mineral Resources and Mineral Reserves”. Glen Kuntz, P. Geo., our non-independent Qualified Person, reviewed and confirmed that the estimate satisfied S-K 1300 standards and remained accurate as of December 31, 2023.



Map: Location of the Ivory Coast Project within the country Ivory Coast.



Sama mandated BBA to upgrade the 2020 Preliminary Economic Assessment using the 2023 updated Mineral Resources at the Samapleu and Grata deposits for producing a nickel concentrate and a copper concentrate. The revised PEA will include site layouts, including road accesses, permits/claims, bodies of water and historical infrastructure as well as all other baseline studies/investigations regarding geotechnical, geochemistry, environmental, hydrology, hydrogeology and metallurgy items for the project. Cost estimation spreadsheet with local workforce rates, fuel costs and power rates. Recoveries and product type, Smelter Terms, mill throughput rate and ramp-up period. BBA has collaborated with Knight Piesold (tailings design) and Blue Coast Research (metallurgical testing). BBA anticipates completion of the revised PEA in Q1 2024.

*Alacran Copper-Gold Project, Colombia (the "Alacran Project")*. On July 31, 2017, we (then HPX) entered into an investment agreement with Cordoba. Under that agreement, Cordoba granted us a right to nominate directors to its board of directors based on our pro rata interest in Cordoba. The investment agreement provides for our nominees to the Cordoba board to be reduced to less than a majority of the directors if our ownership interest in Cordoba is diluted to below 50%, with further proportional reductions thereafter. Assuming the board of Cordoba is to be comprised of seven directors and we hold a 50% or greater interest in Cordoba, we are entitled to nominate four, with at least one of such nominees being independent. We own 62.8% of Cordoba as of December 31, 2023.

On December 8, 2022, Cordoba announced a strategic arrangement with JCHX, whereby JCHX, through a wholly owned subsidiary, will purchase a 50% ownership interest in CMH Colombia S.A.S. (“CMH”), a company existing under the laws of Colombia, for aggregate consideration of \$100 million. CMH will own 100% of the Alacran Project and will be the joint venture vehicle for Cordoba and JCHX in the strategic project level partnership. For its 50% interest, JCHX will pay the \$100 million purchase price in three installments. The transaction closed on May 8, 2023, and \$40 million was paid in cash as a first installment. A second installment of \$40 million was fully paid in cash by January 4, 2024 following the board of directors of Cordoba approving the Feasibility Study of the Alacran Project, and the filing of the Environmental Impact Assessment (“EIA”) to the relevant Colombian Government authority. A third and final installment of \$20 million is payable in cash once the approval of the EIA is obtained, which must be within two years of the transaction’s closing date. Should the EIA not be approved by the second anniversary of the closing date, JCHX will have the option to elect not to complete this final installment, which will result in JCHX being diluted to 40% and Cordoba increasing to a majority 60% shareholding in CMH.

A Joint Venture Shareholders’ Agreement (“JV SHA”) governs the strategic relationship between Cordoba and JCHX, and sets forth the general responsibility and authority of the CMH board of directors, in addition to the entitlements of each shareholder. The JV SHA provides that (1) the CMH board comprises four individuals, of which two directors nominated by Cordoba and the other two directors nominated by JCHX; and for so long as the shareholdings in CMH remain 50%-50%, a Cordoba representative serves as the Chairperson of the CMH board, and possesses a casting vote on all matters subject to a list of reserved matters; (2) Cordoba is appointed as the operator and manager of the Alacran Project pursuant to a management services agreement and is responsible for setting the annual programs and budgets for the CMH board’s approval; (3) JCHX (or its affiliate) has right of first offer to bid on the Engineering, Procurement and Construction and Detailed Design Agreement contracts, provided that Cordoba has the right to open the process out to competitive tender; with JCHX having the right to match any competitive bid; and (4) JCHX (or its affiliate) shall be entitled to up to 100% of the offtake from the production under the current Feasibility Study of the Alacran Project, provided that they are paying fair market value and they are the most competitive offer (including a matching right for other third-party proposals).

The Alacran Project is situated in the municipality of Puerto Libertador, which is approximately 390 km northwest of Bogotá, and 160 km north of Medellín in Colombia, amongst 22 mining concessions owned by the Company, of which, 5 licenses are part of the Alacran Project. The Company conducted several exploration programs between 2012 and 2023, consisting of geological mapping, geochemical sampling, geophysical surveys, and various drilling campaigns, that supported the completion of the 2019 Preliminary Economic Assessment, the 2022 Pre-Feasibility Study, and the current 2023 Feasibility Study, which marks the beginning of the development phase for the Project.

Map: Location of the Alacran Project within the country of Colombia.



Initial capital cost is estimated to be approximately \$420.4 million for the construction of a conventional truck-shovel open pit mine. The Project is anticipated to hold an after-tax NPV of \$360 million with an IRR of 23.8% and a payback period of 3 years. The Project's mine life is projected to be 14.0 years in addition to the estimated two years of construction and pre-production mining, of which, freshly mined ore will be stockpiled alongside historical tailings. The LOM cash costs for copper, net of by-product, is \$1.35/lb with by-product credits at \$1.31/lb, and a total LOM cash cost at \$2.66/lb (cash costs excludes sustaining capital). The average mining rate for the project is projected to be 39.5 Mt of mined material per year of which ore material will be fed to dual processing plants consisting of a main processing facility for fresh and transition material, and a separate wash gravity plant for saprolite ore and historical tailings;

The Company filed the EIA application with the relevant Colombian Government authority on December 11, 2023 and was issued the official filing number on December 12, 2023.

An updated Mineral Resource and Mineral Reserve Estimate titled "NI 43-101 Technical Report, Feasibility Study, Alacran Project, in Colombia" has an effective date of December 18, 2023. The Mineral Resources and Mineral Reserves in this Estimate were independently prepared, including estimations and classification, by Todd McCracken of BBA.

The Mineral Resource and Mineral Reserve estimate for the Alacran Project is set forth below, under the heading "Mineral Resources and Mineral Reserves". Glen Kuntz, P. Geo., our non-independent Qualified Person, reviewed and confirmed that the Mineral Resource estimate satisfied S-K 1300 standards and remained accurate as of December 31, 2023. Sarah Bull, P.E., our non-independent Qualified Person, reviewed and confirmed that the Mineral Reserve estimate satisfied S-K 1300 standards and remained accurate as of December 31, 2023.

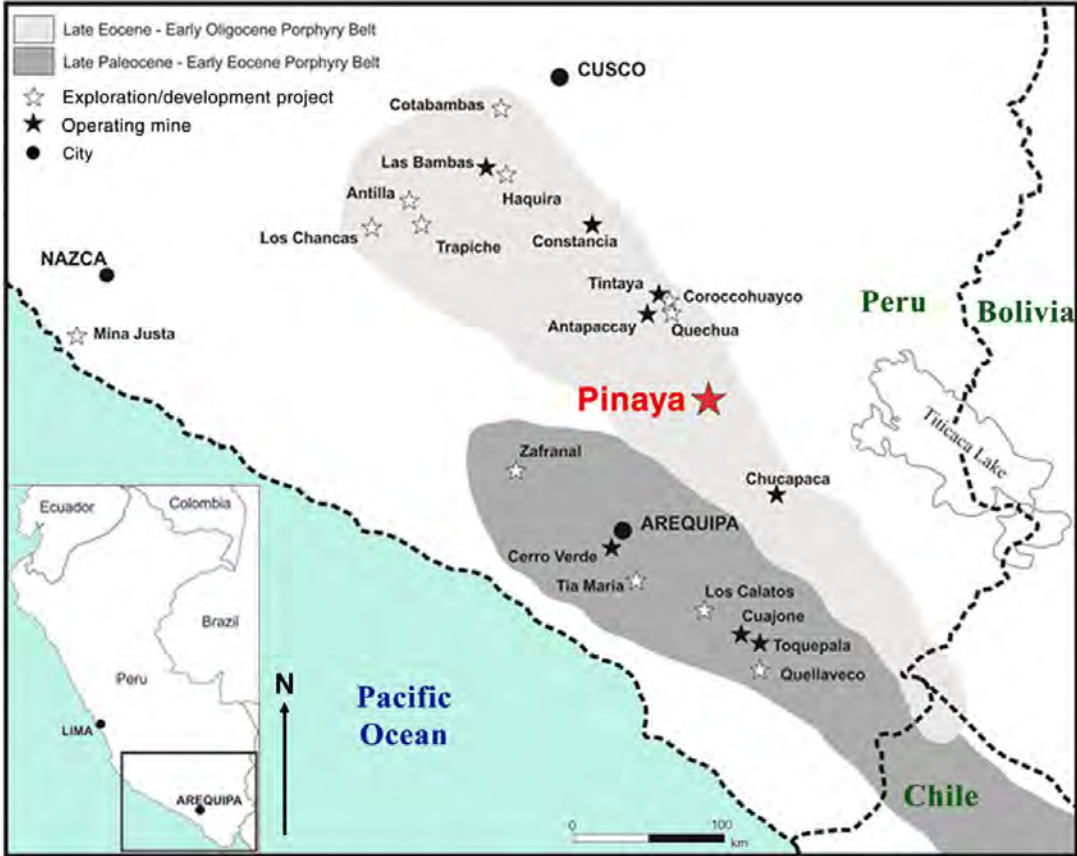
*Pinaya Copper-Gold Project, Peru (the "Pinaya Project").* The Pinaya Project is 100% owned by Ivanhoe Electric as of February 6, 2024 through Ivanhoe Electric's subsidiary Kaizen. Kaizen filed an NI 43-101 technical report for the Pinaya Project, titled "Pinaya Gold-Copper Project Technical Report" and which was prepared jointly by Brian Cole, P.Geo, and GeoSim Services Inc., with an effective date of April 26, 2016 ("Pinaya Technical Report"), which is available

on SEDAR. Scientific and technical information in this section regarding the Pinaya Project is based upon, or in some cases extracted from, the Pinaya Technical Report.

The Mineral Resource estimate for the Pinaya Project is set forth below, under the heading “Mineral Resources and Mineral Reserves”. Ronald G. Simpson, P.Geo., an independent Qualified Person, reviewed and confirmed that the Mineral Resource estimate satisfied S-K 1300 standards and remained accurate as of December 31, 2023.



Map: Location of the Pinaya Project within the country of Peru.



## Summary

Our portfolio of mineral exploration projects and equity investments are summarized in the tables below.

Table: United States Mineral Exploration Projects as of December 31, 2023.

Project Name	Location and Project Size	Stage of Development	Ivanhoe Electric Interest and Nature of Interest	Title Holders / Operator	Primary Minerals	Nature of Mineral Title	Mineral Resources/Reserves	Aggregate Annual Production – Last 3 Fiscal Years
Santa Cruz	Arizona, USA Surface 25.79 km <sup>2</sup>	Exploration	100% of surface rights	Mesa Cobre Holding Corp. - a wholly-owned subsidiary (surface rights)	Copper	Fee Simple land, unpatented mining claims; Arizona State exploration permits	Mineral Resource	Not in production
	Mineral 75.66 km <sup>2</sup>	Exploration	Option to acquire 100% of the mineral title	DRH Energy Inc. (private mineral title); Mesa Cobre Holding Corp. (remaining titles)				
Tintic	Utah, USA 81.97 km <sup>2</sup>	Exploration	Options and lease rights to 100% of the mineral title by acreage	Tintic Copper & Gold, Inc., a wholly-owned subsidiary	Copper Gold	Patented and unpatented mining claims; SITLA leases, and Hardrock Prospecting Permit Applications	n/a	Not in production
Hog Heaven	Montana, USA 24.2 km <sup>2</sup>	Exploration	1.8% equity ownership of Brixton Metals Corporation Earn-in with Brixton for up to a 75% project interest	Brixton USA Corp. (joint venture company), a subsidiary of Brixton	Copper Silver Gold	Fee simple mineral rights, owned and leased, fee simple surface	n/a	Not in production
Lincoln	Utah, USA 50.14 km <sup>2</sup>	Exploration	0% current ownership interest; Option to acquire 100% of the mineral title	Lincoln Cave Exploration, Inc. ("LCE"), a wholly-owned subsidiary	Copper Lead Zinc Silver Gold	Patented mining claims, unpatented mining claims and SITLA leases	n/a	Not in production
Carolina	North Carolina, USA 3.37 km <sup>2</sup>	Exploration	0% current ownership with right to earn up to 85%	Carolina Mining Corp.	Gold Copper	Fee Simple	n/z	Not in production
White Hill	Nevada, USA 86.12 km <sup>2</sup>	Exploration	0% current ownership interest; Option to acquire 80% of the mineral title	Bluebird Copper LLC / Ivanhoe Electric Nevada Holding Inc.	Copper Zinc Silver Gold Molybdenum	Unpatented mining claims	n/a	Not in production
Bitter Creek	Arizona, USA 36.54 km <sup>2</sup>	Exploration	100% Ownership	Bitter Creek Exploration Inc., a wholly-owned subsidiary	Copper Gold	Unpatented mining claims, Arizona State Mineral Exploration Permits	n/a	Not in production
Unity	Oregon, USA 38.29 km <sup>2</sup>	Exploration	0% current ownership interest; Option to acquire 100% of the mineral title	CMC, a wholly-owned subsidiary	Copper	Unpatented mining claims	n/a	Not in production
Desert Mountain	Utah, USA 13.88 km <sup>2</sup>	Exploration	100% Ownership	Little Sahara Exploration, a wholly-owned subsidiary	Copper Gold	Unpatented mining claims	n/a	Not in production
Grasshopper	Montana, USA 7.19 km <sup>w</sup>	Exploration	100% Ownership	IE Montana, a wholly-owned subsidiary Holdings Corp.	Copper	Unpatented mining claims	n/a	Not in production

Project Name	Location and Project Size	Stage of Development	Ivanhoe Electric Interest and Nature of Interest	Title Holders / Operator	Primary Minerals	Nature of Mineral Title	Mineral Resources/Reserves	Aggregate Annual Production – Last 3 Fiscal Years
Lyles	Arizona, USA 25.97 km <sup>2</sup>	Exploration	100% Ownership	Rocksteady Exploration Inc., a wholly-owned subsidiary	Lithium	Unpatented mining claims, Arizona State Mineral Exploration Permits	n/a	Not in production
Hector	California, USA 12.04 km <sup>2</sup>	Exploration	100% Ownership	Rocksteady Exploration Inc., a wholly-owned subsidiary	Lithium	Unpatented mining claims	n/a	Not in production
Bristol	Nevada, USA 11.37 km <sup>2</sup>	Exploration	100% Ownership	Ivanhoe Electric Nevada Holdings Inc.	Copper	Unpatented mining claims	n/a	Not in production
Delamar	Nevada, USA 16.64 km <sup>2</sup>	Exploration	100% Ownership	Ivanhoe Electric Nevada Holdings Inc., a wholly-owned subsidiary	Copper	Unpatented mining claims	n/a	Not in production
Sol Dos	Arizona, USA 7.11 km <sup>2</sup>	Exploration	100% Ownership	Sandhill Exploration Inc., a wholly-owned subsidiary	Copper	Unpatented mining claims	n/a	Not in production
Perseverance	Arizona, USA 116.23 km <sup>2</sup>	Exploration	Shareholder in Cordoba	MMDEX LLC a joint venture company between Cordoba and Bell Copper Corp.	Copper	Fee simple, Arizona State Mineral Exploration Permits	n/a	Not in production

Table: International Mineral Exploration Projects as of December 31, 2023.

Project Name	Location and Project Size	Stage of Development	Ivanhoe Electric Interest and Nature of Interest	Title Holders / Operator	Primary Minerals	Nature of Mineral Title	Mineral Resources/Reserves	Aggregate Annual Production – Last 3 Fiscal Years
Saudi Arabia	Saudi Arabia 48,500 km <sup>2</sup>	Exploration	50% ownership of Joint Venture with Ma'aden	Saudi JVCo	Base Metals Precious Metals	Exploration license	n/a	Not in production
Alacran	Colombia 104.6 km <sup>2</sup>	Development	Shareholder in Cordoba	Cordoba	Copper Gold Silver	Construction and Assembly; Exploration licenses	Mineral Resource & Mineral Reserve	Not in production
Ivory Coast Project	Ivory Coast 1,125 km <sup>2</sup>	Exploration	Option to acquire up to 60% of the Ivory Coast Project; Shareholder in Sama	Société pour le Développement Minier de la Côte d'Ivoire	Nickel Copper Cobalt PGE	Exploration license	Mineral Resource	Not in production
Pinaya <sup>1</sup>	Peru 100.65 km <sup>2</sup>	Exploration	Shareholder in Kaizen	Canper Exploraciones S.A.C.	Copper Gold	Concession	Mineral Resource	Not in production

<sup>1</sup>As of February 6, 2024 Ivanhoe Electric acquired all of the remaining outstanding shares of Kaizen.

## Mineral Project Obligations and Payments

As described above, for many of our mineral projects, we do not own the underlying mineral titles or rights but maintain an option or a right to acquire such titles or rights. Such options or rights may be held through an option arrangement, an earn-in, or through the payment of deferred consideration.

The table below summarizes the cash payments that may be made in respect of each project. Commitments that are non-discretionary are payments we are required to make. Payments that are discretionary are payments that we are not required to make, but if we fail to make the payment in the amounts and when due, we will lose the rights associated with the project.

Table: Mineral Project Obligations and Payments 2024 - 2032, as at December 31, 2023 (\$ thousands)

Mineral Project	Commitment	2024	2025	2026	2027	2028-2032	2023-2032 Total
Santa Cruz (DRHE)	Discretionary	\$ 10,000	\$ —	\$ —	\$ —	\$ —	\$ 10,000
Santa Cruz (Wolff Harvard)	Non-discretionary	12,081	12,081	12,081	12,081	—	48,323
Santa Cruz (Other)	Discretionary	300	596	—	—	—	896
<b>Santa Cruz (Total)</b>		22,381	12,677	12,081	12,081	—	59,220
Hog Heaven (Montana)	Discretionary	500	500	1,000	5,008	25,000	32,008
Ivory Coast	Discretionary	437	—	—	—	—	437
White Hill (Nevada)	Discretionary	250	525	700	750	11,358	13,583
Unity (Oregon)	Discretionary	250	1,500	2,250	—	—	4,000
Cave & Lincoln (Utah)	Discretionary	200	250	750	1,500	—	2,700
Carolina Mining (North Carolina)	Discretionary	—	2,353	—	20,000	—	22,353
<b>Total</b>		24,018	17,805	16,781	39,339	36,358	134,301

## Mining and Mineral Project Exploration Laws

Mining exploration and resource development operations in Utah and Arizona are governed by both federal and state law, and the Company is required to comply with all regulations, rules and directives of governmental authorities and agencies applicable to the exploration of minerals in the United States generally.

### Arizona

The Santa Cruz Project's exploration and mining operations will be conducted entirely on private lands, and the planned mining operations will extract private mineral resources. Based on our assessment of federal and state law and regulations, the State of Arizona will be the lead permitting agency. Similar to Utah, the state of Arizona has been granted primacy of most of the major mining and environmental regulations applicable to the Santa Cruz Project, the primary exception being the federal underground injection control program and the local entitlement process. Several federal and state mining and environmental regulations will be applicable to the Santa Cruz Project depending on final design and operational details. These mining and environmental regulations may apply to exploration, reclamation, air, groundwater protection, natural resources, and development plans. We believe that there will be no federal nexus as it relates to permitting. Environmental studies will be conducted to fully assess and provide technical information on environmental conditions in order to support permit applications. Federal mineral claims do underlie one area adjacent to the planned mining area, but those properties are not currently in the mine plan.

Specific permits required for the Santa Cruz Project cannot be determined until the project design is completed. Specific information to be developed includes:

- Mine design
- Mining methods
- Mineral recovery methods
- Project water balance
- Process facility design
- Water requirements
- Infrastructure
- Surface facilities
- Reclamation methods
- Project emissions

The following table identifies the major permits and approvals that we will need to obtain either prior to the construction or before start-up of the mine and processing plant(s). The permits listed are not meant to be all-inclusive and cover only the major permits required for the mine and processing plant that are known at the current time.



<u>Major Permits or Approvals</u>	<u>Issuing Agency</u>
Underground Injection Control Permit	U.S. Environmental Protection Agency
Dust Control and Air Quality Permits	Pinal County Air Quality Control District
Aquifer Protection Permit	Arizona Department of Environmental Quality
AZPDES Industrial Stormwater Mining Multi-Sector General Permit	Arizona Department of Environmental Quality
Reclamation Plan Approval	Arizona State Mine Inspector
Water Appropriation Permits	Arizona Department of Water Resources

Underground Injection Control (“UIC”) Permit. A UIC permit is administered by Region 9 of the EPA under the federal Safe Drinking Water Act but the issuance of a Class V UIC permit, which is what the project would require for paste backfill, is “authorized by rule”. “Authorized by rule” means that an injection well may be operated without a permit as long as the owners or operators, submit inventory information to their permitting authority and verify that they are authorized to inject, operate the wells in a way that does not endanger underground sources of drinking water (“USDW”), and properly close their Class V well when it is no longer being used. After reviewing an owner or operator’s inventory information the permitting authority may determine that an individual permit is necessary to prevent USDW contamination. The technical information to support a UIC application is extensive and requires significant data on subsurface geology and hydrology. Detailed design would be needed and much of the data requirements would overlap with the Arizona Aquifer Protection Permit (below).

Dust Control and Air Quality Permits. Emissions of fugitive dust caused by activities that disturb the soil, such as earthmoving, vehicular/equipment traffic on unpaved surfaces, project activities disturbing unpaved services and wind require a dust control permit from the Pinal County Air Quality Control District (“PCAQCD”). Dust caused by vehicles traveling on unpaved roads, construction and wind events create a type of air pollution called particulate matter. Rules and regulations have been adopted to limit the amount of particulate matter produced by certain types of activities. A permit is submitted annually through the online portal to cover the exploration activities. A separate dust control permit will be submitted for the commencement of mining operations.

As the project is anticipated to have the potential to create emissions of regulated air pollutants above a minimum threshold during the mining phase for the processing plants, a final permit from PCAQCD must be obtained before construction begins. The permit application would identify emission sources, emission controls and other relevant information. Development of a dispersion model to estimate impacts to background ambient air quality from project emission may be required. The permitting process includes a 30-day public comment period, and the time needed by PCAQCD to complete the technical review depends on the complexity of the project. We anticipate the permit could be obtained within 12 months of application submittal but will be dependent on the category of permit needed and the agency backlog at the time of submittal.

Aquifer Protection Permit (“APP”). During mine commercial operations, unless specifically exempted or designed, constructed and operated so that there will be no migration of pollutants directly to the aquifer or to the vadose zone, mine facilities such as surface impoundments, waste rock or overburden disposal units, tailings impoundments, and leaching facilities are generally considered to be discharging facilities and must be operated pursuant to either an individual APP or general permit. For facilities during decline development, we believe a Type 2.02 General APP Permit would be required. For full project operations, we anticipate that an Individual (as opposed to General) permit would be required and that a public hearing would be held. Technical information to support an APP application is extensive and requires that facility design be advanced to the point that the potential for impacts to groundwater quality can be adequately assessed. Arizona Administrative Code R18-1-525 limits the time for a complex Individual APP with public hearing to 329 business days. This time could be extended if the application review identifies additional information that is required to be submitted or if agency backlog is high at the time of submittal. We anticipate being able to obtain this information within 24 months of developing the permit application.

AZPDES Industrial Stormwater Mining Multi-Sector General Permit (“MSGP”). A Storm Water Pollution Prevention Plan (“SWPPP”) must be prepared as outlined in the mining sector MSGP prior to receiving permit coverage. The drainage control plan developed as part of the mining and reclamation plan will be used to develop the SWPPP. The SWPPP must be fully developed and permit coverage granted prior to breaking ground at the site. A Notice of Intent to be covered under the mining MSGP will be submitted to the Arizona Department of Environmental Quality through the online portal.

Reclamation Plan Approval. All surface facilities must be reclaimed and a reclamation plan must be developed to describe the methods and the schedule for reclamation. In addition, a reclamation bond, the costs for a third-party to complete the reclamation, must be estimated. The reclamation plan and reclamation cost estimate must be provided to the Arizona State Mine Inspector for approval, a process expected to take 120 days. Financial assurance must also be secured

by means of a surety bond, certificate of deposit, cash deposit and corporate guarantee, to ensure that the funds are available to complete reclamation in the event of operator default. The Santa Cruz Project is currently operating under an Exploration Drilling Reclamation Plan that has been approved by the Arizona State Mine Inspector. A Mined Land Reclamation Plan (“MLRP”) for full operations will be completed and submitted for approval prior to construction of the project.

**Water Appropriation Permits.** We have acquired a substantial land package with associated water rights. Most of these rights authorize water use for irrigation or residential service connections, so administrative filings to convert them to the proposed mining uses have been completed. We are also exploring other potential water rights sources in the area.

**City/County Zoning Changes.** The Santa Cruz Project would be required to undergo the City of Casa Grande Entitlement Process in order to rezone the area from a “Planned Area of Development” designation to an “Industrial” designation. In accordance with the provisions of the Arizona Revised Statutes, the city council may from time to time change the zoning of parcels within the municipality. These changes in zoning classification are for the purpose of meeting the land use needs of the residents of the city in conformance with the city's general plan. A Major General Plan Amendment Application must be submitted and approved prior to a rezoning petition. A Major Plan Amendment requires a Planning Commission and City Council public hearing process and can be expected to take up to 200 days. The rezoning petition must be submitted after the Major Plan Amendment approval is received and will require preparation of a Major Site Plan. The Major Site Plan and rezoning process both require a public hearing process and can be expected to take up to 250 days for final approval.

The foregoing is intended to identify the major, or long-lead time, permits and approvals, and is not exhaustive. Additional permits or authorizations will be required. However, additional permit requirements and approvals are not anticipated to require extensive technical detail or review and lengthy issuance timelines.

These additional permits may include:

- Hazardous materials permits
- Solid or hazardous waste permits
- City/County building permits, utility permits, road access permits
- City/County Special Use permit or Development Plan approval
- Floodplain use permit
- Stormwater permit
- Septic or sewage treatment permit
- Onsite landfill permit
- Potable water system permit
- Threatened or endangered species consultation
- Cultural resources consultation

Numerous large mine operations have been permitted in Arizona, and specifically in Pinal County where the Santa Cruz Project is located. Given the prevalence of copper mining, these jurisdictions have developed regulatory programs that have well-defined permitting requirements and that are relatively predictable in terms of the permitting process and associated timelines.

## ***Utah***

The state of Utah has primacy over major mining and environmental laws applicable to the Tintic Project state and private lands, including mining, air and water permitting. With primacy, the U.S. Environmental Protection Agency (“EPA”) and other federal agencies have delegated primary enforcement responsibility for mining and environmental law oversight to the state of Utah. Mining operations must obtain proper permits and approvals and submit proper reclamation surety prior to mine start-up per state and federal statutory and regulatory requirements.

The BLM, as agent for the U.S. Secretary of the Interior, has retained responsibility for managing and overseeing federally owned locatable mineral resources (which includes metalliferous minerals) under the General Mining Law of 1872. When mining projects impact federal lands (minerals or surface), approvals from BLM are required per the Federal Land Policy and Management Act. Federal actions requiring permits or approvals trigger compliance with the NEPA. The level of scrutiny a project receives is based upon BLM’s discretion, the significance of impacts to the environment, and/or the public’s interest or involvement. A portion of the properties within the Tintic Project are located on federal lands and the Company holds via lease or ownership a number of federal unpatented mining claims and, therefore, the Company’s operations on these federal lands will be subject to BLM regulatory oversight and permitting approval.

The Tintic Project is located primarily within Juab County, Utah, though small portions of the project are also located within Utah County. Both Counties' ordinances require mining operations to obtain a Conditional Use Permit ("CUP") prior to commencing mining operations. The Company will work with Juab County officials to secure the required CUP authorizations (and Utah County, as needed). In addition to the CUP, the Tintic Project will be required to obtain other ancillary permits and approvals (such as building and road access permits) from the county in accordance with the county's ordinances.

The Endangered Species Act of 1973 was passed by Congress in order to protect and recover endangered species and their habitat. Site specific surveys will be completed for the Tintic Project area to identify any threatened, endangered, or candidate species or potential habitat. However, based on current information, it appears that the risk of impacts to endangered species and their habitat is limited.

The following table identifies the major permits and approvals that we will need to obtain prior to the construction and start-up of the mine and any processing facilities. The permits listed are not meant to be all-inclusive and cover only the major permits required for the mine and processing facilities. In addition, various rights-of-way ("ROWs") across state and federal lands may be needed from SITLA and BLM in order to construct project water and utility service infrastructure, and to upgrade existing roads. The Company has been in contact with SITLA and BLM regarding a number of aspects of the Tintic Project and does not anticipate that obtaining these ROWs presents a material issue.

Major Permits or Approvals	Issuing Agency
Exploration Permit	Utah Division of Oil, Gas and Mining
Large Mine Operation Approval	Utah Division of Oil, Gas and Mining
Water Appropriations	Utah Division of Water Rights
Air Quality Permit	Utah Division of Air Quality
General Multi-Sector Industrial Storm Water Permit	Utah Division of Water Quality
3809 Plan of Operation Approval	US Bureau of Land Management
Army Corps of Engineers Jurisdictional Waters Concurrence	US Army Corps of Engineers
County Conditional Use Permit and Other Permits	Juab County and Utah County

Exploration Permits. Exploration activities for minerals require an approval from Utah Division of Oil, Gas and Mining ("UDOGM"). Exploration activities within the Tintic Project area are being completed under exploration permits.

Approval for Large Mine Operation. The Notice of Intent to Commence Large Mining Operations must be obtained prior to the commencing of mining operations and will contain a complete description of the existing environmental resources and impacts. Environmental baseline studies will be necessary to support the Notice of Intent application. The Notice of Intent will include a description of mining methods, a comprehensive reclamation plan, and identifies the financial security acceptable to UDOGM to cover the costs of reclamation to be completed by an independent third-party as required under the Utah state administrative rules (R647). Execution of the acceptable financial security instrument will be required in advance of commencing mining activities.

Approval of a Notice of Intent to commence Large Mine Operations in Utah can occur within 6-9 months of an application submittal.

Water Appropriations. The Tintic Project is located within the Sevier River Basin. Surface and groundwater use and appropriations within the State, including this basin, are regulated by the Utah Division of Water Rights. Pursuant to the current Sevier River Basin policy, the basin is closed to new surface and groundwater appropriations, so to meet the water requirements for the Tintic Project, we will rely on lease agreements or acquisitions of existing water rights within the area of the Tintic Project. We have commenced discussions with water rights holders regarding the lease or acquisition of existing water rights.

General Multi-Sector Industrial Storm Water Permit. A SWPPP must be prepared as outlined in the general industrial permit prior to receiving permit coverage. The drainage control plan developed as part of the mining and reclamation plan will be used to develop the SWPPP. The SWPPP must be fully developed, and permit coverage granted prior to breaking ground at the Tintic Project site.

Army Corps of Engineer's ("ACOE") Jurisdictional Waters. Site surveys will be completed for the entire Tintic Project area, including all utility corridor and access roads. It is anticipated that all mining operations will avoid all

currently identified potential jurisdictional waters within the area of the Project. Therefore, no permits or approvals from the ACOE are expected to be required.

County Conditional Use Permit and Other Permits. We have been proactive in maintaining good communication with the local community. To date, county officials as well as local landowners have expressed strong support for the Tintic Project. With this level of support for the Tintic Project, the CUP should be issued by Juab County without significant challenges. Anticipated time for approval would be 3-6 months once all the supporting studies have been completed.



## [Table of Contents](#)

### Mineral Resources and Reserves

Below is a summary table of estimated in situ Mineral Resources as at December 31, 2023, which are presented on a 100% project basis, exclusive of Mineral Reserves.

Company	Deposit	Category	Total		Ni (%)	Au (g/t)	Ag (g/t)	Contained Cu (tonnes)	Contained Ni (tonnes)	Contained Au (oz)	Contained Ag (oz)	Geographic Area	Resource Category
			Tonnes	Cu (%)									
100% Project Basis													
Ivanhoe Electric <sup>1</sup>	Santa Cruz	Indicated	226,715,000	1.24	—	—	—	2,807,000	—	—	—	Arizona, U.S.	Copper
		Inferred	148,998,000	1.24	—	—	—	1,847,000	—	—	—		
Kaizen Discovery Inc. <sup>2</sup>	Pinaya	Measured	8,204,000	0.326	—	0.600	—	26,737	—	158,000	—	Peru	Copper Gold
		Indicated	33,487,000	0.324	—	0.462	—	108,357	—	497,000	—		
		Inferred	40,216,000	0.360	—	0.300	—	144,715	—	388,000	—		
Sama Resources Inc. <sup>3</sup>	Samapleu and Grata	Indicated	14,989,000	0.22	0.25	0.04	—	33,067	37,013	18,800	—	Ivory Coast	Nickel Copper
		Inferred	101,886,000	0.23	0.25	0.04	—	238,952	18,065	119,700	—		
Cordoba Mineral Corp. <sup>4</sup>	Alacran	Indicated	1,522,000	—	—	0.28	0.88	—	—	13,600	43,100	Colombia	Copper Gold Silver
		Inferred	31,839,000	0.20	—	0.25	1.10	64,001	—	259,000	1,100,900		
		Measured	8,204,000	—	—	—	—	26,737	—	158,000	—		
Total		Indicated	276,713,000	—	—	—	—	2,948,424	37,013	529,400	43,100	—	—
	Inferred	322,939,000	—	—	—	—	2,294,668	18,065	766,700	1,100,900	—	—	

Below is a summary table of estimated in situ Mineral Reserves as at December 31, 2023, which are presented on a 100% project basis.

Company	Deposit	Category	Tonnes	Total Cu (%)	Ni (%)	Au (g/t)	Ag (g/t)	Cu (tonnes)	Contained Ni (tonnes)	Contained Au (oz)	Contained Ag (oz)	Geographic Area	Resource Category
Cordoba Mineral Corp. <sup>5</sup>	Alacran	Probable	97,950,000	0.41	—	0.23	2.63	402,628	—	738,570	8,289,133	Colombia	Copper Gold Silver

<sup>1</sup>S-K 1300 Initial Assessment & Technical Report Summary, Santa Cruz Project, Arizona, dated September 6, 2023 - Santa Cruz Deposit 0.70% TCu cut-off, Texaco Deposit 0.80% TCu cut-off, and East Ridge 0.90% TCu cut-off; \$3.70/lb Cu. Underground mineable shape optimization parameters include a long-term copper price of US\$3.70/lb, process recovery of 94% and a mining recovery of 100%. Nordmin, our independent Qualified Person, reviewed and confirmed that the Mineral Resource estimates presented in the table above remained accurate as of December 31, 2023.

<sup>2</sup>Kaizen Discovery Inc. NI 43-101 Technical Report Pinaya Gold-Copper Project, Caylloma and Lampa Provinces, Peru - Copper-equivalent grade estimate based on \$2.84/lb copper and \$1.236/oz gold. Mineral Resources are reported at cut-off grades of 0.25 g/t Au and 0.3% Cu Equivalent and average metallurgical recoveries of 80%. Ronald G. Simpson, P. Geo., an independent Qualified Person, reviewed and confirmed that the Mineral Resource estimates presented in the table above satisfy S-K 1300 standards and remained accurate as of December 31, 2023. As of February 6, 2024 Ivanhoe Electric acquired all of the outstanding shares of Kaizen.

<sup>3</sup>Sama Resources Inc. NI 43-101 Technical Report Mineral Resource Estimate for the Samapleu and Grata Deposits Project, effective June 27, 2023 - NSR Cut-off grade \$16.34/t milled. Long term metal prices of \$3.75/lb Cu, \$8.70/lb Ni, and \$1.690/oz Au. Metallurgical recoveries varied based on concentration and grade. Glen Kuntz, P. Geo., our non-independent Qualified Person, reviewed and confirmed that the Mineral Resource estimates presented in the table above satisfy S-K 1300 standards remained accurate as of December 31, 2023.

<sup>4</sup>Cordoba Minerals Corp. NI 43-101 Technical Report & Feasibility Study, Alacran Project, in Colombia, Mineral Resource effective December 18, 2023 - NSR cut-off grade varied from \$2.08/t to \$9.88/t milled based on processing, and G&A costs as well as the recoveries in different units, long term metal prices of \$3.80/lb Cu, \$1.690/oz Au, and \$22.50/oz Ag. Glen Kuntz, P. Geo., our non-independent Qualified Person, reviewed and confirmed that the Mineral Resource estimates presented in the table above satisfy S-K 1300 standards remained accurate as of December 31, 2023.

<sup>5</sup>Cordoba Minerals Corp. NI 43-101 Technical Report & Feasibility Study, Alacran Project, in Colombia, Mineral Reserve effective October 21, 2021 - Open pit cut-off value varied from \$2.07/t to \$10.26/t milled based on processing, and G&A costs as well as the recoveries in different units. Long term metal prices of \$3.80/lb Cu, \$1.690/oz Au, and \$22.50/oz Ag. Sarah Bull, P.E., our non-independent Qualified Person, reviewed and confirmed that the Mineral Reserve estimates presented in the table above satisfy S-K 1300 standards remained accurate as of December 31, 2023.

## [Table of Contents](#)

Below is a summary table of estimated in situ Mineral Resources as at December 31, 2023, which are presented on an attributable basis, exclusive of Mineral Reserves.

Company	Deposit	Attributable Ownership of Deposit	Category	Attributable Basis						Attributable Contained Au (oz)	Attributable Contained Ag (oz)	Geographic Area	Resource Category
				Attributable Tonnes	Total Cu (%)	Ni (%)	Au (g/t)	Ag (g/t)	Attributable Contained Cu (tonnes)	Attributable Contained Ni (tonnes)			
Ivanhoe Electric <sup>1</sup>	Santa Cruz	100.0 %	Indicated	226,715,000	1.24	—	—	—	2,807,000	—	—	Arizona, U.S.	Copper
			Inferred	148,998,000	1.24	—	—	—	1,847,000	—	—		
Kaizen			Measured	6,768,300	0.326	—	0.600	—	22,058	—	130,350		
Discovery Inc. <sup>2*</sup>	Pinaya	82.5 %	Indicated	27,626,775	0.324	—	0.462	—	89,395	—	410,025	Peru	Copper
			Inferred	33,178,200	0.360	—	0.300	—	119,390	—	320,100		Gold
Sama Resources Inc. <sup>3</sup>	Samapleu	45.9 %	Indicated	6,880,550	0.186	0.238	—	—	15,179	16,991	8,630	Ivory Coast	Nickel
			Inferred	46,769,749	0.144	0.224	—	—	109,689	8,293	54,947		Copper
Cordoba Mineral Corp. <sup>4</sup>	Alacran	31.4 %	Indicated	477,908	—	—	0.28	0.88	—	—	4,270	Colombia	Copper
			Inferred	9,997,446	0.210	—	0.21	0.94	20,096	—	81,326		Gold
			Measured	6,783,067	—	—	—	—	22,058	—	130,350		Silver
			Indicated	2,617,234	—	—	—	—	2,911,574	16,991	422,925		—
Total			Inferred	238,943,395	—	—	—	—	2,096,175	8,293	456,737		—

Below is a summary table of estimated in situ Mineral Reserves as at December 31, 2023, which are presented on an attributable basis.

Company	Deposit	Attributable Ownership of Deposit	Category	Tonnes	Total Cu (%)	Ni (%)	Au (g/t)	Ag (g/t)	Attributable Contained Cu (tonnes)	Attributable Contained Ni (tonnes)	Attributable Contained Au (oz)	Attributable Contained Ag (oz)	Geographic Area	Resource Category
Cordoba Mineral Corp. <sup>5</sup>	Alacran	31.4%	Probable	30,756,300	0.41	—	0.23	2.63	126,425	—	231,911	2,602,788	Colombia	Copper
														Gold
														Silver

<sup>1</sup>S-K 1300 Initial Assessment & Technical Report Summary, Santa Cruz Project, Arizona, dated September 6, 2023 - Santa Cruz Deposit 0.70% TCu cut-off, Texaco Deposit 0.80% TCu cut-off, and East Ridge 0.90% TCu cut-off; \$3.70/lb Cu. Underground mineable shape optimization parameters include a long-term copper price of US\$3.70/lb, process recovery of 94% and a mining recovery of 100%. Nordmin, our independent Qualified Person, reviewed and confirmed that the Mineral Resource estimates presented in the table above remained accurate as of December 31, 2023.

<sup>2</sup>Kaizen Discovery Inc. NI 43-101 Technical Report Pinaya Gold-Copper Project, Caylloma and Lampa Provinces, Peru - Copper-equivalent grade estimate based on \$2.84/lb copper and \$1,236/oz gold. Mineral Resources are reported at cut-off grades of 0.25 g/t Au and 0.3% Cu Equivalent and average metallurgical recoveries of 80%. Ronald G. Simpson, P. Geo., an independent Qualified Person, reviewed and confirmed that the Mineral Resources estimates presented in the table above satisfy S-K 1300 standards and remained accurate as of December 31, 2023. As of February 6, 2024 Ivanhoe Electric acquired all of the outstanding shares of Kaizen.

<sup>3</sup>Sama Resources Inc. NI 43-101 Technical Report Mineral Resource Estimate for the Samapleu and Grata Deposits Project, effective June 27, 2023 - NSR Cut-off grade \$16.34/t milled. Long term metal prices of \$3.75/lb Cu, \$8.70/lb Ni, and \$1,690/oz Au. Metallurgical recoveries varied based on concentration and grade. Glen Kuntz, P. Geo., our non-independent Qualified Person, reviewed and confirmed that the Mineral Resource estimates presented in the table above satisfy S-K 1300 standards remained accurate as of December 31, 2023.

<sup>4</sup>Cordoba Minerals Corp. NI 43-101 Technical Report & Feasibility Study, Alacran Project, in Colombia, Mineral Resource effective December 18, 2023 - NSR cut-off grade varied from \$2.08/t to \$9.88/t milled based on processing, and G&A costs as well as the recoveries in different unit, long term metal prices of \$3.80/lb Cu, \$1,690/oz Au, and \$22.50/oz Ag. Glen Kuntz, P. Geo., our non-independent Qualified Person, reviewed and confirmed that the Mineral Resource estimates presented in the table above satisfy S-K 1300 standards remained accurate as of December 31, 2023.

<sup>5</sup>Cordoba Minerals Corp. NI 43-101 Technical Report & Feasibility Study, Alacran Project, in Colombia, Mineral Reserve effective October 21, 2021 - Open pit cut-off value varied from \$2.07/t to \$10.26/t milled based on processing, and G&A costs as well as the recoveries in different units. Long term metal prices of \$3.80/lb Cu, \$1,690/oz Au, and \$22.50/oz Ag. Sarah Bull, P.E., our non-independent Qualified Person, reviewed and confirmed that the Mineral Reserve estimates presented in the table above satisfy S-K 1300 standards remained accurate as of December 31, 2023.

## Typhoon™

We own, through a wholly-owned subsidiary, patents to a proprietary exploration technology known as Typhoon™. When we reference “our” Typhoon™ technology, we mean the technology that is covered by patents owned by our wholly-owned subsidiary Geo27, Inc. (“Geo27”). We also are the exclusive worldwide licensee of certain technology in the field of geological survey for mineral exploration from I-Pulse Inc. (“I-Pulse”). I-Pulse is the parent of our predecessor company, HPX.

Typhoon™ is the brand name for our proprietary electrical geophysical surveying transmitter, which can detect the presence of sulfide minerals containing copper, nickel, gold and silver, as well as water and oil (although the Company does not hold any rights to water and oil exploration). The technology was developed by I-Pulse to unlock exploration in areas where potential deposits are hidden by cover, where target depths exceed the range of conventional geophysical surveying systems, or where the scale and topography of an exploration target area prevents efficient and cost-effective conventional work. Typhoon™ allows us to potentially discover deposits otherwise thought to be undetectable through conventional survey methods and technology.

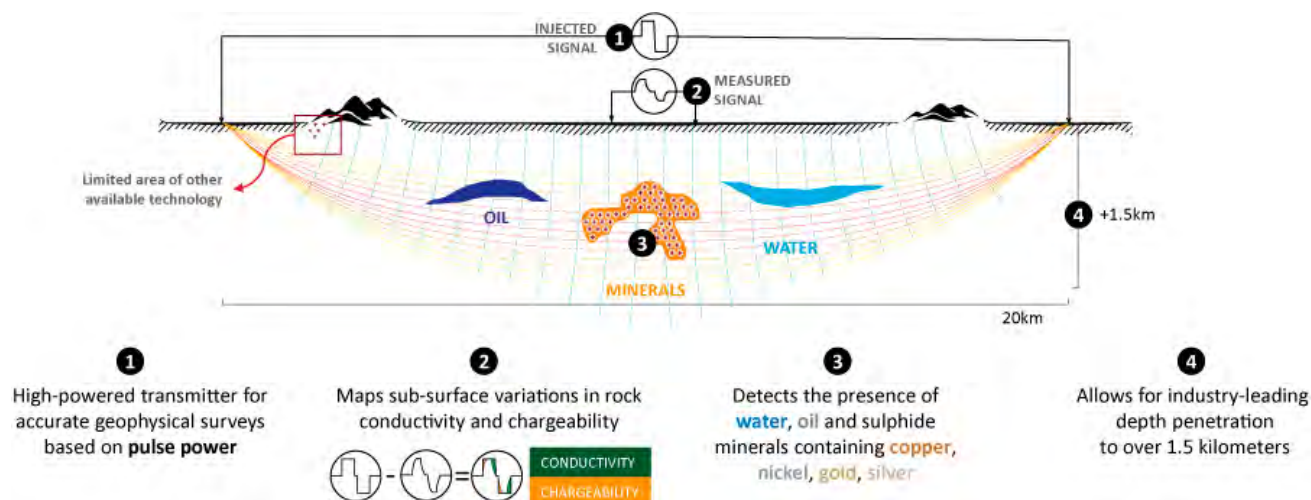
We own the issued patents shown below. These patents cover certain aspects of our Typhoon™ technology. The actual protection afforded by these patents varies depending on the scope of coverage of each individual patent as well as the availability of legal remedies in each jurisdiction.

Type	Short title	Country	Grant Date	Grant Number	Expiration Date
Patent	Current signal generator and method of implementing such a generator	France	16/02/2018	FR2980653	22/09/2031
		Australia	05/01/2017	AU2012311429	21/09/2032
		Brazil	19/01/2021	BR112014006276	21/09/2032
		Canada	22/05/2018	CA2849558	21/09/2032
		Indonesia		Pending	
		Turkey	21/04/2015	TR201403350B	21/09/2032
		USA	28/02/2017	US9584037	18/09/2033
Patent	Current generator and method for generating current pulses	France	04/04/2014	FR2988933	30/03/2032
		Australia	02/02/2017	AU2013241675	29/03/2033
		Canada	08/09/2020	CA2869170	29/03/2033
		Chile	30/10/2018	CL56649	29/03/2033
		Peru	20/05/2019	PE9489	29/03/2033
		USA	28/06/2016	US9379636	03/06/2033
Patent	Switch and system to inject current	France	28/01/2022	FR3105446	19/12/2039

We believe the following specifications differentiate Typhoon™ from conventional geophysical systems:

- high current that is adjustable according to the depth and scale of the exploration target;
- high voltages that are also adjustable to overcome near-surface resistance;
- the ability to transmit both electromagnetic and direct current signals;
- extremely clean signal, which yields a high signal to noise ratio in recorded data;
- the ability to synchronize with multiple types of data receivers, so that the user can choose the receiver system most appropriate for the exploration environment; and
- three deployment configurations, from a large containerized system to a smaller lightweight system that is helicopter portable.

Figure: Schematic of Typhoon™ at work.



We currently have four Typhoon™ units, which allow us to evaluate multiple prospects at any given time. Saudi JVCo has ordered three new Typhoon™ units, one of which was delivered in 2023 and two that are expected to be delivered in the first half of 2024. We have also ordered the construction of a further six additional Typhoon™ machines and anticipate that the first will be delivered to us in the second half of 2024 following delivery of the new units for Saudi JVCo.

The data processing and artificial intelligence software developed by our subsidiary CGI complements our Typhoon™ technology and represents the only software product that can process the full spectrum of geophysical data produced by Typhoon™ efficiently.

### Computational Geosciences

CGI is headquartered in Vancouver, British Columbia, Canada. It was founded in 2010 in order to capitalize on advanced software technology developed at the University of British Columbia that was designed to improve mineral exploration. The technology has undergone significant improvements over the years and extended its market reach into an O&G sector as well as water exploration activities. As of December 31, 2023, we owned 94.3% of CGI's outstanding shares while 5.6% are equally held by CGI's two co-founders. CGI was co-founded by Livia Mahler B.Sc., MBA, who currently serves as CGI's Chief Executive Officer, and Dr. Eldad Haber Ph.D., who currently serves as CGI's Chief Technology Officer, and is a professor at the University of British Columbia.

CGI's technology consists of sophisticated software codes and artificial intelligence tools ("AI") that are used to process geophysical data (including that generated by Typhoon™) in order to build accurate 3D subsurface images that indicate the presence of various metals and minerals, as well as water and oil. The AI tools are used to generate prospectivity maps for specific minerals, based on deep learning algorithms analyzing vast amounts of geoscience data.

CGI provides fee-for-service and software licensing agreements to customers in the area of critical minerals, energy and water exploration. CGI's services apply its geophysical data inversion codes on geophysical data (included that of Typhoon™) collected by third party data acquirers as well as other sources such as public or private libraries, in order to construct and refine 3D subsurface images. These services help CGI's customers in geophysical survey design through more accurately identifying potential resource targets for exploration while minimizing the operational footprint of those exploration activities. CGI also offers mineral prospectivity mapping services which are based on deep learning AI algorithms to help identify and rank prospective areas for critical minerals. In order to prepare diverse layers for AI algorithms, CGI uses unique tools such as data augmentation for sparse, unstructured data which enhance the results and provide critical knowledge of the subsurface for clients.

CGI applies its services to not only mineral projects but also to the global energy industry and in the search for underground water resources. In the energy sector, CGI has independently developed and collaborated to deploy a real-time 3D inversion service for resistivity logging-while-drilling ("LWD") data, significantly optimizing well placement and well completion designs to maximize reservoir productivity. CGI is also able to monitor fluid substitution within reservoirs, whether for enhanced oil recovery or carbon capture and storage. CGI has entered into a non-exclusive licensing agreement with a major oilfield service provider for the worldwide license of the LWD code. With respect to the identification of underground water resources, CGI's technology can also be deployed to predict prospective areas or delineate known water aquifers.



CGI does not patent its software codes. CGI owns codes for magnetics, gravity, DC/IP and electromagnetics.

CGI's intention is to grow its client base in the mining sector for existing geophysical inversion and AI based services in order to increase its revenue from third party sources. CGI is currently developing two new geophysical modelling products and has identified another solution for the AI-based platform digitization application. CGI is also building large geoscience databases from vast amounts of publicly available data in various countries and regions of the world in order to use these datasets to map minerals, water, geothermal and other targets. CGI competes with geophysical data processors, airborne and ground surveyors, off-shore surveyors, and AI service providers. These include companies such as TechnoImaging, LLC, Geotech Ltd., KoBold Metals and Quantec Geoscience.

On February 6, 2023, CGI, together with Clean TEQ Water Operations Pty Ltd, incorporated Go2Lithium Inc. ("Go2Lithium"), a British Columbia company in which each party owns 50%. Go2Lithium was formed for the purpose of financing, acquiring and/or joint venturing a portfolio of technologies to produce battery grade lithium salts from aqueous sources and to build extraction plants based on proprietary continuous ion-exchange direct lithium extraction technology.

## **VRB Energy**

VRB's current commercial platform is the Third Generation Vanadium Redox Energy Storage System ("Gen3 VRB-ESS®"). The Gen3 VRB-ESS is a commercially validated system that presents a superior solution for grid-scale utility storage compared to existing lithium-ion batteries. VRB-ESS® deliver better levelized cost of storage with superior safety characteristics compared to lithium-ion battery systems, and we believe that the Gen3 VRB-ESS platform is presently the largest and most efficient in the market. In 2023 VRB's 1MW power module and 60kW cell stacks were certified to Underwriters Laboratories ("UL") UL1973 product safety standards. UL 1973 is recognized as a global standard for commercially available battery energy storage.

We believe that a vertically integrated vanadium flow battery business will round out the Company's electrification transition portfolio and provides us with additional growth opportunities in what management considers a rapidly growing end-user market. Growing needs for renewable energy sources are expected to drive the demand for longer-lasting, safe and reliable high-performance vanadium flow batteries. VRB's core technology is VRB-ESS®, engineered for low-cost manufacturing, optimal performance, and long-life. While lithium-ion batteries are well suited to power consumer electronics and electric vehicles, their battery lifetime is limited and would have to be replaced periodically throughout a grid-scale project's lifetime.

We believe VRB-ESS® can be charged and discharged over an almost unlimited number of cycles without wearing out, providing the lowest lifecycle cost of energy of any type of battery storage. In addition, VRB's proprietary electrolyte formula contains no heavy metals and the liquid electrolyte is non-toxic, non-flammable and 100% reusable, making VRB-ESS® superior to lithium-ion batteries for grid scale energy storage.

Vanadium pentoxide ("V<sub>2</sub>O<sub>5</sub>") is a key input factor and cost driver of VRB-ESS®. As part of its strategic business plan, VRB has been working on vertically integrating into V<sub>2</sub>O<sub>5</sub> production through recycling of vanadium-bearing waste products, principally produced by petroleum refineries. In 2020, VRB established a joint venture with Yang Xing Vanadium ("YX") to operate a 1,800 tpa V<sub>2</sub>O<sub>5</sub> plant in Vietnam, which agreement terminated in May 2022. This allowed VRB to secure an initial low-cost supply of V<sub>2</sub>O<sub>5</sub> for battery production and realize revenues from the sale of a portion of the vanadium produced.

Figure: VRB-ESS® System Overview



## **Corporate Governance, ESG and Leadership**

### ***Longstanding Leadership Commitment to ESG Principles***

The leadership team at Ivanhoe Electric has a proven track record of implementing environmental, social and governance (“ESG”) focused policies and strategies pertaining to community engagement, diversity, safety, environmental standards and clean energy. This has been a focus of Robert Friedland from his work in other ventures, including at Ivanhoe Mines.

Ivanhoe Electric is advancing ESG initiatives as it continues to explore the Company’s assets and move into production. As part of its ongoing commitment to good corporate stewardship, in 2023 the Company hired a full-time senior leader to focus on its ESG initiatives. The new role leads cross-functional efforts to coordinate, execute, and communicate the Company’s ESG efforts and to integrate ESG policies, frameworks, goals, and metrics into the Company’s business risk and opportunity strategies.

Additionally, in 2024, the Board of Directors created a Health, Safety and Environmental (HS&E) Committee to oversee the Company’s key health, safety, environmental and social policies and related risks, opportunities and matters affecting the Company’s business. The HS&E and Audit Committees will ensure accurate reporting of ESG matters of the Company.

### ***Environmental, Health, and Safety Matters***

We are required to comply with numerous other environmental laws, regulations and permits in addition to those discussed above. These additional requirements include, for example, various permits regulating road construction and drilling at our mineral projects. We endeavor to conduct our mining operations in compliance with all applicable laws and regulations. However, because of extensive and comprehensive regulatory requirements, violations during mining operations occur from time to time in the industry.

### ***Human Capital***

We are committed to promoting the health, safety and well-being of our workforce and striving to further strengthen our commitment to promoting an inclusive and diverse workplace. We believe our workforce is the foundation of our success. Our Board of Directors oversees our policies and implementation programs that govern our approach to management of our human capital, with the HS&E and Compensation and Nominating Committees having oversight of human capital matters, including those relating to health and safety, executive recruitment, retention and development, pay equity, and inclusion and diversity.

As of December 31, 2023, Ivanhoe Electric and its subsidiaries had 244 full time employees. We consider our relationship with our employees to be strong. None of our employees are represented by a labor union or party to a collective bargaining agreement.

### ***History***

#### ***2021 Reorganization and Financing***

We were incorporated in Delaware on July 14, 2020, as a wholly-owned subsidiary of HPX. On April 30, 2021, HPX completed a restructuring whereby HPX contributed (i) all of the issued and outstanding shares of HPX’s subsidiaries, other than those holding direct or indirect interests in its Nimba Iron Ore Project; (ii) certain property, plant and equipment; and (iii) certain financial assets, in exchange for shares of our common stock. HPX then distributed the shares common stock to HPX stockholders by way of a dividend, with each HPX stockholder receiving one share of our common stock for each HPX share of common stock then held by the stockholder.

On April 30, 2021 we also entered into an intellectual property assignment and novation agreement with HPX, I-Pulse, and several subsidiary companies by which the rights to certain technology and patent license agreements previously held by HPX or a subsidiary, as licensee, were assigned to us.

#### ***Stapled Offering of Equity and Series 1 Convertible Notes***

Between August 3, 2021 and November 17, 2021, we and I-Pulse, issued and sold “bundles” of securities comprised of (i) an aggregate of 4,015,990 shares of our common stock at \$2.49 per share, (ii) \$49,999,200 aggregate principal amount of promissory notes convertible into shares of our common stock (“Convertible Notes”), and (iii) \$19,999,680 aggregate principal amount of promissory notes issued by I-Pulse convertible into shares of our common stock held by I-Pulse (“I-

Pulse Convertible PIK Notes”). The securities comprising the bundles were immediately separable. As a result, we raised gross proceeds of \$59,999,040. We did not receive any proceeds from the issuance of the I-Pulse Convertible PIK Notes.

Upon the consummation of our initial public offering, the Convertible Notes, including any accrued but unpaid interest, automatically converted into 5,419,923 shares of our common stock at a price per share equal to \$9.39 per share of common stock.

Pursuant to the terms of the I-Pulse Convertible PIK Notes, upon the consummation of our initial public offering, the I-Pulse Convertible PIK Notes, including any accrued but unpaid interest, may be exchanged, in whole or in part, at the option of the holder, into shares of our common stock then held by I-Pulse at a price per share equal to \$4.6929 per share of common stock, subject in each case to adjustment for any stock split, stock dividend, reverse stock split, or similar transactions. The I-Pulse Convertible PIK Notes are also convertible at the option of the holder at any time prior to maturity into shares of I-Pulse common stock. The I-Pulse Convertible PIK Notes matured on July 31, 2023.

### ***Series 2 Convertible Notes***

On April 5, 2022, we issued and sold an aggregate principal amount of \$86,200,000 of our Series 2 Convertible Notes.

Upon the consummation of our initial public offering, the Series 2 Convertible Notes, including any accrued but unpaid interest thereon, automatically converted into 8,209,035 shares of our common stock at a price per share equal to \$10.58 per share.

### ***Reverse Stock Split***

On June 16, 2022, we effected a reverse stock split of our outstanding common stock at a ratio of 3-for-1 (the “Reverse Stock Split”). The number of authorized shares and the par value of the common stock were not adjusted as a result of the Reverse Stock Split. All references to common stock, options to purchase common stock, per share data and related information have been retrospectively adjusted to reflect the effect of the Reverse Stock Split for all periods presented.

### ***Initial Public Offering***

On June 30, 2022, we completed an initial public offering of 14,388,000 shares of our common stock at a price of \$11.75 per share, resulting in gross proceeds from the offering of \$169.1 million. The Company’s shares were listed on the NYSE American and the Toronto Stock Exchange under the ticker symbol “IE”.

### ***Corporate Information***

We were incorporated in the State of Delaware in July 2020. Our principal executive offices are located at 450 E. Rio Salado Parkway, Suite 130, Tempe, Arizona, and our telephone number is (480) 656-5821. Our website address is [ivanhoeelectric.com](http://ivanhoeelectric.com).

### ***Available Information***

We make available, free of charge, on our website at [ivanhoeelectric.com](http://ivanhoeelectric.com) our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and any amendments to such reports, as soon as reasonably practicable after such reports are electronically filed with, or furnished to, the SEC. We do not incorporate the information on or accessible through our website into this Annual Report, and you should not consider any information on, or that can be accessed through, our website a part of this Annual Report or any other filing we make with the SEC.

All such reports are also available free of charge via EDGAR through the SEC website at [www.sec.gov](http://www.sec.gov).



## **Item 1A. Risk Factors**

*The following risks and uncertainties may have a material and adverse effect on our business, financial condition, results of operations, or stock price. You should consider these risks and uncertainties carefully, together with all of the other information contained in this Annual Report, including our consolidated financial statements and related notes. The risks and uncertainties described below may not be the only ones we face. If any of the risks or uncertainties we face were to occur, the trading price of our securities could decline, and you may lose all or part of your investment. This Annual Report also contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in the forward-looking statements as a result of factors that are described below and elsewhere in this report. See “Cautionary Note Regarding Forward-Looking Statements.”*

### **Risks Related to our Mining Businesses and the Mining Industry**

***We operate no mines, and the development of our mineral projects into mines is highly speculative in nature, may be unsuccessful, and may never result in the development of an operating mine.***

All of our mineral projects are at the exploration stage and are without identified mineral resources or reserves, except at the Santa Cruz Project, the Pinaya Project, the San Matias Project and the Ivory Coast Project, where we have an interest in declared mineral resources. The San Matias Project also hosts mineral reserves. We do not have any interest in any mining operations or mines in development.

Mineral exploration and mine development are highly speculative in nature, involve many uncertainties and risks and are frequently unsuccessful. Mineral exploration is performed to demonstrate the dimensions, position and mineral characteristics of mineral deposits, estimate mineral resources, assess amenability of the deposit to mining and processing scenarios, and to estimate potential deposit size. Once mineralization is discovered, it may take a number of years from the initial exploration phases before mineral development and production is possible, during which time the potential feasibility of the project may change adversely. Even if mineralization is discovered, that mineralization may not be economic to mine. A significant number of years, several studies, and substantial expenditures are typically required to establish economic mineralization in the form of Proven Mineral Reserves and Probable Mineral Reserves, to determine processes to extract the metals and, if required, to construct mining, processing, and tailing facilities and obtain the rights to the land and the resources (including capital) required to develop the mining operation. In addition, if we discover mineralization that becomes a mineral reserve, it will take several years to a decade or more from the initial phases of exploration until production is possible. During this time, the economic feasibility of production may change. As a result of these uncertainties, we may not be able to successfully develop a commercially viable producing mine.

Whether developing a producing mine is economically feasible will depend upon numerous additional factors, most of which are beyond our control, including the availability and cost of required development capital and labor, movement in the price of commodities, securing and maintaining title to mining tenements, as well as obtaining all necessary consents, permits and approvals for the development of the mine. The economic feasibility of mine development projects is based upon many factors, including the accuracy of mineral resource and mineral reserve estimates; metallurgical recoveries; capital and operating costs; government regulations relating to prices, taxes, royalties, land tenure, land use, importing and exporting and environmental protection; and metal prices, which are highly volatile. Development projects are also subject to the successful completion of feasibility studies, issuance of necessary governmental permits and availability of adequate financing. Any of these factors may result in us being unable to successfully develop a commercially viable operating mine.

***Mineral exploration activities have a high risk of failure and may never result in finding Ore Bodies sufficient to develop a producing mine.***

While the discovery of an Ore Body may result in substantial rewards, few mineral properties which are explored are ultimately developed into producing mines even if mineralization is identified. Most exploration projects do not result in the discovery of commercially mineable Ore deposits, and anticipated levels of recovery of mineral resources and mineral reserves, if any, may not be realized, nor may any identified mineral deposit ever be a commercially mineable (or viable) Ore Body which can be legally and economically exploited. Our exploration programs and activities may therefore not result in the discovery, development or production of a commercially viable Ore Body or mine.

If current exploration programs do not result in the discovery of commercially mineable, Ore Bodies, we may need to write-off part or all of our investment in our existing exploration stage properties, and may need to acquire additional properties.

***We have no history of mineral production and may never engage in mineral production.***

We currently have no operating mines, nor do we have any interest in any mining operations or development stage mining projects. All of our mineral projects are at the exploration stage and have never been mined by us nor have we produced any revenue from mining operations. We also have no operating history upon which to base estimates of future operating costs, capital spending requirements, site remediation costs or asset retirement obligations. Our company has no experience in developing or operating a mine. We may never develop and produce minerals from a commercially viable Ore Body or mine.

***We have a history of negative operating cash flows and net losses and we may never achieve or sustain profitability.***

We have a history of negative operating cash flows and net losses. We expect to continue to incur negative operating cash flows and net losses until such time as one or more of our mineral projects or other businesses generates sufficient revenues to fund our continuing operations. For the years ended December 31, 2023 and 2022, we had a net loss of \$216.1 million and \$160.2 million respectively, and negative cash flows from operating activities of \$150.5 million and \$115.7 million respectively. Given our history of negative operating cash flows and net losses, and expected future negative operating cash flows from operating activities and net losses, we expect to fund our continuing operations through the issuance of common stock to the public or other investors.

We may never achieve or sustain profitability. In addition, we may encounter unforeseen expenses, difficulties, complications, delays and other unknown factors that may adversely affect our ability to generate revenues and achieve or sustain profitability. Our failure to achieve or sustain profitability could depress our market value, could impair our ability to execute our business plan, raise capital, explore or develop our mineral projects or continue our operations, and could cause our stockholders to lose all or part of their investment.

***The mineral resource calculations made at our material mineral projects and other projects are only estimates and may not reflect the amount of minerals that may ultimately be extracted from those projects.***

Any figures presented for mineral resources in this Annual Report and those which may be presented in the future are and will only be estimates and depend on geological interpretation and statistical inferences or assumptions drawn from drilling and sampling analysis, which might prove to be materially inaccurate. There is a degree of uncertainty attributable to the calculation of mineral resources. Until mineral resources are actually mined and processed, the quantity of metal and grades are considered as estimates only and the estimated levels of metals contained within such mineral resource estimates may not actually be produced.

The estimation of mineral resources (as well as mineral reserves) is a subjective process that is partially dependent upon the judgment of the persons preparing the estimates. The process relies on the quantity and quality of available data and is based on knowledge, mining experience, statistical analysis of drilling results and industry practices. Valid estimates made at a given time may significantly change when new information becomes available. Estimates of mineral reserves and mineral resources can also be affected by such factors as environmental permitting regulations and requirements, weather, environmental factors, unforeseen technical difficulties, the metallurgy of the mineralization forming the mineral deposit, unusual or unexpected geological formations and work interruptions,

***Mineral resource estimates may change adversely and such changes may negatively impact the viability of developing a mineral project into a mine.***

Estimated mineral resources (and mineral reserves) may have to be recalculated based on changes in commodity prices, further exploration or development activity, loss or change in permits or actual production experience. Such changes could materially and adversely affect estimates of the volume or grade of mineralization, estimated Recovery Rates or other important factors that influence mineral resource estimates. The extent to which our mineral resources may ultimately be reclassified as mineral reserves depends on the demonstration of their profitable recovery and economic mineability.

In addition, mineral resource estimates have been determined and valued based on assumed future metal prices, cut-off grades, and operating costs that may prove to be inaccurate. Extended declines in the market price for minerals such as copper, nickel, vanadium, cobalt, platinum group elements, gold and silver may render portions of our mineralization uneconomic and result in reduced reported volume and grades, which in turn could have a material adverse effect on our financial performance, financial position and results of operations, as well as a reduction in the amount of mineral resources. In addition, Inferred Mineral Resources have a great amount of uncertainty as to their existence and their economic and legal feasibility. You should not assume that any part of an Inferred Mineral Resource will be upgraded to a higher category or that any of the mineral resources will be reclassified as mineral reserves. In addition, it may not be possible to economically mine or process any of our mineral resources.

Material changes in mineral resources, if any, grades, stripping ratios or Recovery Rates may affect the economic viability of any project. Our future growth and productivity will depend, in part, on our ability to successfully develop and maintain commercially mineable mineral deposits at our existing properties or identify and acquire other commercially mineable mineral deposits, as well as on the costs of and results of continued exploration and potential development programs at our mineral projects.

***Lack of reliability and inaccuracies of historical information could hinder our exploration plans.***

We have relied on, and some disclosure in the Santa Cruz and Tintic Technical Reports is based, in part, upon historical data compiled by previous parties involved with our mining projects. To the extent that any of such historical data is inaccurate or incomplete, our exploration plans may be adversely affected.

San Matias project is the only project in which we have an interest in mineral reserves and the mineral resources at our projects may never be converted to mineral reserves.

Mineral reserves represent mineralization that has been determined to be economically mineable as determined by at least a pre-Feasibility Study or feasibility level study. Such studies demonstrate that, at the time of reporting, extraction could reasonably be economically justified. Other than at the San Matias project, we do not have any mineral projects that host mineral reserves and accordingly, we do not have any Ore that is demonstrated to be economically viable to extract. The mineral resources at our projects may never be converted to mineral reserves.

***The prices of the minerals for which we are principally exploring (copper, nickel, vanadium, cobalt, platinum group elements, gold and silver) change on a daily basis, and a substantial or extended decline in the prices of these minerals could materially and adversely affect our ability to raise capital, conduct exploration activities, and develop or operate a mine.***

Our business and financial performance will be significantly affected by fluctuations in the prices of the key minerals we are principally exploring for (copper, nickel, vanadium, cobalt, platinum group elements, gold and silver). The prices of these minerals are volatile, can fluctuate substantially and are affected by numerous factors that are beyond our control, including prevailing interest rates and returns on other asset classes; expectations regarding inflation, monetary policy and currency values; speculative activities; governmental and foreign exchange rate decisions; decisions regarding the creation and disposal of mineral stockpiles; political and economic conditions; structural changes in demand including electrification; the availability and costs of metal substitutes; the location and the demand for products containing these key minerals; technological changes and changes in industrial processes, as well as economic slow-downs or recessions.

We cannot predict the effect of these factors on mineral prices. Significant and/or prolonged reductions in prices for these minerals would materially and adversely affect our ability to raise capital, and if not considered viable for exploration activities, would cause us to delay, halt or stop exploration and development activities altogether. If we are operating a producing mine at the time of such a reduction in prices, we would expect to suffer decreasing revenues and profitability which could materially and adversely affect our results of operations and financial condition and may cause us to suspend or cease mining operations.

Significant and/or prolonged increase in prices for these minerals may decrease the demand for these minerals and increase the demand for substitute minerals. A fall in demand could also decrease the price for these minerals, thereby reducing the attractiveness of conducting exploration activities for these minerals. A fall in demand may also adversely affect our ability to raise capital and develop or operate a mine. In addition, an increase in worldwide supply, and consequent downward pressure on prices, may result over the longer term from increased mineral production from mines developed or expanded as a result of current metal price levels.

***We do not own all of the mineral subsurface rights at the Santa Cruz and the Tintic Projects and we do not own all of the surface rights at the Tintic Project.***

At our Santa Cruz Project in Arizona and our Tintic Project in Utah, we only own some of the subsurface mineral rights, and at Tintic we only own some of the surface rights. The rights we do not own are held under option agreements or purchase agreements in respect of which title has not yet transferred to us. At the Santa Cruz Project, the majority of subsurface mineral rights are owned by one company. At the Tintic Project, five vendors continue to hold title to the remaining subsurface and surface rights, pending us making all required payments within the time required. If we do not make all the option or purchase agreement payments when due, or fail to pay the total amount to the owners, we will lose our right to acquire the subsurface mineral or surface rights at these projects.

At times, the owners of subsurface mineral and surface rights may be unable or unwilling to fulfill their contractual obligations to us. In addition, our option agreements and purchase agreements are often complex and may be subject to interpretation or uncertainties. The owners of subsurface mineral and surface rights and other counterparties may interpret our interests in a manner adverse to us. For these or other reasons, we could be forced to expend resources or take legal action to enforce our contractual rights. We may not be successful in enforcing our contractual rights. We may also need to expend significant monetary and human resources to defend our position. Such disputes to enforce our contractual rights could have adverse effects on our business, results of operations and financial condition.

***Our indebtedness and grant of security interests in certain of our assets could adversely affect our business.***

We may incur indebtedness from time to time, which may be secured. As of December 31, 2023, our total consolidated liabilities were \$110.9 million, which includes a remaining balance of \$48.9 million pursuant to the promissory note (the “Santa Cruz Promissory Note”) that we issued as part of the consideration for the acquisition of 5,975 acres of surface title and associated water rights at our Santa Cruz Project, which is secured by a deed of trust on such assets (the “Deed of Trust”). Our mineral properties are in the exploration stage and we have limited sources of revenue from which to pay indebtedness. If we are unable to pay existing or future indebtedness when due, the holders will have rights against us, and in the case of secured indebtedness, the holders may potentially seize or sell the assets subject to the security interest. Any failure to timely meet our obligations under these instruments may adversely affect our assets, results of operations and future prospects. In addition, the Deed of Trust requires us to pay the Santa Cruz Promissory Note in full prior to commencing material construction on the Santa Cruz Project, which could materially adversely impact our business and the value of the Santa Cruz Project. See “Business — “Material and Key Mineral Projects — Santa Cruz Project, Arizona, USA”.

***Actual capital costs, operating costs, production and economic returns may differ significantly from those we have anticipated and future development activities may not result in profitable mining operations.***

The actual operating costs at any mineral project that we are able to develop into an operating mine will depend upon changes in the availability and prices of labor, equipment and infrastructure, variances in Ore recovery and mining rates from those assumed in any mining plan that may be generated, operational risks, changes in governmental regulation, including taxation, environmental, permitting and other regulations and other factors, many of which are beyond our control. Due to any of these or other factors, the operating costs at any such future mine may be significantly higher than those set forth in the pre-feasibility or Feasibility Study we may ultimately prepare and will use as a basis for construction of a mine. As a result of higher capital and operating costs, production and economic returns may differ significantly from those set forth in such studies and any future development activities may not result in profitable mining operations.

***We are or will be required to obtain, maintain and renew environmental, construction and mining permits, which is often a costly and time-consuming process and ultimately may not be possible to achieve.***

Mineral exploration and mining companies, including ours, need many environmental, construction and mining permits, each of which can be time-consuming and costly to obtain, maintain and renew, and which become more numerous as activities advance from exploration to mine development and construction and finally to mining operations.

In connection with our exploration activities and future mine development and operations, we must obtain and maintain a number of permits that impose strict conditions, requirements and obligations, including those relating to various environmental and health and safety matters. To obtain, maintain and renew certain permits, we have been and may in the future be required to conduct environmental studies, and make associated presentations to governmental authorities pertaining to the potential impact of our current and future activities upon the environment and to take steps to avoid or mitigate those impacts. Permit terms and conditions can impose restrictions on how we conduct our activities and limit our flexibility in exploring our mineral projects and in how we may develop them into mines in the future.

Many of our permits are subject to renewal from time to time, and applications for renewal may be denied or the renewed permits may contain more restrictive conditions than our existing permits, including those governing impacts on the environment. We may be required to obtain new permits to expand our activities, and the grant of such permits may be subject to an expansive governmental review of our operations.

We may not be successful in obtaining all such permits, which could prevent us from commencing, continuing or expanding operations or otherwise adversely affect our business. Renewal of existing permits or obtaining new permits may be more difficult if we are not able to comply with our existing permits. Applications for permits, permit area expansions and permit renewals can also be subject to challenge by interested parties, which can delay or prevent receipt of needed permits. The permitting process can vary by jurisdiction in terms of its complexity and likely outcomes. The



applicable laws and regulations, and the related judicial interpretations and enforcement policies change frequently, which can make it difficult for us to obtain and renew permits and to comply with applicable requirements. Accordingly, permits required for our activities may not be issued, maintained or renewed in a timely fashion or at all, may be issued or renewed upon conditions that restrict our ability to conduct our operations economically, or may be subsequently revoked. Any such failure to obtain, maintain or renew permits, or other permitting delays or conditions, including in connection with any environmental impact analyses, could have a material adverse effect on our business, results of operations and financial condition.

***We are subject to environmental and health and safety laws, regulations and permits that may subject us to material costs, liabilities and obligations.***

We are subject to environmental laws, regulations and permits in the various jurisdictions in which we operate, including those relating to, among other things, the removal and extraction of natural resources, the emission and discharge of materials into the environment, including plant and wildlife protection, remediation of soil and groundwater contamination, reclamation and closure of properties, including Tailings and waste storage facilities, groundwater quality and availability, and the handling, storage, transport and disposal of wastes and hazardous materials. Pursuant to such requirements, we may be subject to inspections or reviews by governmental authorities. Failure to comply with these environmental requirements may expose us to litigation, fines or other sanctions, including the revocation of permits and suspension of operations. We expect to continue to incur significant capital and other compliance costs related to such requirements. These laws, regulations and permits, and the enforcement and interpretation thereof, change frequently and generally have become more stringent over time. If our noncompliance with such regulations were to result in a release of hazardous materials into the environment, such as soil or groundwater, we could be required to remediate such contamination, which could be costly. Moreover, noncompliance could subject us to private claims for property damage or personal injury based on exposure to hazardous materials or unsafe working conditions. In addition, changes in applicable requirements or stricter interpretation of existing requirements may result in costly compliance requirements or otherwise subject us to future liabilities. The occurrence of any of the foregoing, as well as any new environmental, health and safety laws and regulations applicable to our business or stricter interpretation or enforcement of existing laws and regulations, could have a material adverse effect on our business, financial condition and results of operations.

We also could be liable for any environmental contamination at, under or released from our or our predecessors' currently or formerly owned or operated properties or third-party waste disposal sites. Certain environmental laws impose joint and several strict liability for releases of hazardous substances at such properties or sites, without regard to fault or the legality of the original conduct. A generator of waste can be held responsible for contamination resulting from the treatment or disposal of such waste at any off-site location (such as a landfill), regardless of whether the generator arranged for the treatment or disposal of the waste in compliance with applicable laws. Costs associated with liability for removal or remediation of contamination or damage to natural resources could be substantial and liability under these laws may attach without regard to whether the responsible party knew of, or was responsible for, the presence of the contaminants. Accordingly, we may be held responsible for more than our share of the contamination or other damages, up to and including the entire amount of such damages. In addition to potentially significant investigation and remediation costs, such matters can give rise to claims from governmental authorities and other third parties, including for orders, inspections, fines or penalties, natural resource damages, personal injury, property damage, toxic torts and other damages.

Our costs, liabilities and obligations relating to environmental matters could have a material adverse effect on our business, financial position and results of operations.

***Land reclamation and exploration restoration requirements may be burdensome and costly.***

Land reclamation and exploration restoration requirements are generally imposed on mineral exploration companies, such as ours, which require us, among other things, to minimize the effects of land disturbance. Such requirements may include controlling the discharge of potentially dangerous effluents from a site and restoring a site's landscape to its pre-exploration form. The actual costs of reclamation and exploration restoration requirements are uncertain and planned expenditures may differ from the actual expenditures required. Therefore, the amount that we are required to spend could be materially higher than any current or future estimates. Any additional amounts required to be spent on reclamation and exploration restoration may have a material adverse effect on our financial performance, financial position and results of operations and may cause us to alter our operations. Should we develop an operating mine, we will also be required to reclaim and restore future mining operations once the mine has closed. Such amounts may be significant and could have a material adverse effect on our financial performance, financial position and results of operations and may cause us to alter our operations.

We also may be required to maintain financial assurances, such as letters of credit, to secure reclamation obligations under certain laws and regulations. The failure to acquire, maintain or renew such financial assurances could subject us to fines and penalties or suspension of our operations. Letters of credit or other forms of financial assurance may represent only a portion of the total amount of money that will be spent on reclamation over the life of a mine's operation. Although we will include liabilities for estimated reclamation, exploration restoration, and mine closure costs in our financial statements, it may be necessary to spend more than what we projected to fund required reclamation, exploration restoration and mine closure activities.

***The development of one or more of our mineral projects into an operating mine will be subject to all of the risks associated with establishing and operating new mining operations.***

If the development of any of our other mineral projects is found to be economically feasible and we seek to develop an operating mine, the development of such a mine will require obtaining permits and financing the construction and operation of the mine itself, processing plants and related infrastructure. As a result, we will be subject to certain risks associated with establishing new mining operations, including:

- uncertainties in timing and costs, which can be highly variable and considerable in amount, of the construction of mining and processing facilities and related infrastructure;
- we may find that skilled labor, mining equipment and principal supplies needed for operations, including explosives, fuels, chemical reagents, water, power, equipment parts and lubricants are unavailable or available at costs that are higher than we anticipated;
- we will need to obtain necessary environmental and other governmental approvals and permits and the receipt of those approvals and permits may be delayed or extended beyond what we anticipated, or that the approvals and permits may contain conditions and terms that materially impact our ability to operate a mine;
- we may not be able to obtain the financing necessary to finance construction and development activities or such financing may be on terms and conditions costlier than anticipated, which may make mine development activities uneconomic;
- we may suffer industrial accidents as part of building or operating a mine that may subject us to significant liabilities;
- we may suffer mine failures, shaft failures or equipment failures which delay, hinder or halt mine development activities or mining operations;
- our mining projects may suffer from adverse natural phenomena such as inclement weather conditions, floods, droughts, rock slides and seismic activity;
- we may discover unusual or unexpected geological and metallurgical conditions that could cause us to have to revise or modify mine plans and operations in a materially adverse manner; and
- the development or operation of our mines may become subject to opposition from non-governmental organizations, environmental groups or local groups, which may delay, prevent, hinder or stop development activities or operations.

We may find that the costs, timing and complexities of developing our mining projects may be greater than we anticipated. Cost estimates may increase significantly as more detailed engineering work is completed on a project. It is common in mining operations to experience unexpected costs, problems and delays during construction, development and mine start-up. Accordingly, our activities may not result in profitable mining operations at our mineral properties.

***Our future capital and operating cost estimates at any of our mining projects may not be accurate.***

The capital and operating cost estimates we may make in respect of our mineral projects that we intend to develop or ultimately develop into operating mines may not prove to be accurate. Capital and operating cost estimates are typically set out in Feasibility Studies and are based on the interpretation of geological data, cost of consumables, cost of capital, labor costs, transportation costs, mining and processing costs, anticipated climatic conditions, the costs of taxes, duties and royalties, permitting and restrictions or production quotas on exportation of minerals) and title claims, and other factors which may be considered at the time the estimates are made and will be based on information prevailing at that time. Any of the following events, among the other uncertainties and risks described in this Annual Report, could affect the ultimate accuracy of such estimates:

- unanticipated changes in grade and tonnage of Ore to be mined and processed;
- incorrect data on which engineering assumptions are made;
- delays in construction schedules;
- delays in the ramp-up of the rate of operations;
- unanticipated transportation costs;
- the accuracy of major equipment and construction cost estimates;
- labor negotiations and labor availability;
- changes in government regulation, including regulations regarding greenhouse gas emissions;
- changes in the cost of consumables;
- changes in royalty, duty, and tax rates;
- permitting costs and requirements; and
- general demand for skilled labor, steel, industrial equipment and other components required for mining, any of which could cause material and adverse changes to our future capital and operating costs.

***We may face opposition from organizations that oppose mining which may disrupt or delay our mining projects.***

There is an increasing level of public concern relating to the effects of mining on the natural landscape, in communities and on the environment. Certain non-governmental organizations, public interest groups and reporting organizations (“NGOs”) that oppose resource development can be vocal critics of the mining industry. In addition, there have been many instances in which local community groups have opposed resource extraction activities, which have resulted in disruption and delays to the relevant operation. NGOs or local community organizations could direct adverse publicity against and/or disrupt our operations in respect of one or more of our properties, regardless of our successful compliance with social and environmental best practices, due to political factors, activities of unrelated third parties on lands in which we have an interest or our operations specifically. Any such actions and the resulting media coverage could have an adverse effect on our reputation and financial condition or our relationships with the communities in which we operate, which could have a material adverse effect on our business, financial condition or results of operations.

***Our operations involve significant risks and hazards inherent to the mining industry.***

Our operations involve the operation of large machines, heavy mobile equipment and drilling equipment. Hazards such as adverse environmental conditions, unusual or unexpected geological formations, metallurgical and other processing problems, industrial accidents, cave-ins, mechanical equipment failure, facility performance problems, fire and natural phenomena such as inclement weather conditions, floods, landslides and earthquakes are inherent risks in our activities. These hazards inherent to the mining industry can cause injuries or death to employees, contractors or other persons at our mineral projects, severe damage to and destruction of our property, plant and equipment, and contamination of, or damage to, the environment, and can result in the suspension of our exploration activities and future development and mine production activities. The occurrence of any of these events may delay, prevent, hinder or stop exploration and development activities altogether on any mineral project, and once in operation may cause mining activities to be suspended or cease altogether.

In addition, from time to time we may be subject to governmental investigations and claims and litigation filed on behalf of persons who are harmed while at our properties or otherwise in connection with our activities. To the extent that we are subject to personal injury or other claims or lawsuits in the future, it may not be possible to predict the ultimate outcome of these claims and lawsuits due to the nature of personal injury litigation. Similarly, if we are subject to governmental investigations or proceedings, we may incur significant penalties and fines, and enforcement actions against us could result in our being required to stop exploration and development activities or to close future mining operations. If claims and lawsuits or governmental investigations or proceedings are ultimately resolved against us, it could have a material adverse effect on our business, financial position and results of operations.

***A significant portion of any future revenue from our operations is expected to come from a small number of mines, such that any adverse developments at these mines could have a more significant or lasting impact on our results of operations than if our business was less concentrated.***

If and when we begin generating revenue from future mining operations, a significant portion of our revenue is expected to come from a small number of mines, which means that adverse developments at these properties could have a more significant or lasting impact on our results of operations than if our revenue was less concentrated.

***Joint ventures and other partnerships in relation to our properties may expose us to risks.***

We have in the past entered into, are currently party to, and may in the future enter into, joint ventures, such as our current joint venture with Ma'aden, or other arrangements with parties in relation to the exploration, development, and production of certain of the properties in which we have an interest. Joint ventures may require unanimous approval of the parties to the joint venture or their representatives for certain fundamental decisions, such as an increase or reduction of registered capital, merger, division, dissolution, amendments of constating documents, and the pledge of joint venture assets, which means that each joint venture party may have a veto right with respect to such decisions, which could lead to a deadlock in the operations of the joint venture or partnership. Further, we may be unable to exert control over strategic decisions made in respect of such joint venture properties. Joint ventures and similar arrangements may also impose financial, operational and other requirements on each of the parties. Any failure of us or such other companies to meet our and their respective obligations, or any disputes with respect to the parties' respective rights and obligations, could have a material adverse effect on the joint ventures or their properties and, therefore, could have a material adverse effect on our results of operations, financial performance, cash flows and the price of our common stock.

***We operate in a highly competitive industry.***

The mining industry is highly competitive. Much of our competition is from larger, established mining companies with greater liquidity, greater access to credit and other financial resources, newer or more efficient equipment, lower cost structures, more effective risk management policies, more staff and equipment, and procedures and/or a greater ability than us to withstand losses. Our competitors may be able to respond more quickly to new laws or regulations or emerging technologies, or devote greater resources to the expansion or efficiency of their operations than we can, or expend greater amounts of resources, including capital, in acquiring new and prospective mining projects. In addition, current and potential competitors may make strategic acquisitions or establish cooperative relationships among themselves or with third parties. Accordingly, it is possible that new competitors or alliances among current and new competitors may emerge and gain significant market share to our detriment. We may not be able to compete successfully against current and future competitors, and any failure to do so could have a material adverse effect on our business, financial condition or results of operations.

***Higher metal prices in past years have encouraged increased mining exploration, development and construction activity, which has increased demand for, and cost of, exploration, development and construction services and equipment.***

The relative strength of metal prices in past years has encouraged increases in mineral exploration, development and construction activities around the world, which has resulted in increased demand for, and cost of, exploration, development and construction services and equipment. Increased demand for, and cost of, services and equipment could result in delays if services or equipment cannot be obtained in a timely manner due to inadequate availability, and may cause scheduling difficulties due to the need to coordinate the availability of services or equipment, any of which could materially increase project exploration, development and/or construction costs or could result in material delays or other operational challenges.

***The title to properties within some of our mineral projects may be uncertain or defective, which could put our investment in such mineral projects at risk.***

Title to our properties may be challenged, and we may not have, or may not be able to obtain, all necessary surface rights to develop a property. An unknown title defect on any of our mineral projects (or any portion thereof) could adversely affect our ability to explore, develop and/or mine the projects and/or process the minerals that we mine in the future. In addition to termination, failure to make timely tenement maintenance payments and otherwise comply with applicable laws, regulations and local practices relating to mineral right applications and tenure could result in reduction or expropriation of entitlements.

Title insurance is generally not available for mineral projects, or where available is cost prohibitive, and our ability to ensure that we have obtained secure claim to individual mineral projects or mining tenements may be severely constrained. We rely on title information and/or representations and warranties provided by the grantors. Any challenge to our title could result in litigation, insurance claims and potential losses, hinder our access to capital, delay the exploration and development of a property and ultimately result in the loss of some or all of our interest in the mineral project. A successful challenge could also result in our not being compensated for our prior expenditures relating to the property.

***Failure to make mandatory payments required under earn-in, option and similar arrangements related to mineral projects may result in a loss of our opportunity and/or right to acquire an interest in such mineral projects.***

We have interests in, or rights to acquire interests in, a number of mineral projects through earn-in arrangements, options and similar agreements with the owner of the mineral project. These arrangements typically require us to commit to meet certain expenditure requirements on the mineral project and/or to pay certain fees to the mineral project owner, each within specified time frames. If we comply with the terms of such arrangements and make the required payments within the time periods required, we would then earn an interest in the project directly or in an entity that holds the legal title to the mineral project. Such arrangements are common in the mining industry and are often staged, with the company that is earning-in earning an interest in the project at various stages and over various timeframes, resulting in a joint venture arrangement with the company that is the owner of the mineral project, or in some cases could result in the outright acquisition of the project from its owner.

If we do not make the required expenditures when contractually agreed, and if such failure occurs before earning any interest in a project, or if we otherwise fail to comply with the terms of such agreements, we may lose all of the expenditures and payments made to that time in respect of that mineral project and acquire no interest in such mineral project. If we do not make the required expenditures when contractually agreed after we have earned some interest in the project, we may lose the right to acquire any further interest and may be left with a minority interest in a mineral project that provides us with limited or few rights with respect to the exploration and development of that mineral project, and which may have limited resale value to a third party. Any such failure or occurrence could materially and adversely affect our business, financial condition, results of operations or prospects and may result in us forfeiting our right to acquire an interest, or a further interest, in mineral projects that may ultimately be determined to be viable commercial mining operations.

***Suitable infrastructure may not be available for exploration or development of mineral properties or damage to existing infrastructure may occur.***

Mining, processing, development and exploration activities depend on adequate infrastructure. Reliable roads, bridges, port and/or rail transportation, power sources, water supply and access to key consumables are important determinants for capital and operating costs. The lack of availability on acceptable terms or the delay in the availability of any one or more of these items could prevent or delay exploration, development or exploitation of our mineral projects. If adequate infrastructure is not available, the future mining or development of our projects may not be commenced or completed on a timely basis, or at all, the resulting operations may not achieve the anticipated production volume, and the construction costs and operating costs associated with the mining and/or development of our projects may be higher than anticipated. Shortages of water supply, critical spare parts, maintenance service and new equipment and machinery may materially and adversely affect our operations and development projects.

***Our future mining operations may require access to abundant water sources which may not be available.***

Any future mines that we develop will require the use of significant quantities of water for mining activities, processing and related auxiliary facilities. Water usage, including extraction, containment and recycling requires appropriate permits granted by governmental authorities.

In particular, many of our mineral projects are in the south-western portions of the United States, an area that has suffered from prolonged drought, dwindling water resources and growing conflict over the use of water resources. Our mining projects, if developed into operating mines, may not be able to source all the water needed for mining operations, and governments or regulatory authorities may determine to prioritize other commercial or industrial activities ahead of mining in the use of water.

Water may not be available in sufficient quantities to meet our future production needs and may not prove sufficient to meet our water supply needs. In addition, necessary water rights may not be granted and/or maintained. A reduction in our water supply could materially and adversely affect our business, results of operations and financial condition. We currently



own no water rights and we have not yet obtained the water rights to support some of our potential development activities and our inability to obtain those rights could prevent us from pursuing those activities.

***An increase in prices of power and water supplies, including infrastructure, could negatively affect our future operating costs, financial condition, and ability to develop and operate a mine.***

Our ability to obtain a secure supply of power and water at a reasonable cost at our mineral projects depends on many factors, including: global and regional supply and demand; political and economic conditions; problems that can affect local supplies; delivery; infrastructure, weather and climate conditions; and relevant regulatory regimes, all of which are outside our control. We may not be able to obtain secure and sufficient supplies of power and water at reasonable costs at any of our mineral projects and the failure to do so could have a material adverse effect on our ability to develop and operate a mine, and on our financial condition and results of operations.

***Our success depends on developing and maintaining relationships with local communities and stakeholders.***

Our ongoing and future success depends on developing and maintaining productive relationships with the communities surrounding our mineral projects, including local indigenous people who may have rights or may assert rights to certain of our properties, and other stakeholders in our operating locations. Local communities and stakeholders may be dissatisfied with our activities or the level of benefits provided, which may result in legal or administrative proceedings, civil unrest, protests, direct action or campaigns against us. Any such occurrence could materially and adversely affect our business, financial condition or results of operations, as well as our ability to commence or continue exploration or mine development activities.

***The impacts of climate change may adversely affect our operations and/or result in increased costs to comply with changes in regulations.***

Climate change is an international and community concern which may directly or indirectly affect our business and current and future activities. The continuing rise in global average temperatures has created varying changes to regional climates across the world and extreme weather events have the potential to delay or hinder our exploration activities at our mineral projects, and to delay or cease operations at any future mine. This may require us to make additional expenditures to mitigate the impact of such events which may materially and adversely increase our costs and/or reduce production at a future mine. Governments at all levels are amending or enacting additional legislation to address climate change by regulating, among other things, carbon emissions and energy efficiency, or where legislation has already been enacted, regulation regarding emission levels and energy efficiency are becoming more stringent. As a significant emitter of greenhouse gas emissions, the mining industry is particularly exposed to such regulations. Compliance with such legislation, including the associated costs, may have a material adverse effect on our business, financial condition, results of operations, prospects and our ability to commence or continue our exploration and future development and mining operations.

Changing climate patterns may also affect the availability of water. If the effects of climate change cause prolonged disruption in the delivery of essential commodities then production efficiency may be reduced, which may have a material adverse effect on our business, financial condition, results of operations and prospects.

In addition, climate change is perceived as a threat to communities and governments globally and stakeholders may demand reductions in emissions or call upon mining companies to better manage their consumption of climate-relevant resources. Negative social and reputational attention toward our operations may have a material adverse effect on our business, financial condition, results of operations and prospects. A number of governments have already introduced or are moving to introduce climate change legislation and treaties at the international, national, state/provincial and local levels. Regulations relating to emission levels (such as carbon taxes) and energy efficiency are becoming more stringent. If the current regulatory trend continues, this may result in increased costs at some or all of our mineral projects.

***Our subsidiary, Cordoba, is involved in lengthy litigation, which may adversely affect the value of our investment in it and its mineral projects.***

Our subsidiary, Cordoba, is currently involved in two legal proceedings. The first is a criminal lawsuit filed by Cordoba in late 2018 and in January 2019 with the Colombian prosecutors against nine members of former Colombian management of a Cordoba subsidiary alleging breach of fiduciary obligations, abuse of trust, theft and fraud. This proceeding is ongoing. In the second proceeding, Cordoba (along with the National Mining Agency, Ministry of Mines and Energy, the local environmental authority, the Municipality of Puerto Libertador and the State of Cordoba) were served with a class action claim by individuals purporting to represent the Alacran Community — “Asociación de Mineros de El

Alacrán” (“Alacran Community”). This class action seeks (i) an injunction against Cordoba’s operations in the Alacrán area and (ii) an injunction against the prior declaration by the authorities that the Alacran Community’s mining activities were illegal. The claim was initially filed with the Administrative Court of Medellín, which remanded the case to the Administrative Court of Montería, which contested it and submitted the case to the Council of State. The Council of State determined the Administrative Court of Montería as the competent tribunal, where the process is currently being conducted. The Administrative Court of Montería admitted the commencement of the class action on September 2021. The decision was challenged by Cordoba and other defendants and confirmed by the Court. Cordoba timely filed its: (i) response to the lawsuit and statement of defense; and (ii) opposition to the injunction requested by plaintiffs. The Court now should: (i) issue a decision on the injunction; and (ii) schedule date and time for the initial hearing. While the court matters proceed, Cordoba will incur additional costs that will negatively impact its financial position. The litigation process is uncertain and it is possible that the second proceeding is resolved against Cordoba, which could have a material adverse effect on its business, results of operations, financial condition and prospects.

***Our subsidiary Cordoba operates in a jurisdiction, Colombia, which has heightened security risks.***

Colombia is home to South America’s largest and longest running insurgency. The situation may become unstable and may deteriorate in the future into violence, including kidnapping, gang warfare, homicide and/or terrorist activity. Any such actions may generally disrupt supply chains and business activities in Colombia, and discourage qualified individuals from being involved with Cordoba’s operations. Our operations may be impacted as a result, and our ability to advance the San Matias project may be delayed or halted altogether. This may include the inability to access the project site, as well as damage to property and injury or death to our personnel. Any such events could have a material adverse effect on Cordoba’s business, results of operations, financial condition and prospects.

***Our subsidiary Kaizen operates in a jurisdiction, Peru, which has recently experienced an increase in political instability and violence.***

Peru is one of the world’s largest producers of copper and a country with a significant mining industry. Since the ouster of the former president in early December 2022, protests have broken out across the country. Demonstrators have blocked roads and intermittently stalled several airports in Peru’s south. Tourism has declined with the temporary closure of Machu Picchu, the Inca ruin and Peru’s pre-eminent tourist attraction. Demonstrators are calling for the replacement president to step down and congress to resign. A number of mines, particularly in the country’s south, have been impacted by the demonstrations with some mines ceasing operation. Should the instability grow it may hinder or prevent access to the Pinaya Project in Peru and prevent Kaizen from advancing its exploration plans, as well as potentially cause damage to property and injury or death to its personnel. Any such events could have a material adverse effect on Kaizen’s business, results of operations, financial condition and prospects.

***Illegal mining activities may negatively impact our ability to explore, develop and operate some mineral projects.***

Artisanal and illegal miners are present at the San Matias Project in Colombia (owned directly by Cordoba) and the Pinaya Project in Peru (owned by our subsidiary Kaizen). As these companies further explore and advance these projects towards production, each must enter into discussions with illegal miners operating at the projects. There is a risk that such illegal miners may oppose Cordoba’s or Kaizen’s proposed operations and this may result in a disruption to the planned development and/or mining and processing operations, all of which may have an adverse effect on our investment in Cordoba and/or Kaizen. In addition, illegal miners have extracted metals from both projects in a manner that does not meet health and safety or environmental standards. Accidents may occur and may range from minor to serious, including death. While each company takes all formal steps to notify the authorities when illegal miners operate in an unsafe manner, illegal miners may advance within close proximity to our contemplated mine sites or trespass on them, which may disrupt exploration and development activities, and may result in increased costs to address the presence of such illegal miners.

## **RISKS RELATED TO VRB**

***VRB may be unable to obtain sufficient suitable feedstock for vanadium production required to produce its VRB-ESS®.***

VRB requires significant amounts of vanadium-containing waste to produce sufficient  $V_2O_5$  for commodity sales and vanadium electrolyte for energy storage. The feedstock itself needs to be of sufficient grade and specification to deliver the low operating cost necessary for profitable production by VRB. We may be unable to identify, source and acquire sufficient feedstock to meet our  $V_2O_5$  requirements, or we may be unable to acquire such feedstock on terms (including prices) that are acceptable. Failure to obtain sufficient feedstock will inhibit our ability to produce our VRB-ESS® and grow our battery business, which may have a negative impact on our financial condition, results of operations and cash flow.

***We currently purchase certain key raw materials and components from third parties, some of which we only source from one supplier or from a limited number of suppliers.***

We currently purchase certain key raw materials, such as feedstock, for our electrodes and a variety of other components from third parties, some of which we only source from one supplier or from a limited number of suppliers. Our current suppliers may be unable to satisfy our future requirements on a timely basis. Moreover, the price of purchased raw materials, components and assembled batteries could fluctuate significantly due to circumstances beyond our control. If our current suppliers are unable to satisfy our long-term requirements on a timely basis, we may be required to seek alternative sources for necessary materials and components, produce the raw materials or components in-house, which we are currently unable to do, or redesign our proposed products to accommodate available substitutes or at reasonable cost. We may not be able to enter into the required manufacturing supply agreements with the battery manufacturers and component suppliers. If we fail to secure a sufficient supply of key raw materials and components and we are unable to produce them in-house in a timely fashion, it would result in a significant delay in our manufacturing and shipments, which may cause us to breach our sales contracts with our customers. Furthermore, failure to obtain sufficient supply of these raw materials and components or produce them in-house at a reasonable cost could also harm our revenue and gross profit margins.

***Substantial and increasingly intense competition may harm VRB's business.***

The energy storage systems industry is highly competitive and is characterized by rapid technological change, frequent new product introductions, and a competitive pricing environment. Large vendors in this market may have greater resources to devote to research and development, manufacturing, marketing and sales than VRB, as well as greater brand name recognition. These large vendors could compete more aggressively with VRB by acquiring companies with new technologies which could allow them to develop products and technologies better suited to the needs of end-users, earlier and at a lower cost. VRB's future success will depend in part on its ability to develop products that keep pace with the continuing changes in technology, evolving industry standards, new product introductions by competitors and changing customer preferences and requirements. VRB may be unable to successfully address these developments on a timely basis or at all. Failure to respond quickly and cost-effectively to new developments through the development of new products and technologies or enhancements to existing products and technologies could render its existing products and technologies less competitive or obsolete and could reduce its revenue. If effective new sources of energy storage systems are discovered, VRB's existing products and technologies could become less competitive or obsolete.

A number of small manufacturers of energy storage systems could also develop and introduce new products at a faster pace than VRB, therefore better meeting market needs. Such small manufacturers could also be acquired by, receive investments from, or enter into other commercial relationships with, larger, well-established and well-financed competitors. VRB's competitors' energy storage systems may be more readily accepted by industry participants than ours.

***Developments in alternative technology may adversely affect the demand for VRB's battery products.***

Significant developments in alternative energy storage technologies, such as fuel cell technology, advanced diesel, coal, ethanol or natural gas, or breathing batteries, may materially and adversely affect our business, prospects, financial condition and operating results in ways that we may not currently anticipate. Existing and other battery technologies, fuels or sources of energy may emerge as customers' preferred alternatives to our battery products. Any failure by us to develop new or enhanced technologies or processes, or to react to changes in existing technologies, could materially delay our development and introduction of new and enhanced alternative products, which could result in decreased revenue and a loss of market share to our competitors. Our research and development efforts may not be sufficient to adapt to changes in alternative technology and we may not compete effectively with alternative systems if we are not able to source and integrate the latest technology into our battery products.

***VRB manufactures and markets vanadium-based battery systems. If a viable substitute product or chemistry to vanadium-based battery systems emerges and gains market acceptance, our business, financial condition and results of operations will be materially and adversely affected. Furthermore, our failure to keep up with rapid technological changes and evolving industry standards within the battery market may cause our products to become obsolete and less marketable, resulting in loss of market share to our competitors.***

Some of our competitors are conducting research and development on alternative battery technologies, such as lithium-based batteries, fuel cells and super capacitors, and academic studies are ongoing as to the viability of lithium, sulphur and aluminum-based battery technologies. If any viable substitute products emerge and gain market acceptance because they have more enhanced features, more power, more attractive pricing, or better reliability, the market demand for VRB's products may decrease, and accordingly, our business, financial condition and results of operations would be materially and adversely affected.

Furthermore, the battery market is characterized by rapid technological changes and evolving industry standards, which are difficult to predict. This, coupled with the frequent introduction of new products and models, has shortened product life cycles and may render our products obsolete or less marketable. For example, research on the electrochemical applications of lithium-based batteries, carbon nanotechnology and other storage technologies is developing at a rapid pace, and many private and public companies and research institutions are actively engaged in the development of new battery technologies. If we fail to adopt these new technologies, such technologies may, if successfully developed by our competitors, offer significant performance or price advantages compared with our technologies and our technology leadership and competitive strengths may be adversely affected. Our significant investment in our research and development infrastructure may not lead to marketable products. Additionally, our competitors may improve their technologies or even achieve technological breakthroughs either as alternatives to vanadium-based battery systems or improvements on existing vanadium-based battery systems that would render our products obsolete or less marketable. Therefore, our failure to effectively keep up with rapid technological changes and evolving industry standards by introducing new and enhanced products may cause us to lose market share and to suffer a decrease in our revenue.

***VRB may experience significant delays in the design, production and launch of its battery projects, which could harm our business, prospects, financial condition and operating results.***

VRB's research and development team is continually looking to improve its battery systems. Any delay in the financing, design, production and launch of new products could materially damage our brand, business, prospects, financial condition and operating results. There are often delays in the design, production and commercial release of new products, and to the extent we delay the launch because of the items identified above, our growth prospects could be adversely affected as we may fail to grow our market share, to keep up with competing products or to satisfy customers' demands or needs.

***VRB batteries rely on software and hardware that is highly technical, and if these systems contain errors, bugs or vulnerabilities, or if we are unsuccessful in addressing or mitigating technical limitations in our systems, our business could be adversely affected.***

VRB's products rely on software and hardware, including software and hardware developed or maintained internally or by third parties that is highly technical and complex and will require modification and updates over the life of a battery. In addition, certain of our products depend on the ability of such software and hardware to store, retrieve, process and manage immense amounts of data. Our software and hardware may contain errors, bugs or vulnerabilities, and our systems are subject to certain technical limitations that may compromise our ability to meet the objectives. Some errors, bugs or vulnerabilities inherently may be difficult to detect and may only be discovered after the code has been released for external or internal use. Errors, bugs, vulnerabilities, design defects or technical limitations may be found within our software and hardware. Remediation efforts may not be timely, may hamper production, or may not be to the satisfaction of our customers. If we are unable to prevent or effectively remedy errors, bugs, vulnerabilities or defects in our software and hardware, we may suffer damage to our brand, loss of customers, loss of revenue or liability for damages, any of which could adversely affect our business and financial results.

***VRB may not be able to substantially increase its manufacturing output in order to fulfill orders from its customers.***

We intend to expand our battery manufacturing capacity to meet the expected demand for our products. This expansion will impose significant added responsibilities on our senior management and our resources, including financial resources and the need to identify, recruit, maintain, and integrate additional employees. Our proposed expansion will also expose us to greater overhead and support costs and other risks associated with the manufacture and commercialization of new products. Difficulties in effectively managing the budgeting, forecasting and other process control issues presented by such expansion could harm our business, prospects, results of operations and financial condition. Even if we succeed in expanding our manufacturing capacity, we may not have enough demand for our products to justify the increased capacity. If there is persistent mismatch in the demand for our products and our manufacturing capacity, our business, financial condition and results of operations could be adversely affected. Our ability to increase our manufacturing output is subject to significant constraints and uncertainties, including:

- delays by our suppliers and equipment vendors and cost overruns as a result of a number of factors, many of which may be beyond our control, such as increases in raw material prices and problems with equipment vendors;
- delays in government approval processes or denial of required approvals by relevant government authorities;
- diversion of significant management attention and other resources; and
- failure to execute our expansion plan effectively.

If we are unable to increase our manufacturing output because of any of the risks described above, we may be unable to fulfill customer orders or achieve the growth we expect. Consequently, our reputation could be affected and our customers could source battery systems from other companies. The combination of the foregoing could adversely affect our business, financial condition and results of operations.

***Our failure to cost-effectively manufacture our batteries in quantities which satisfy our customers' demands and product specifications and their expectations for product quality and reliable delivery could damage our customer relationships and result in significant lost business opportunities for us.***

VRB manufactures its products rather than relying upon third-party outsourcing. To be successful, we must cost-effectively manufacture commercial quantities of our complex batteries that meet our customer specifications for quality and timely delivery. To facilitate the commercialization of our products, we will need to further reduce our manufacturing costs, which we intend to do by improving our manufacturing and development operations. We depend on the performance of our manufacturing operations to manufacture and deliver our products to our customers. If we are unable to manufacture products in commercial quantities on a timely and cost-effective basis, we could lose our customers and be unable to attract future customers.

***Changes in the policies of the Government of the People's Republic of China ("PRC") or its laws, or intervention or control by the PRC Government may materially affect VRB and its assets.***

The business of VRB is primarily conducted in the PRC. Accordingly, VRB's financial condition and results of operations have been, and are expected to continue to be, affected by the economic, political and social developments in China including policies related to renewable energy development and technology, COVID-19 and the conflict in Ukraine. The PRC's economy may not continue to grow, and if there is growth, such growth may not be steady and uniform, and if there is a slowdown, such slowdown may have a negative effect on our business and results of operations.

The PRC government plays a significant role in regulating industry development by imposing industrial policies. The PRC government also exercises significant control over China's economic growth through regulation, the allocation of resources, controlling payment of foreign currency-denominated obligations, setting monetary policy and providing preferential treatment to particular industries or companies. A change in these government policies could materially and adversely affect VRB and accordingly our business, financial condition and results of operations. Certain measures adopted by the PRC government may restrict loans to certain industries, such as changes in the statutory deposit reserve ratio and lending guidelines for commercial banks by the People's Bank of China (the "PBOC"). These current and future government actions could materially affect our liquidity, VRB's access to capital and its ability to operate its business. Our financial condition and results of operations could be materially and adversely affected by the PRC's control over capital investments or changes in tax regulations that are applicable to us. In addition, any stimulus measures designed to boost the Chinese economy may contribute to higher inflation, which could adversely affect our results of operations and financial condition.

***Any future revocation of approvals or any future failure to obtain approvals applicable to our business or any adverse changes in foreign investment policies of the PRC government may have a material adverse impact on our business, financial condition and results of operations.***

PRC regulations relating to foreign ownership in the battery manufacturing industry, including the manufacturing of VRB's products, have been revised periodically over the past decade. In 2018, the Chinese legislature issued the Special Administrative Measures for Access of Foreign Investment (the "Negative List"). Under the new Negative List regime, any industry that is not on the Negative List is free from foreign ownership restrictions. The most updated version of the Negative List (2021 version) contains no foreign ownership restrictions over the manufacturing of power batteries. However, we recognize that PRC may change its foreign ownership regulations to governing battery manufacturers, or may change such regulations in other ways that govern VRB, which could adversely affect our results of operations and financial condition.

***The PRC government exerts substantial influence over the manner in which we must conduct our business activities.***

The PRC government has exercised and continues to exercise substantial control over virtually every sector of the Chinese economy through regulation and state ownership. Our ability to operate in the PRC may be harmed by changes in its laws and regulations, including those relating to taxation, currency controls, import and export tariffs, environmental regulations, production safety, land use rights, property and other matters. In addition, the central or local governments of the jurisdictions in which we operate may impose new, stricter regulations or interpretations of existing regulations that



would require additional expenditures and efforts on our part to ensure our compliance with such regulations or interpretations.

Accordingly, government actions in the future, including any decision not to continue to support recent economic reforms could have a significant effect on economic conditions in the PRC or particular regions thereof and could require us to divest ourselves of any interest we then hold in Chinese properties or joint ventures.

Additionally, the PRC's Foreign Investment Law came into effect on January 1, 2020 and embodies an expected PRC regulatory trend of rationalizing the foreign investment regulatory regime in line with prevailing international practice and the legislative efforts to unify the corporate legal requirements for both foreign and domestic investments. The Foreign Investment Law, together with our implementation rules and ancillary regulations, may materially impact our organizational structure, corporate governance practice and compliance costs, for example through the imposition of stringent ad hoc and periodic information reporting requirements.

***PRC regulations of loans to PRC entities and direct investment in PRC entities by offshore holding companies may delay or prevent us from making loans or additional capital contributions to VRB.***

We may transfer funds to VRB or finance VRB by means of stockholder loans or capital contributions. Any loans from us to VRB, a foreign-invested enterprise, cannot exceed statutory limits determined by (1) the formula under the Notice on Matters Concerning the Macro-Prudential Management of Full-Covered Cross-Border Financing issued by the PBOC; or (2) the difference between the investment amount and the registered capital of VRB (if applicable), and must be registered with the State Administration of Foreign Exchange (the "SAFE"), or our local counterparts. Any capital contributions we make to VRB are subject to the approval by or filing and registration with the Administration for Market Regulation, the Ministry of Commerce of PRC, the National Development and Reform Commission of PRC and SAFE, or their local counterparts. We may not be able to obtain these government registrations or approvals on a timely basis, if at all. If we fail to receive such registrations or approvals, our ability to provide loans or capital contributions to VRB in a timely manner may be negatively affected, which could materially and adversely affect its liquidity and its ability to fund and expand its business.

***Uncertainties with respect to the PRC legal system could limit available legal protections.***

VRB is generally subject to laws and regulations applicable to foreign investments in the PRC and, in particular, laws applicable to foreign investment enterprises. The PRC legal system is a civil law system based on written statutes, and prior court decisions may be cited for reference, but have limited precedential value. Since the PRC legal system continues to rapidly evolve, the interpretations of many laws, regulations and rules are not always uniform and enforcement of these laws, regulations and rules involve uncertainties. Moreover, the PRC government may amend or revise existing laws, rules or regulations, or promulgate new laws, rules or regulations, in a manner which materially and adversely affects our business, results of operations or financial condition.

***VRB may be negatively impacted by the state of PRC-United States relations.***

VRB operates as a wholly-owned foreign enterprise in the PRC with us as its United States-domiciled majority owner and controlling stockholder. The United States and the PRC are the two largest energy storage markets globally. A continued deterioration in the United States-PRC relationship, which may be evidenced by tariff and non-tariff barriers, lack of advancement on trade negotiations, domestic "buy local" policies, lack of business travel and business contact, and potentially sanctions or other barriers to commerce, may negatively affect VRB's business, business prospects, results of operations and cash flows. The products that VRB produces may face tariff or other barriers to United States markets that negatively impact demand and sales in the United States, may increase the cost of VRB's products, or may cause VRB's products to be excluded from United States markets altogether. At the same time, VRB faces resistance to its United States controlling ownership from large Chinese State-owned entities developing energy storage projects in PRC. This limits VRB's ability to sell its products in the PRC and may lead to a decline in sales in PRC for VRB's products, any of which would have a negative effect on VRB's financial condition, results of operations and cash flows.

## **RISKS RELATED TO INTELLECTUAL PROPERTY**

***If we are unable to successfully obtain, maintain, protect, enforce or otherwise manage our intellectual property and proprietary rights, we may incur significant expenses and our business may be adversely affected.***

Our success and ability to compete depend in part upon the proprietary nature of, and protection for, our products, technologies, processes and know-how. Our subsidiary VRB relies on patents to establish and protect its intellectual

property rights in the PRC, the United States and other jurisdictions. As a result, VRB may be required to spend significant resources to monitor and protect its intellectual property rights. Litigation brought to protect and enforce its intellectual property rights could be costly, time-consuming and distracting to management and could result in the impairment or loss of portions of its intellectual property. Furthermore, VRB's efforts to enforce its intellectual property rights may be met with defenses, counterclaims and countersuits attacking the validity and enforceability of its intellectual property rights. In addition, VRB's competitors may develop products similar to theirs that do not conflict with VRB's intellectual property rights, may design around their intellectual property rights or may independently develop similar or superior technology. VRB's failure to establish, protect and enforce its intellectual property rights could have a material adverse effect on our business, prospects, financial condition, results of operations and cash flows.

The Typhoon<sup>TM</sup> technology we utilize in our exploration activities is based on patents owned by our subsidiary Geo27. In addition, we are also the exclusive worldwide licensee of certain legacy technology from I-Pulse and its affiliates, related to mineral exploration. Any failure by us or our licensor to establish, protect and enforce our intellectual property rights could have a material adverse effect on our business, prospects, financial condition, results of operations and cash flows, as would any breach by the licensor of our license agreements.

***We may not be able to protect our intellectual property rights in the PRC.***

The validity, enforceability and scope of protection available under the relevant intellectual property laws in the PRC is imperfect and still evolving. Implementation and enforcement of PRC intellectual property-related laws has historically been challenging. Accordingly, the protection of intellectual property rights in the PRC may not be as effective as in the United States, Canada or other jurisdictions. In addition, policing the unauthorized use of proprietary technology is cumbersome and expensive, and we may need to resort to litigation to enforce or defend patents issued to us or our other intellectual property rights or to determine the enforceability, scope and validity of our proprietary rights or those of others. Such litigation and an adverse determination in any such litigation, if any, could result in substantial costs, loss of our proprietary rights, and diversion of resources and management's attention.

***We may be exposed to infringement or misappropriation claims by third parties, which, if determined adversely to us, could cause us to lose significant rights and to be unable to continue providing our existing product offerings.***

Our success also depends largely on our ability to use and develop our technology and know-how without infringing the intellectual property rights of third parties. The validity and scope of claims relating to vanadium-based battery technology and Typhoon<sup>TM</sup> technology patents involve complex scientific, legal and factual questions and analysis and, therefore, may be highly uncertain, expensive and time-consuming. We may receive in the future notices that claim we or our clients using our products have misappropriated or misused other parties' intellectual property rights, particularly as the number of competitors in our market grows and the functionality of products among competitors overlaps. If we are sued by a third party that claims that our technology infringes its rights, the litigation, whether or not successful, could be extremely costly to defend, divert our management's time, attention, and resources, damage our reputation and brand and substantially harm our business. Further, in some instances, our agreements with our clients include indemnification provisions under which we or our subsidiaries agree to indemnify such parties for losses suffered or incurred in connection with third party claims for intellectual property infringement. The results of any intellectual property litigation to which we might become a party, or for which we are required to provide indemnification, may also require us to do one or more of the following:

- cease offering or using technologies that incorporate the challenged intellectual property;
- make substantial payments for legal fees, settlement payments or other costs or damages to the party claiming infringement, misappropriation or other violation of intellectual property rights;
- obtain a license to sell or use the relevant technology, which may not be available on reasonable terms or at all; or
- redesign technology to avoid infringement, which may not be feasible.

Our failure to develop non-infringing technologies or license the intellectual property or the proprietary rights on a timely basis would harm our business, possibly materially. Protracted litigation could result in our customers, or potential customers, deferring or limiting their purchase or use of our products until resolution of such litigation. Parties making the infringement claim may also obtain an injunction that can prevent us from selling our products or using technology that contains the allegedly infringing contents. If we were to discover that our products violate third-party proprietary rights, we may be unable to continue offering our products on commercially reasonable terms, or at all, to redesign our technology to avoid infringement or to avoid or settle litigation regarding alleged infringement without substantial expense and damage

awards. Any intellectual property litigation or proceeding could have a material adverse effect on our business, results of operation and financial condition.

## **RISKS RELATED TO OUR BUSINESSES GENERALLY**

***We will require substantial capital investment in the future and we may be unable to raise additional capital on favorable terms or at all.***

The construction and operation of potential future mines and the continued exploration of our mineral exploration projects will require significant funding. We have no operating cash flow or other sources of funding to meet these requirements. As a result, we expect to raise capital through equity financings to meet the funding requirements of these investments and our ongoing business activities. Our ability to raise additional capital will depend on a range of factors such as macroeconomic conditions, future commodity prices, our exploration success, and market conditions among other factors. If these factors deteriorate, our ability to raise capital to fund ongoing operations and business activities, and service any outstanding indebtedness could be negatively impacted. If we are unable to obtain additional financing, we will not be able to continue our exploration activities and our assessment of the commercial viability of our operations. Further, even if mineralization is discovered, we may not be able to successfully advance our project into commercial production. If we are able to establish that development of mining operations is commercially viable, our inability to raise additional financing at that stage may result in our inability to place the operations into production and recover our investment. If additional financing is not available, we may also have to postpone further exploration or development of, or sell, one or more of our principal mineral properties.

***Currency fluctuations may affect our results of operation and financial condition.***

We pay for goods and services in a number of currencies, including the United States dollar, the Canadian dollar and other currencies. We also raise capital in United States dollars. Adverse fluctuations in these currencies relative to each other and relative to the currencies in which we incur expenditures could materially and adversely affect our financial position and the costs of our exploration and development activities. We do not engage in currency or commodity hedging activities.

***Our insurance may not provide adequate coverage in the event of a loss.***

Our business and activities are subject to a number of risks and hazards, including, but not limited to, adverse environmental conditions, metallurgical and other processing problems, industrial accidents, labor disputes, unusual or unexpected geological conditions, ground control problems, cave-ins, changes in the regulatory environment, mechanical equipment failure, facility performance problems, fires and natural phenomena such as inclement weather conditions, floods, landslides and earthquakes. These risks could result in damage to, or destruction of, our mineral properties or production facilities, personal injury or death, environmental damage, delays in exploration, mining or processing, increased production costs, asset write downs, monetary losses and legal liability.

Our property and liability insurance may not provide sufficient coverage for losses related to these or other hazards. Insurance against certain risks, including those related to environmental matters or other hazards resulting from exploration and production, is generally not available to us or to other companies within the mining industry. Our current insurance coverage may not continue to be available at economically feasible premiums, or at all. In addition, we do not carry business interruption insurance relating to our properties. Any losses from these events may cause us to incur significant costs that could have a material adverse effect on our business, financial position and results of operations.

***We are dependent on the leadership of Robert Friedland, our founder and Executive Chairman, and the services of our executive management team and key employees.***

Our exploration activities and any future mine development, as well as the construction and operation of a mine depend to a significant extent on the continued service and performance of Robert Friedland, the Company's founder and Executive Chairman, and the executive management team. We depend on a relatively small number of key officers and consultants, and we currently do not have, and do not intend to, purchase key-person insurance for these individuals. Departures by our executive management team could have a negative impact on our business, as we may not be able to find suitable personnel to replace departing management on a timely basis, or at all. The loss of Mr. Friedland and any member of our senior management team could impair our ability to execute our business plan and could, therefore, have a material adverse effect on our business, results of operations and financial condition. In addition, the international mining industry is very active and we are facing increased competition for qualified personnel in all disciplines and areas of operation. We may not be able to attract and retain personnel to sufficiently staff our development and operating teams.

***Our directors and officers may have conflicts of interest as a result of their relationships with other mining companies that are not affiliated with us.***

Robert Friedland and some of our other directors and officers are also, or may also become, directors, officers and stockholders of other companies, including companies that are similarly engaged in the business of developing and exploiting natural resource properties. Consequently, there is a possibility that our directors and officers may have conflicts of interest from time to time. To the extent that such other companies may participate in ventures in which we may participate in, or in ventures which we may seek to participate in, our directors and officers may have a conflict of interest in negotiating and concluding terms respecting the extent of such participation. In all cases where our directors and officers have an interest in other companies, such other companies may also compete with us for the acquisition of mineral property investments.

***We may have difficulty recruiting and retaining employees.***

Recruiting and retaining qualified personnel is critical to the success of exploration activities and to future mine development and mine operations. The number of persons skilled in acquisition, exploration and development of mining projects is limited and competition for qualified persons is intense. As our business activity grows, we will require additional key financial, administrative, geologic and mining personnel as well as additional operations staff. We may not be successful in attracting, training and retaining qualified personnel as competition for persons with these skill sets increases. If we are not successful in attracting, training and retaining qualified personnel, we may have inadequate staffing to advance all of our exploration activities and to conduct mine development activities, or such activities may be reduced or delayed, which could have an adverse material impact on our prospects, business, results of operations and financial condition.

***Any acquisitions we make may not be successful or achieve the expected benefits.***

We regularly consider and evaluate opportunities to acquire assets, companies and operations, including prospective mining projects or properties. We may not be able to successfully integrate any acquired assets, companies or operations, and prospective mining projects or properties that we acquire may not develop as anticipated. Acquisition transactions involve inherent risks, including but not limited to:

- inaccurate assessments of the value, strengths, weaknesses, contingent and other liabilities and potential profitability of acquisition candidates;
- inability to exploit identified and anticipated operating and financial synergies;
- unanticipated costs;
- diversion of management attention from existing business;
- potential loss of our key employees or key employees of any business acquired;
- unanticipated changes in business, industry or general economic conditions that affect the assumptions underlying the acquisition;
- decline in the value of acquired properties, companies or securities;
- inability to maintain our financial and strategic focus while integrating the acquired business or property;
- inability to implement uniform standards, controls, procedures and policies at the acquired business, as appropriate; and
- to the extent that we make an acquisition outside of markets in which we have previously operated, inability to conduct and manage operations in a new operating environment.

As we do not have significant cash flow from operations and do not expect to have significant cash flow from operations in the foreseeable future, any such acquisitions will be funded by cash raised in equity financings or through the issuance of new equity or equity-linked securities. Equity issuances also may result in dilution of existing stockholders. If we were to incur debt to finance an acquisition, the requirement to repay that debt may lead us to issue additional equity to repay the debt, all in the absence of positive cash flow. Any such developments may materially and adversely affect our financial position and results of operations.

If future acquisitions are significant, they could change the scale of our business and expose us to new geographic, political, operating and financial risks. In addition, each acquisition involves a number of risks, such as the diversion of our management team's attention from our existing business to integrating the operations and personnel of the acquired business, possible adverse effects on our results of operations and financial condition during the integration process, our inability to achieve the intended objectives of the combination and potential unknown liabilities associated with the acquired assets.

***Our information technology systems may be vulnerable to cyber-attack or other disruption, which could place our systems at risk for data loss, operational failure or compromise of confidential information.***

We rely on various information technology systems. These systems remain vulnerable to disruption, damage or failure from a variety of sources, including, but not limited to, errors by employees or contractors, computer viruses, cyber-attacks, including phishing, ransomware, and similar malware, misappropriation of data by outside parties, and various other threats. Techniques used to obtain unauthorized access to or sabotage our systems are under continuous and rapid evolution, and we may be unable to detect efforts to disrupt our data and systems in advance. Breaches and unauthorized access carry the potential to cause losses of assets or production, operational delays, equipment failure that could cause other risks to be realized, inaccurate recordkeeping, or disclosure of confidential information, any of which could result in financial losses and regulatory or legal exposure, and could have a material adverse effect on our business, financial condition or results of operations. We may incur material losses relating to cyber-attacks or other information security breaches in the future. Our risk and exposure to these matters cannot be fully mitigated because of, among other things, the evolving nature of these threats. As such threats continue to evolve, we may be required to expend additional resources to modify or enhance any protective measures or to investigate and remediate any security vulnerabilities.

***We may be subject to claims and legal proceedings that could materially and adversely impact our business, financial condition or results of operations.***

We may be subject to claims or legal proceedings covering a wide range of matters that arise in the ordinary course of business activities. These matters may result in litigation which can distract management from our business or have an unfavorable resolution, which could materially and adversely impact our business, financial condition and results of operations. See "Risks Related to our Mining Businesses and the Mining Industry"--Our subsidiary, Cordoba, is involved in lengthy litigation, which may adversely affect the value of our investment in it and its mineral projects".

***We are subject to the risk of labor disputes, which could adversely affect our business.***

We may experience labor disputes in the future, including protests, blockades and strikes, which could disrupt our business operations and have an adverse effect on our business and results of operations. We may not be able to maintain a satisfactory working relationship with our employees in the future.

***Our activities and business could be adversely affected by the effects of health epidemics, including the COVID-19 pandemic, in regions where we conduct our business operations.***

Our business and exploration activities could be adversely affected by health epidemics or pandemics. For example, the global COVID-19 pandemic has negatively affected the global economy, disrupted financial markets and international trade, resulted in increased unemployment levels and significantly affected global supply chains, all of which have and may continue to affect our future exploration activities and business. Federal, state, and local governments have implemented various mitigation measures at various times since the pandemic began, including travel restrictions, border closings, restrictions on public gatherings, shelter-in-place restrictions and limitations on non-essential business. Some of these actions may halt, hinder, delay or slowdown our exploration activities or future development of mining operations, or increase our costs to conduct such activities. Disruptions in the financial markets as a result of the worsening of the COVID-19 pandemic could make it more difficult for us to access the capital markets in the future.

It is not possible to accurately predict with any degree of certainty the impact COVID-19 will have on our operations going forward as the situation continues to remain fluid, including, but not limited to, the pace of the continued spread of the pandemic, the severity and ultimate duration of the pandemic, including any resurgences, mutations or variants, any governmental regulations or restrictions imposed in response to such, and the ultimate efficacy and distribution speed of approved vaccines and treatments.

We may take further actions as may be required by government authorities or as we determine are in the best interests of our employees, consultants and business partners. There is no guarantee that we will not experience significant disruptions to our activities in the future as a result of the COVID-19 pandemic or any similar health epidemics.



***While our equity ownership in our listed company Cordoba may be significant, we may not be able to exert control or direction over the company or its business.***

We have significant equity ownership in Cordoba, a listed company in Canada, of which we own and control more than 50% of the outstanding common shares. However, while such common share ownership gives us the legal right to elect the directors of the company, the directors elected owe duties to all shareholders, including us. Accordingly, such elected directors may determine to take an action that they consider in the best interests of all shareholders, even if it is not the preferred course of action for us. As well, transactions between us and such company are highly regulated by related party transaction rules in Canada, as well as those of the TSX. Accordingly, many transactions that we could undertake with Cordoba may be subject to independent formal valuation requirements and/or minority shareholder approval requirements, at which our votes will be disregarded. Accordingly, transactions that we may consider to be in our best interest and in the best interest of Cordoba may not proceed if they are subject to minority shareholder approval requirements, and minority shareholders do not provide the necessary approvals. If any such transactions are not approved, we may be unable to advance our business interests through Cordoba and/or may not be able to engage in transactions with them which we consider beneficial, any of which could have an adverse material impact on our prospects, business, results of operations and financial condition.

## **RISKS RELATED TO GOVERNMENT REGULATIONS AND INTERNATIONAL OPERATIONS**

***We have subsidiaries, mineral projects, investments in mineral projects or exploration activities in the United States, Canada, Australia, Colombia, Peru, Ivory Coast and Saudi Arabia where the governments extensively regulate mineral exploration and mining operations, imposing significant actual and potential costs on us.***

The mining industry is subject to increasingly strict regulation by federal, state and local authorities in the jurisdictions in which we have mineral projects, investments in mineral projects or exploration activities, including the United States, Canada, Australia, Colombia, Peru, Ivory Coast and Saudi Arabia. These regulations relate to limitations on land use; mine permitting and licensing requirements; exploration and drilling activities; reclamation and restoration of properties after mining is completed; management of materials generated by mining operations; and storage, treatment and disposal of wastes and hazardous materials, among other things.

The liabilities and requirements associated with the laws and regulations related to these and other matters, including with respect to air emissions, water discharges and other environmental matters, may be costly and time-consuming and may restrict, delay or prevent commencement or continuation of exploration or production operations. We may not have been or may not be at all times in compliance with all applicable laws and regulations in all jurisdictions. Failure to comply with applicable laws and regulations may result in the assessment of administrative, civil and criminal penalties, the imposition of cleanup and site restoration costs and liens, the issuance of injunctions to limit or cease operations, the suspension or revocation of permits or authorizations and other enforcement measures that could have the effect of limiting or preventing production from our operations. We may incur material costs and liabilities resulting from claims for damages to property or injury to persons arising from our operations. If we are pursued for sanctions, costs and liabilities in respect of these matters, our mining operations and, as a result, our financial performance, financial position and results of operations, could be materially and adversely affected.

Any new legislation or administrative regulations or new judicial interpretations or administrative enforcement of existing laws and regulations that would further regulate and tax the mining industry may also require us to change activities significantly or incur increased costs, or even potentially halt or cease activities entirely. Such changes could have a material adverse effect on our prospects, our business, financial condition and results of operations.

***Our activities outside of the United States are subject to additional political, economic and other uncertainties not necessarily present for activities taking place within the United States.***

We have subsidiaries, mineral projects, investments in mineral projects and exploration activities in the United States, Canada, Australia, Colombia, Peru, Ivory Coast, Saudi Arabia and the PRC. Some of these countries are less developed economically and politically than the United States, and have historically been more politically or socially unstable than the United States, including with respect to civil unrest and significant civil strife (including violent insurrections). As such, our activities in these countries are subject to significant risks not necessarily present in the United States and additional risks inherent in exploration and resource extraction by foreign companies. Our exploration and future development and production activities in these countries are therefore subject to heightened risks, many of which are beyond our control. These risks include:

- the possible unilateral cancellation or forced re-negotiation of contracts and licenses;

- unfavorable or arbitrary changes in laws and regulations;
- arbitrary royalty and tax increases;
- claims by governmental entities or indigenous communities;
- expropriation or nationalization of property;
- political instability (including civil strife, insurrection and potentially civil war);
- significant fluctuations in currency exchange rates;
- social and labor unrest, organized crime, hostage taking, terrorism and violent crime;
- uncertainty regarding the enforceability of contractual rights and judgments; and
- other risks arising out of foreign governmental sovereignty over areas in which our mineral properties are located.

Local economic conditions also can increase costs and adversely affect the security of our activities and the availability of skilled workers and supplies. Higher incidences of criminal activity and violence in the area of some of our properties could adversely affect our ability to operate in an optimal fashion or at all, and may impose greater risks of theft and higher costs, which could adversely affect results of operations and financial condition.

Acts of civil disobedience are not uncommon in some of these countries. Mining companies have been targets of actions to restrict their legally-entitled access to mining concessions or property. Such acts of civil disobedience often occur with no warning and can result in significant direct and indirect costs. We may experience disruptions in the future, which could adversely affect our business and our exploration and development activities.

***Our foreign mining projects and investments are subject to risk typically associated with operating in foreign countries.***

In general, our foreign mining projects and investments are subject to the risks typically associated with conducting business in foreign countries. These risks may include, among others: labor disputes; invalidation of governmental orders and permits; corruption; uncertain political and economic environments; sovereign risk; war; civil disturbances and terrorist actions; arbitrary changes in laws; the failure of foreign parties to honor contractual relations; opposition to mining from environmental or other non-governmental organizations; limitations on foreign ownership; limitations on the repatriation of earnings; limitations on minerals and commodity exports; instability due to economic under-development; inadequate infrastructure; and increased financing costs. In addition, the enforcement of our legal rights may not be recognized by any foreign government, or by the court system of a foreign country. These risks may limit or disrupt our activities, restrict the movement of funds, or result in the deprivation of mining-related rights or the taking of property by nationalization or expropriation without fair compensation. The occurrence of events associated with these risks could have a material and adverse effect on our mineral projects, business and activities, the viability our foreign operations and investments, and could have a material and adverse effect on our future cash flow, earnings, results of operations and financial condition.

***Uncertainty in governmental agency interpretation or court interpretation and the application of applicable laws and regulations in any jurisdictions where we operate or have investments could result in unintended non-compliance.***

The courts in some of the jurisdictions in which we operate may offer less certainty as to the judicial outcome of legal proceedings or a more protracted judicial process than is the case in more established economies such as the United States. Businesses can become involved in lengthy court cases over simple issues when rulings are not clearly defined, and the poor drafting of laws and excessive delays in the legal process for resolving issues or disputes compound such problems. Accordingly, we could face risks such as:

- greater difficulty in obtaining effective legal redress in the courts of such jurisdictions, whether in respect of a breach of law or regulation, or in an ownership dispute;
- a higher degree of discretion on the part of governmental authorities, which leads to greater uncertainty;
- the lack of judicial or administrative guidance on interpreting applicable rules and regulations;
- inconsistencies or conflicts between and within various laws, regulations, decrees, orders and resolutions; or
- relative inexperience of the judiciary and courts in such matters.

Enforcement of laws in some of the jurisdictions in which we operate may depend on and be subject to the interpretation of such laws by the relevant governmental authorities, and such authority may adopt an interpretation of an aspect of local law that differs from the advice that has been given to us by local lawyers or even by the relevant local authority itself on a prior occasion. In addition, there may be limited or no relevant case law providing guidance on how courts would interpret such laws and the application of such laws to our contracts, joint ventures, licenses, license applications or other legal arrangements. Thus, contracts, joint ventures, licenses, license applications or other legal arrangements may be adversely affected by the actions of government authorities and the effectiveness of and enforcement of such arrangements in these jurisdictions. In some of the jurisdictions in which we operate, the commitment of local businesses, government officials and agencies and the judicial system to abide by legal requirements and negotiated agreements may be more uncertain and may be susceptible to revision or cancellation, and legal redress may be uncertain or delayed. These uncertainties and delays could have a material adverse effect on our business and activities, as well as our results of operations and financial condition.

***Proposed changes to United States federal mining and public land law could impose, among other things, royalties and fees paid to the United States government by mining companies and royalty holders.***

Periodically, members of the United States Congress have introduced bills which would supplant or alter the provisions of The General Mining Law of 1872 which governs the disposition of metallic minerals on lands owned by the federal government. Some of our mineral properties occur on unpatented mining claims located on United States federal lands. There have been recent proposals to amend the United States mining law to impose a royalty on the production of select hardrock minerals, such as silver, gold and copper, from U.S. federal lands, and a reclamation fee on production from federal and other lands.

Any such proposal, if enacted by the United States Congress, could substantially increase the cost of holding mining claims and could reduce our revenue from unpatented mining claims, and to a lesser extent, on other lands in the United States. Moreover, such legislation could significantly impair the ability of our properties to develop mineral resources on unpatented mining claims. Although at this time we are not able to predict what royalties and fees may be imposed in the future, the imposition of such royalties and fees could adversely affect the potential for development of such mining claims and the economics of existing operating mines. Passage of such legislation may result in a material and adverse effect on our profitability, results of operations, financial condition and the trading price of our common stock.

***We are subject to, and may become liable for any violations of anti-corruption and anti-bribery laws.***

Our operations are governed by, and involve interactions with, various levels of government in foreign countries. We are required to comply with anti-corruption and anti-bribery laws, including the U.S. Foreign Corrupt Practices Act (the “FCPA”) and similar laws where we have activities. These laws generally prohibit companies and company employees from engaging in bribery or other prohibited payments to foreign officials for the purpose of obtaining or retaining business. The FCPA also requires companies to maintain accurate books and records and internal controls. As we have certain subsidiaries, mineral projects and investments in other countries, including Colombia, Peru, Ivory Coast, Saudi Arabia and the PRC, there is a risk of potential FCPA violations.

In recent years, there has been a general increase in both the frequency of enforcement and the severity of penalties under such laws, resulting in greater scrutiny and punishment to companies convicted of violating anti-corruption and anti-bribery laws. A company may be found liable for violations by not only its employees, but also by its contractors and third-party agents. Our internal procedures and policies may not always be effective in ensuring that we, our employees, contractors or third-party agents will comply strictly with all such applicable laws. If we become subject to an enforcement action or we are found to be in violation of such laws, this may have a material adverse effect on our reputation and may possibly result in significant penalties or sanctions, and may have a material adverse effect on our business, financial condition or results of operations.

***Changes to United States and foreign tax laws could adversely affect our results of operations.***

We are subject to tax in the United States and foreign jurisdictions. Current economic and political conditions make tax laws and their interpretation subject to significant change in any jurisdiction. We cannot predict the timing or significance of future tax law changes in the United States or other countries in which we do business. If material tax law changes are enacted, our future effective tax rate, results of operations, and cash flows could be adversely impacted. Further, tax authorities, now or in the future, may periodically conduct reviews of our tax filings and compliance. Those reviews could result in adverse tax consequences and unexpected financial costs and exposure.

## RISKS RELATED TO OUR COMMON STOCK

***Future sales and issuances of our common stock or rights to purchase common stock, including pursuant to our equity incentive plans, could result in additional dilution of the percentage ownership of our stockholders and could cause the price of our common stock to decline.***

In the future, we may sell common stock, convertible securities, or other equity securities in one or more transactions at prices and in the manner we determine from time to time. We also issue securities to employees and directors pursuant to our equity incentive plans. If we sell common stock, convertible securities, or other equity securities in subsequent transactions, or common stock is issued pursuant to equity incentive plans, our investors' holdings may be materially diluted. In addition, new investors in such subsequent transactions could gain rights, preferences, and privileges senior to those of holders of our common stock.

***If a substantial number of our shares of common stock are sold, or it is perceived that they will be sold, in the public market, the market price of our common stock could decline.***

Sales of a substantial number of shares of our common stock in the public market could occur at any time. These sales, or the perception in the market that the holders of a large number of shares of common stock intend to sell shares, could reduce the market price of our common stock. Most of our outstanding shares of common stock can be sold at any time pursuant to Rule 144 of the Securities Act of 1933, as amended (the "Securities Act"), or pursuant to registration statements that we have filed or agreed to file to permit the resale of such shares. We have also registered all shares of common stock that we may issue under our equity compensation plans or that are issuable upon exercise of outstanding options or other equity awards. Therefore, these shares can be freely sold in the public market. If significant amounts of our shares are sold, or if it is perceived that they will be sold, in the public market, the market price of our common stock could decline.

***Ma'aden holds certain top-up rights that could lead to further dilution or adversely affect our stock price.***

We have granted Ma'aden the right to purchase additional shares of common stock to maintain its 9.9% stock ownership position in the event of any issuances of common stock by us (the "Ma'aden Top-Up Right"). Ma'aden may exercise this right each time we issue shares (or securities convertible into shares) for cash as part of an equity financing transaction and in certain other circumstances. In the event that Ma'aden does not exercise the Ma'aden Top-Up Right, the ownership threshold for purposes of Ma'aden Top-Up Right will be reduced to its ownership level after giving effect to the dilutive issuance. The Ma'aden Top-Up Right will expire on the earlier of (i) July 6, 2028 (being five years from the date of completion of Ma'aden's initial investment in us) (the "Initial Period"), but only if within such five-year period Ma'aden has (a) failed on two separate occurrences to exercise in full the Ma'aden Top-Up Right, or (b) Ma'aden has sold, transferred or otherwise disposed of any of shares of our common stock (other than to an affiliate or to the Public Investment Fund of Saudi Arabia (the "PIF")); (ii) the first day following the Initial Period on which Ma'aden sells, transfers or otherwise disposes of any of our shares of common stock (other than to an affiliate or to the PIF); and (iii) three years after the Initial Period. To the extent the Ma'aden Top-Up Right is exercised, such exercise would cause dilution to our shareholders. Any decision by Ma'aden not to exercise Ma'aden Top-Up Right could adversely affect the price of our common stock.

***The price of our common stock may be volatile and fluctuate substantially, which could result in substantial losses for purchasers of our common stock.***

Our stock price is volatile. The stock market in general has experienced extreme volatility that has often been unrelated to the operating performance of particular companies. The market price for our common stock may be influenced by many factors, including: the failure to identify mineral resources or reserves at our properties; the failure to achieve production at any of our mineral properties; the lack of mineral exploration success; the actual or anticipated changes in the price of commodities we are seeking to discover and mine, namely copper, nickel, vanadium, cobalt, platinum group elements, gold and silver; changes in market valuations of similar companies; changes in technology and demand for minerals; the success or failure of competitor mining companies; changes in our capital structure, such as future issuances of securities or the incurrence of debt; sales of common stock by us, our executive officers, directors or principal stockholders, or others; changes in regulatory requirements and the political climate in the United States, and other jurisdictions where we have activities, including Canada, Australia, Colombia, Peru, Ivory Coast, Saudi Arabia and the PRC; litigation involving us, our general industry or both; the recruitment or departure of key personnel; our ability to control our costs; accidents at mining projects, whether owned by us or otherwise; cyber-attacks or cyber-breaches; natural disasters, terrorist attacks, and acts of war, including the large-scale invasion of Ukraine by Russia; general economic, industry and market conditions, such as

the impact of the COVID-19 pandemic, on our industry and market conditions, or the occurrence of other epidemics or pandemics; and the other factors described in this “Risk Factors” section.

In the past, following periods of volatility in the market price of a company’s securities, securities class- action litigation has often been instituted against that company. Any lawsuit to which we are a party, with or without merit, may result in an unfavorable judgment. We also may decide to settle lawsuits on unfavorable terms. Any such negative outcome could result in payments of substantial damages or fines, damage to our reputation or adverse changes to our offerings or business practices. Such litigation may also cause us to incur other substantial costs to defend such claims and divert management’s attention and resources. Furthermore, negative public announcements of the results of hearings, motions or other interim proceedings or developments could have a negative effect on the market price of our common stock.

***If securities or industry analysts do not publish research or reports about us, or if they downgrade our common stock, the price of our common stock could decline.***

The trading market for our common stock depends, in part, on the research and reports that securities or industry analysts publish about us. We do not have any control over these analysts. If one or more of the analysts who cover us downgrade our common stock or publish inaccurate or unfavorable research about us, the price of our common stock would likely decline. In addition, if our results of operations fail to meet the forecasts of analysts, the price of our common stock would likely decline. If one or more of these analysts cease coverage of us or fail to publish reports on us regularly, demand for our common stock could decrease, which might cause the price and trading volume of our common stock to decline.

***The market price of our common stock is subject to fluctuations and may not reflect our long-term value at any given time, and we may be subject to securities litigation as a result.***

The price of our common stock is likely to be significantly affected by a variety of factors and events including short-term changes to our financial condition or results of operations as reflected in our quarterly financial statements. Other factors unrelated to our performance that may have an effect on the price of our common stock include the following: (i) the extent of analytical coverage available to investors concerning our business may be limited if investment banks with research capabilities do not follow our securities; (ii) lessening in trading volume and general market interest in our securities may affect an investor’s ability to trade significant numbers of our common stock; (iii) the size of our public float may limit the ability of some institutions to invest in our securities; and (iv) a substantial decline in the price of our common stock that persists for a significant period of time could cause our securities to be delisted from the NYSE American or the TSX, further reducing market liquidity.

As a result of any of these factors, the market price of our common stock is subject to fluctuations and may not accurately reflect our long-term value at any given point in time. Securities class action litigation has often been brought against companies following periods of volatility in the market price of their securities. We may be the target of similar litigation in the future. Securities litigation could result in substantial costs and damages and divert management’s attention and resources.

***Our amended and restated certificate of incorporation and amended and restated bylaws contain provisions that may make the acquisition of our company more difficult.***

Certain provisions in our amended and restated certificate of incorporation and amended and restated bylaws contain provisions that may make the acquisition of our company more difficult, including the following:

- amendments to certain provisions of our amended and restated certificate of incorporation or amendments to our amended and restated bylaws generally require the approval of at least 66 and 2/3% of the voting power of our outstanding capital stock;
- our stockholders are only able to take action at a meeting of stockholders and are not able to take action by written consent for any matter;
- our amended and restated certificate of incorporation do not provide for cumulative voting;
- vacancies on our Board of Directors are able to be filled only by our Board of Directors and not by stockholders;
- a special meeting of our stockholders may only be called by the chairperson of our Board of Directors or our Chief Executive Officer, as applicable, or a majority of our Board of Directors;
- restrict the forum for certain litigation against us to Delaware or the federal courts of the United States, as applicable;



- our amended and restated certificate of incorporation authorizes undesignated preferred stock, the terms of which may be established and shares of which may be issued without further action by our stockholders; and
- advance notice procedures apply for stockholders to nominate candidates for election as directors or to bring matters before an annual meeting of stockholders.

Moreover, Section 203 of the Delaware General Corporation Law (the “DGCL”) may discourage, delay or prevent a change in control of our company. Section 203 imposes certain restrictions on mergers, business combinations and other transactions between us and holders of 15% or more of our common stock.

These provisions, alone or together, could discourage, delay or prevent a transaction involving a change in control of our company. These provisions could also discourage proxy contests and make it more difficult for stockholders to elect directors of their choosing and to cause us to take other corporate actions they desire, any of which, under certain circumstances, could limit the opportunity for our stockholders to receive a premium for their shares of our common stock, and could also affect the price that some investors are willing to pay for our common stock.

***Our Board of Directors is authorized to issue and designate shares of our preferred stock in additional series without stockholder approval.***

Our amended and restated certificate of incorporation authorizes our Board of Directors, without the approval of our stockholders, to issue 50,000,000 shares of our preferred stock, subject to limitations prescribed by applicable law, rules and regulations and the provisions of our amended and restated certificate of incorporation, as shares of preferred stock in series, to establish from time to time the number of shares to be included in each such series and to fix the designation, powers, preferences and rights of the shares of each such series and the qualifications, limitations or restrictions thereof. The powers, preferences and rights of these additional series of preferred stock may be senior to or on parity with our common stock, which may reduce its value.

***Our amended and restated certificate of incorporation designates specific state or federal courts as the exclusive forum for certain litigation that may be initiated by our stockholders, which could limit stockholders’ ability to obtain a favorable judicial forum for disputes with us.***

Our amended and restated certificate of incorporation provides that, unless we consent in writing to the selection of an alternative forum, to the fullest extent permitted by law, the Court of Chancery of the State of Delaware will be the sole and exclusive forum for any state law claims for:

- any derivative action or proceeding brought on our behalf;
- any action asserting a claim of breach of fiduciary duty owed by any of our directors, officers or other employees to us or our stockholders;
- any action asserting a claim arising pursuant to the DGCL, our amended and restated certificate of incorporation or our amended and restated bylaws; or
- any action asserting a claim that is governed by the internal affairs doctrine (the “Delaware Forum Provision”).

The Delaware Forum Provision does not apply to any causes of action arising under the Securities Act or the Exchange Act. Further, our amended and restated certificate of incorporation provides that, unless we consent in writing to the selection of an alternative forum, the federal district courts of the United States are the sole and exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act (the “Federal Forum Provision”). In addition, our amended and restated certificate of incorporation provides that any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock is deemed to have notice of and consented to the Delaware Forum Provision and the Federal Forum Provision; provided, however, that stockholders cannot and will not be deemed to have waived our compliance with the United States federal securities laws and the rules and regulations thereunder.

The Delaware Forum Provision and the Federal Forum Provision in our amended and restated certificate of incorporation may impose additional litigation costs on stockholders in pursuing any such claims. Additionally, these forum selection clauses may limit our stockholders’ ability to bring a claim in a judicial forum that they find favorable for disputes with us or our directors, officers or employees, which may discourage the filing of lawsuits against us and our directors, officers and employees, even though an action, if successful, might benefit our stockholders. In addition, while the Delaware Supreme Court ruled in March 2020 that federal forum selection provisions purporting to require claims under the Securities Act be brought in federal court are “facially valid” under Delaware law, there is uncertainty as to whether other courts will enforce our Federal Forum Provision. If the Federal Forum Provision is found to be

unenforceable, we may incur additional costs associated with resolving such matters. The Federal Forum Provision may also impose additional litigation costs on stockholders who assert that the provision is not enforceable or invalid. The Court of Chancery of the State of Delaware and the federal district courts of the United States may also reach different judgments or results than would other courts, including courts where a stockholder considering an action may be located or would otherwise choose to bring the action, and such judgments may be more or less favorable to us than our stockholders.

***We do not currently intend to pay dividends on our common stock and consequently, the ability to achieve a return on investment will depend on appreciation in the price of our common stock.***

We have never declared or paid any cash dividends on our capital stock. We do not intend to pay any cash dividends on our common stock for the foreseeable future. We currently intend to retain any future earnings to finance our business. In addition, Delaware law may impose requirements that may restrict our ability to pay dividends to holders of our common stock. As a result, stockholders must rely on sales of their shares of common stock after price appreciation as the only way to realize any future gains on their investment. The payment of any future dividends, if any, will be determined by our Board of Directors in light of conditions then existing, including our earnings, financial condition and capital requirements, business conditions, corporate law requirements and other factors.

***We may incur significant additional costs and expenses, including costs and expenses associated with obligations relating to being a public company, which will require significant resources and management attention and may divert focus from our business operations, particularly after we are no longer eligible to report under smaller reporting company standards.***

Our general administrative expenses, such as legal and accounting expenses related to becoming and being a public company, have increased since becoming a public company in June 2022. As a public company, we are subject to the reporting requirements of the Exchange Act, the Sarbanes-Oxley Act, applicable Canadian securities laws and regulations, the listing requirements of the NYSE American and the TSX and other applicable securities rules and regulations. As a public company, we incur significant legal, accounting, insurance, and other expenses, including expenses related to our ESG strategy. Compliance with these rules and regulations will continue to increase our legal and financial compliance costs and make some activities more time-consuming and costly, particularly after we are no longer eligible to report under smaller reporting company standards.

Furthermore, the need to continue to establish the corporate infrastructure demanded of a public company may divert management's attention from implementing our growth strategy, which could prevent us from successfully implementing our strategic initiatives and improving our business, operating results, financial condition, and prospects. If we fail to manage these additional costs or increase our revenue, we may incur losses in the future.

***This Annual Report was prepared pursuant to the standards applicable to a smaller reporting company, and the reduced disclosure requirements applicable to smaller reporting companies may make our common stock less attractive to investors.***

This Annual Report was prepared pursuant to the standards applicable to a smaller reporting company as defined under the Exchange Act, pursuant to a transitional period approved by the SEC for former smaller reporting companies. In particular, we are permitted to present only the two most recent fiscal years of audited financial statements in our Annual Report on Form 10-K and have reduced disclosure obligations regarding executive compensation. Accordingly, the information contained herein may be different from the information you receive from other public companies in which you hold stock.

We cannot predict whether investors will find our common stock less attractive if we rely on certain or all of these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be more volatile.

***If we are unable to implement and maintain effective internal controls over financial reporting, investors may lose confidence in the accuracy and completeness of our financial reports.***

As a public company, we are required to implement and maintain internal controls over financial reporting and to report any material weaknesses in such internal controls. There is no guarantee we will maintain effective internal controls in the future.

If during the evaluation and testing process, we identify one or more material weaknesses in the design or effectiveness of our internal control over financial reporting or determine that existing material weaknesses have not been remediated,

our management will be unable to assert that our internal control over financial reporting is effective. Even if our management concludes that our internal control over financial reporting is effective, our independent registered public accounting firm may conclude that there are material weaknesses with respect to our internal controls or the level at which our internal controls are documented, designed, implemented, or reviewed. If we are unable to assert that our internal control over financial reporting is effective, or when required in the future, if our independent registered public accounting firm is unable to express an opinion as to the effectiveness of our internal control over financial reporting, investors may lose confidence in the accuracy and completeness of our financial reports and the valuation of our common stock could be adversely affected.

***Non-U.S. holders may be subject to United States federal income tax on gain on the sale or other taxable disposition of shares of our common stock.***

Because we hold significant United States real property interests, we believe we are a “United States real property holding corporation” for United States federal income tax purposes. As a result, a non-U.S. holder generally will be subject to United States federal income tax with respect to any gain on the sale or other taxable disposition of shares of our common stock (and will be required to file a United States federal income tax return for the taxable year of such sale or other taxable disposition), unless our common stock is regularly traded on an established securities market and such non-U.S. holder did not actually or constructively hold more than 5% of our common stock at any time during the shorter of (a) the five-year period preceding the date of the sale or disposition and (b) the non-U.S. holder’s holding period in such stock. Additionally, a purchaser of our common stock generally will be required to withhold and remit to the Internal Revenue Service fifteen percent (15%) of the purchase price paid to such non-U.S. holder unless, at the time of such sale or other disposition, any class of our stock is regularly traded on an established securities market or any other exception to such withholding applies.

We believe that our common stock currently is regularly traded on an established securities market. However, no assurance can be given in this regard and no assurance can be given that our common stock will remain regularly traded in the future. Non-U.S. holders should consult their own tax advisors concerning the consequences of disposing of shares of our common stock.

***A significant number of the members of our Board of Directors and executive officers and certain of the experts named in this Annual Report are non-U.S. residents, and you may not be able to enforce civil liabilities against these persons.***

Although Ivanhoe Electric is incorporated under the DGCL, a significant number of the members of our Board of Directors and executive officers and certain of the experts named in this Annual Report are non-U.S. residents, and certain assets of such persons are located outside the United States. As a result, you may not be able to effect service of process within the United States upon these persons or to enforce, in U.S. courts, against these persons or their assets, judgments of U.S. courts predicated upon any civil liability provisions of the U.S. federal or state securities laws. In addition, you may not be able to enforce certain civil liabilities predicated upon U.S. federal or state securities laws in non-US jurisdictions against us, our directors and executive officers and certain of the experts named in this Annual Report or the assets of such persons.

**Item 1B. Unresolved Staff Comments**

Not applicable

**Item 1C. Cybersecurity**

We utilize internal personnel and external cybersecurity consultants to focus on assessing, detecting, identifying, managing, preventing and responding to cybersecurity threats and incidents. The underlying controls of our cybersecurity management process are based on recognized best practices and standards for cybersecurity and information technology, including the framework of Critical Security Controls of the Center of Internet Security. To assess the design and effectiveness of our cybersecurity controls, we engage with external consultants, auditors and other third parties.

We have experienced cybersecurity incidents in the past which have not materially affected us. We may not be successful in preventing or mitigating a cybersecurity incident that could materially affect our results of operations or financial condition. Refer to Item 1A. “Risk Factors” for further information on the risks we face from cybersecurity threats.

Our cybersecurity risk management and processes are led by our Chief Financial Officer, with support of management, internal personnel and external consultants. While management is responsible for the day-to-day management of cybersecurity risks, our Board of Directors, through its Audit Committee, has oversight of the Company’s processes,

policies and procedures for assessing, identifying, and managing material risks from cybersecurity threats including the integration and establishment of cybersecurity processes into the Company's overall risk management system or processes.

## **Item 2. Properties**

See Item 1. Business for information about our mineral properties.

In March 2023, we entered into a five-year lease for office space in Tempe, Arizona, which now serves as our headquarters. Global Mining Management Corp. provides us with office space for our office in Vancouver, Canada, pursuant to a Cost Sharing Agreement. See Note 19 to our Consolidated Financial Statements.

## **Item 3. Legal Proceedings**

From time to time, we and our subsidiaries may become subject to various legal proceedings that are incidental to the ordinary conduct of our business. Although we cannot accurately predict the amount of any liability that may ultimately arise with respect to any of these matters, we make a provision for potential liabilities when we deem them probable and reasonably estimable. These provisions are based on current information and legal advice and may be adjusted from time to time according to developments.

Our subsidiary Cordoba is currently involved in two legal proceedings. The first is a criminal lawsuit filed by Cordoba in late 2018 and in January 2019 with the Colombian prosecutors against nine members of former Colombian management alleging breach of fiduciary obligations, abuse of trust, theft and fraud. This proceeding is ongoing. In the second proceeding, Cordoba (along with the National Mining Agency, Ministry of Mines and Energy, the local environmental authority, the Municipality of Puerto Libertador and the State of Cordoba) were served with a class action claim by the Alacran Community. This class action seeks (i) an injunction against Cordoba's operations in the Alacrán area and (ii) an injunction against the prior declaration by the authorities that the Alacran Community's mining activities were illegal. The claim was initially filed with the Administrative Court of Medellín, which remanded the case to the Administrative Court of Montería, which contested it and submitted the case to the Council of State. The Council of State determined the Administrative Court of Montería as the competent tribunal, where the process is currently being conducted. The Administrative Court of Montería admitted the commencement of the class action on September 2021. The decision was challenged by Cordoba and other defendants and confirmed by the Court. Cordoba timely filed its: (i) response to the lawsuit and statement of defense; and (ii) opposition to the injunction requested by plaintiffs. The Court now should: (i) issue a decision on the injunction; and (ii) schedule date and time for the initial hearing. While the court matters proceed, Cordoba will incur additional costs that will negatively impact its financial position. As well, the litigation process is uncertain and it is possible that the second proceeding is resolved against Cordoba, which could have a material adverse effect on its business, results of operations, financial condition and prospects.

## **Item 4. Mine Safety Disclosures**

Not applicable.

## Part II

### Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

#### Market Information

Our common stock has been listed and traded on the NYSE American under the symbol “IE” and on the TSX, also under the symbol “IE”, since June 28, 2022.

#### Holders of Record

As of February 22, 2024, we had approximately 94 holders of record of our common stock. This number does not include beneficial owners whose shares were held in street name. The actual number of holders of our common stock is greater than this number of record holders and includes stockholders who are beneficial owners, but whose shares are held in street name by brokers or held by other nominees. This number of holders of record also does not include stockholders whose shares may be held in trust by other entities.

#### Securities Authorized for Issuance Under Equity Compensation Plans

See Item 12.

#### Recent Sales of Unregistered Securities

During the year ended December 31, 2023, we did not sell any unregistered equity securities except as previously reported on Form 10-Q or Form 8-K. Subsequent to year end, we sold the following unregistered securities:

- On February 6, 2024, we issued 116,413 shares of our common stock pursuant to the Plan or Arrangement (the “Arrangement”) between the Company and Kaizen. We issued the shares without registration in reliance upon Section 3(a)(10) of the Securities Act. Immediately prior to the closing of the Arrangement, the Company beneficially owned 54,428,971 common shares of Kaizen, representing 82.54% of the issued and outstanding common shares on a non-diluted basis. Following the closing of the Arrangement, the Company owns 69,229,659 common shares of Kaizen, representing 100% of the issued and outstanding common shares on a fully diluted basis. Effective February 6, 2024, Kaizen is now a wholly-owned subsidiary of the Company. The Company acquired the common shares of Kaizen in consideration for the issuance of one share of common stock of the Company for every 127 common shares of Kaizen issued and outstanding immediately prior to the closing of the Arrangement.
- On February 21, 2024, we issued 12,765 shares of our common stock at a price of \$11.75 per share to Exiro Minerals USA Corp. as partial consideration for the right to earn in on the White Hill Copper Project. The issuance of the above securities was exempt pursuant to Section 4(a)(2) of the Securities Act, as transactions by an issuer not involving a public offering.

#### Purchases of Equity Securities

We made no purchases of our equity securities during the fourth quarter of the year ended December 31, 2023.

#### Use of Proceeds

On June 27, 2022, our Registration Statement on Form S-1 (File No. 333-265175) (the “Final Prospectus”) relating to our IPO of our common stock was declared effective by the SEC.

On June 30, 2022, we completed our IPO and issued and sold 14,388,000 shares of our common stock at a price to the public of \$11.75 per share for aggregate gross proceeds of \$169.1 million. BMO Capital Markets Corp. and Jefferies LLC acted as joint book-running managers for the IPO and as representatives of the underwriters.

The net proceeds from the IPO to us, after deducting underwriting discounts and commissions and offering expenses of \$10.9 million, were \$158.2 million. No IPO expenses were paid directly or indirectly to any of our directors or officers (or their associates) or persons owning 10.0% or more of any class of our equity securities or to any other affiliates. We have exhausted the net proceeds from our IPO with the use as described in the Final Prospectus.

#### Certain United States Federal Income Tax and Estate Tax Consequences to Non-U.S. Holders

The following is a summary of certain material United States federal income tax and estate tax consequences to a non-U.S. holder (as defined below) relating to the ownership and disposition of our common stock, but does not purport to be a



complete analysis of all the potential tax considerations relating thereto. This summary is based upon the provisions of the Internal Revenue Code of 1986, as amended (the “Code”), Treasury regulations promulgated thereunder (“Treasury Regulations”), administrative rulings and judicial decisions, all as in effect on the date hereof. These authorities may be changed, possibly retroactively, so as to result in United States federal income or estate tax consequences different from those set forth below. This summary does not discuss the potential effects, whether adverse or beneficial, of any proposed legislation that, if enacted, could be applied on a retroactive basis. We have not sought any ruling from the IRS with respect to the statements made and the conclusions reached in the following summary, and there can be no assurance that the IRS will agree with such statements and conclusions.

This summary also does not address the tax considerations arising under the laws of any non-U.S., state or local jurisdiction, or under United States federal gift and estate tax laws, except to the limited extent below. This summary also does not address all aspects of U.S. federal income taxation, such as the U.S. alternative minimum income tax and the additional tax on net investment income. Except as provided below, this summary does not address tax reporting requirements. In addition, this discussion does not address tax considerations applicable to a non-U.S. holder’s particular circumstances or to non-U.S. holders that may be subject to special tax rules, including, without limitation:

- banks, insurance companies or other financial institutions;
- persons subject to special tax accounting rules;
- persons subject to the alternative minimum tax;
- tax-exempt organizations, tax-qualified retirement plans, and pension plans;
- controlled foreign corporations, passive foreign investment companies and corporations that accumulate earnings to avoid United States federal income tax and, in each case, shareholders thereof;
- partnerships or other entities treated as pass-through entities for United States federal income tax purposes;
- dealers in securities or currencies;
- traders in securities that elect to use a mark-to-market method of accounting for their securities holdings;
- persons who acquire our common stock pursuant to the exercise of employee stock options or otherwise as compensation for their services;
- persons that own, or are deemed to own, more than five percent (by voting power or value) of our common stock, except to the extent specifically set forth below;
  - real estate investment trusts or regulated investment companies;
  - certain U.S. expatriates, former citizens or long-term residents of the United States;
  - persons who hold our common stock as part of a straddle, hedge, conversion, constructive sale, or other integrated security transaction;
  - corporations organized outside the United States, any state thereof, or the District of Columbia that are nonetheless treated as U.S. persons for U.S. federal income tax purposes; or
  - persons who do not hold our common stock as a capital asset (within the meaning of Section 1221 of the Code).

In addition, if a partnership, including any entity or arrangement classified as a partnership for United States federal income tax purposes, holds our common stock, the United States federal income tax treatment of a partner in the partnership generally will depend on the status of the partner, the activities of the partnership, and certain determinations made at the partner level. Accordingly, partnerships that hold our common stock, and partners in such partnerships, should consult their own tax advisors regarding the United States federal income tax consequences to them of the acquisition, ownership, and disposition of our common stock.

Prospective investors are urged to consult their own tax advisors with respect to the application of the United States federal income tax laws to their particular situation, as well as any tax consequences of the purchase, ownership and disposition of our common stock arising under the United States federal estate or gift tax rules or under the laws of any state, local, non-U.S. or other taxing jurisdiction or under any applicable tax treaty.

## **Non-U.S. Holder Defined**

For purposes of this discussion, a non-U.S. holder is a beneficial owner of shares of our common stock that is not, for United States federal income tax purposes:

- an individual citizen or resident of the United States;
- a corporation (or other entity treated as a corporation for United States federal income tax purposes) created or organized in or under the laws of the United States, any state or political subdivision thereof, or the District of Columbia;
- a partnership (or other entity treated as a partnership for United States federal income tax purposes);
- an estate whose income is subject to United States federal income tax regardless of its source; or
- a trust (x) whose administration is subject to the primary supervision of a United States court and which has one or more United States persons who have the authority to control all substantial decisions of the trust or (y) which has made an election to be treated as a United States person.

## **Distributions**

We have not paid and we do not anticipate declaring or paying dividends in the foreseeable future to holders of our common stock. However, if we make a distribution of cash or other property (other than certain pro rata distributions of our common stock) in respect of our common stock, the distribution will be treated as a dividend for United States federal income tax purposes to the extent it is paid from our current or accumulated earnings and profits (as determined under United States federal income tax principles). If the amount of a distribution exceeds our current and accumulated earnings and profits, the excess will be treated first as a tax-free return of capital that reduces a non-U.S. holder's adjusted basis in such holder's common stock, but not below zero. Any excess will be treated as gain realized on the sale or other disposition of our common stock and will be treated as described under “- Sale, Exchange or Other Disposition of Our Common Stock,” below.

Subject to the discussion below regarding effectively connected income, backup withholding and FATCA (as defined below), distributions treated as dividends on our common stock held by a non-U.S. holder generally will be subject to United States federal withholding tax at a rate of 30%, or at a lower rate if provided by an applicable income tax treaty and the non-U.S. holder has provided the documentation required to claim benefits under such treaty. Generally, to claim the benefits of an income tax treaty, a non-U.S. holder will be required to provide a properly executed IRS Form W-8BEN, IRS Form W-8BEN-E or other applicable IRS Forms. In the case of any constructive distribution, it is possible that this tax would be withheld from any amount owed to the non-U.S. Holder, including, but not limited to, distributions of cash, common stock or sales proceeds subsequently paid or credited to that holder. If we are unable to determine, at the time of payment of a distribution, whether the distribution will constitute a dividend, we may nonetheless choose to withhold any U.S. federal income tax on the distribution as permitted by Treasury Regulations. If we are a USRPHC (as defined below) and we do not qualify for the Regularly Traded Exception (as defined below), distributions which constitute a return of capital will be subject to withholding tax unless an application for a withholding certificate is filed to reduce or eliminate such withholding.

If a non-U.S. holder holds our common stock in connection with the non-U.S. holder's conduct of a trade or business within the United States, and dividends paid on our common stock are effectively connected with such non-U.S. holder's United States trade or business (and, if an applicable tax treaty so provides, are attributable to a permanent establishment or fixed base maintained by the non-U.S. holder in the United States), the dividends will not be subject to the 30% United States federal withholding tax (provided the non-U.S. holder has provided the appropriate documentation, generally an IRS Form W-8ECI, to the withholding agent), but the non-U.S. holder generally will be subject to United States federal income tax in respect of the dividend on a net income basis, and at graduated rates, in substantially the same manner as United States persons. Dividends received by a non-U.S. holder that is a corporation for United States federal income tax purposes and which are effectively connected with the conduct of a United States trade or business may also be subject to a branch profits tax at the rate of 30% (or a lower rate if provided by an applicable tax treaty).

A non-U.S. holder that is eligible for a reduced rate of United States federal withholding tax under an income tax treaty may obtain a refund or credit of any excess amounts withheld by timely filing an appropriate claim for a refund together with the required information with the IRS.

## **Sale, Exchange or Other Disposition of Our Common Stock**

Subject to the discussion below regarding backup withholding and FATCA (as defined below), a non-U.S. holder generally will not be subject to United States federal income or withholding tax on any gain realized on the sale or other disposition of our common stock unless:

- such non-U.S. holder is an individual who is present in the United States for 183 days or more in the taxable year of such sale or disposition, and certain other conditions are met;
- such gain is effectively connected with the conduct by the non-U.S. holder of a trade or business in the United States (and, if an applicable tax treaty so provides, is attributable to a permanent establishment or a fixed base maintained by the non-U.S. holder in the United States); or
- our common stock constitutes a United States real property interest (“USRPI”) by reason of our status as a “United States real property holding corporation” (“USRPHC”) at any time within the shorter of the five-year period preceding the disposition or the non-U.S. holder’s holding period for our common stock.

A non-U.S. holder described in the first bullet point above generally will be subject to tax at a gross rate of 30% on the amount by which such non-U.S. holder’s taxable capital gains allocable to United States sources, including gain from the sale or other disposition of our common stock, exceed capital losses allocable to United States sources, except as otherwise provided in an applicable income tax treaty.

If the gain is described in the second bullet point above, gain realized by the non-U.S. holder generally will be subject to United States federal income tax on a net income basis, and at graduated rates, in substantially the same manner as a United States person (except as provided by an applicable tax treaty). In addition, if such non-U.S. holder is a corporation for United States federal income tax purposes, it may also be subject to a branch profits tax at the rate of 30% (or a lower rate if provided by an applicable tax treaty) on such effectively connected gain, as adjusted for certain items.

With respect to the third bullet point above, because we hold significant real property interests in the United States, we believe we are a USRPHC for United States federal income tax purposes. Because the determination of whether we are a USRPHC depends on the fair market value of our United States real property interests relative to the fair market value of our worldwide real property interests and our other assets used or held for use in a trade or business, it is possible we may (or may not) remain a USRPHC in the future. As a USRPHC, if our common stock is “regularly traded” on an “established securities market” (in each case, as defined by applicable Treasury Regulations) (the “Regularly Traded Exception”) during the calendar year in which a non-U.S. holder disposes of our stock, the non-U.S. holder would not be subject to taxation on the gain on the disposition of our common stock under this rule unless the non-U.S. holder has, actually or constructively, owned more than 5% of our outstanding common stock at any time during the shorter of the five-year period ending on the date of the disposition of such common stock or the non-U.S. holder’s holding period for such common stock. We believe that our common stock currently is regularly traded on an established securities market. However, no assurance can be given in this regard and no assurance can be given that our common stock will remain regularly traded in the future. If gain on the sale or other taxable disposition of shares of our common stock by a non-U.S. holder is subject to United States federal income taxation by reason of such stock being treated as a USRPI, such non-U.S. holder generally would be subject to regular United States federal income tax with respect to such gain in the same manner as a taxable U.S. holder and would be required to file a United States federal income tax return for the taxable year in which such gain was recognized. In addition, the purchaser of our shares of common stock from a non-U.S. holder generally would be required to withhold and remit to the IRS fifteen percent (15%) of the purchase price paid to such non-U.S. holder unless, at the time of such sale or other disposition, any class of our stock is regularly traded on an established securities market (as discussed above) or any other exception to such withholding applies.

## **Federal Estate Tax**

Our common stock beneficially owned by an individual who is not a citizen or resident of the United States (as defined for United States federal estate tax purposes) at the time of death generally will be includable in the decedent’s gross estate for United States federal estate tax purposes, unless an applicable estate tax treaty provides otherwise.

## **Additional Withholding Tax on Payments Made to Foreign Accounts**

Withholding taxes may be imposed under Sections 1471 to 1474 of the Code (such sections commonly referred to as the Foreign Account Tax Compliance Act, or “FATCA”) on certain types of payments made to non-U.S. financial institutions and certain other non-U.S. entities. Specifically, a 30% withholding tax may be imposed on dividends paid to a non-U.S. holder on, or subject to the proposed Treasury Regulations discussed below, gross proceeds from the disposition

of, our common stock paid to a “foreign financial institution” or a “non-financial foreign entity” (each as defined in the Code), unless (i) the foreign financial institution undertakes certain diligence and reporting obligations, (ii) the non-financial foreign entity either certifies it does not have any “substantial United States owners” (as defined in the Code) or furnishes identifying information regarding each substantial United States owner, or (iii) the foreign financial institution or non-financial foreign entity otherwise qualifies for an exemption from these rules. If the payee is a foreign financial institution and is subject to the diligence and reporting requirements in clause (i) above, it must enter into an agreement with the United States Department of Treasury requiring, among other things, that it undertake to identify accounts held by certain “specified United States persons” or “United States owned foreign entities” (each as defined in the Code), annually report certain information about such accounts, and withhold 30% on certain payments to non-compliant foreign financial institutions and certain other account holders. Foreign financial institutions located in jurisdictions that have an intergovernmental agreement with the United States governing FATCA may be subject to different rules.

Under the applicable Treasury Regulations and administrative guidance, withholding under FATCA generally applies to payments of dividends on our common stock, and subject to proposed Treasury Regulations described below, to payments of gross proceeds from the sale or other disposition of such stock. The United States Department of Treasury has released proposed Treasury Regulations (the preamble to which specifies that taxpayers may rely on them pending finalization) which would eliminate FATCA withholding on payments of gross proceeds from the sale or other disposition of our common stock. There can be no assurance that the proposed Treasury Regulations will be finalized in their present form.

Prospective investors should consult their own tax advisors regarding the potential application of withholding under FATCA to an investment in our common stock.

### **Backup Withholding and Information Reporting**

Backup withholding, currently at a rate of 24%, generally will not apply to dividends paid to a non-U.S. holder on, or to the gross proceeds paid to a non-U.S. holder from a disposition of, our common stock, provided that the non-U.S. holder furnishes the required certification for its non-U.S. status, such as by providing a valid IRS Form W-8BEN, IRS Form W-8BEN-E, IRS Form W-8ECI, or certain other requirements are met. Backup withholding may apply if the payor has actual knowledge, or reason to know, that the holder is a United States person who is not an exempt recipient.

We are required to report annually to the IRS the amount of any dividends paid to a non-U.S. holder, regardless of whether we actually withheld any tax. Copies of the information returns reporting such dividends and the amount withheld may also be made available to the tax authorities in the country in which the non-U.S. holder resides under the provisions of an income tax treaty or other agreement between the United States and the tax authorities in such country. In addition, proceeds from the disposition by a non-U.S. holder of our common stock that is transacted within the United States or conducted through certain United States-related brokers generally will not be subject to backup withholding or information reporting if the applicable withholding agent receives the certification described above and does not have actual knowledge or reason to know that such holder is a United States person, or the holder otherwise establishes an exemption. Proceeds of a disposition of our common stock conducted through a non-U.S. office of a non-U.S. broker generally will not be subject to backup withholding or information reporting.

Backup withholding is not an additional tax. The United States federal income tax liability of persons subject to backup withholding will be reduced by the amount of tax withheld. If backup withholding results in an overpayment of taxes, a refund or credit may generally be obtained from the IRS, provided that the required information is timely furnished to the IRS.

The preceding summary is for informational purposes only and is not tax advice. Each prospective investor should consult its own tax advisor regarding the particular United States federal, state and local and non-United States tax consequences of purchasing, holding and disposing of our common stock, including the consequences of any proposed change.

### **Item 6. Reserved**

## Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

*The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our consolidated financial statements and the related notes to those statements included elsewhere in this Annual Report. In addition to historical financial information, the following discussion and analysis contains forward-looking statements that involve risks, uncertainties and assumptions. Our actual results and timing of selected events may differ materially from those anticipated in these forward-looking statements as a result of many factors, including those discussed under Item 1A. Risk Factors and elsewhere in this Annual Report. See "Cautionary Note Regarding Forward-Looking Statements."*

### Business Overview

We are a United States domiciled company that combines advanced mineral exploration technologies with electric metals exploration projects predominantly located in the United States. We use our accurate and powerful Typhoon™ geophysical surveying system, together with advanced data analytics provided by our 94.3% owned subsidiary, Computational Geosciences Inc. ("CGI"), to accelerate and de-risk the mineral exploration process as we seek to discover new deposits of critical metals that may otherwise be undetectable by traditional exploration technologies. We believe the United States is significantly underexplored and has the potential to yield major new discoveries of critical metals. Our mineral exploration efforts focus on copper as well as other metals including nickel, vanadium, cobalt, platinum group elements, gold and silver. Through the advancement of our portfolio of electric metals exploration projects, headlined by the Santa Cruz Project in Arizona and the Tintic Project in Utah, as well as other exploration projects in the United States, we intend to support the United States' supply chain independence by finding and delivering critical metals necessary for the electrification of the economy. We also operate a 50/50 joint venture with Saudi Arabian Mining Company Ma'aden ("Ma'aden") to explore for minerals on ~48,500 km<sup>2</sup> of underexplored Arabian Shield in Saudi Arabia.

Finally, in addition to our mineral projects, we also own a 90.0% controlling interest in VRB Energy Inc. ("VRB") which is primarily engaged in the design, manufacture, installation, and operation of vanadium redox flow energy storage systems.

At our Santa Cruz Project in Arizona, we are evaluating the potential for a high-grade modern underground copper mining operation. In September 2023, we completed the Initial Assessment & Technical Report Summary for the Santa Cruz Project (the "IA"), which outlines a potential 5.9 million tonnes per year underground mining operation, supported by 105.2 million tonnes of modeled mill feed with an average grade of 1.58% copper from the Santa Cruz and East Ridge Deposits, resulting in an estimated 20-year mine life. We are advancing further studies for an underground copper mining operation with a focus on minimizing the surface footprint of the mine while at the same time incorporating leading technologies to improve efficiencies and costs. We are designing a technologically advanced mine that we expect to result in low carbon dioxide emissions per pound of copper produced and be a leading example of responsibly produced domestic copper. Key considerations that will influence our decision making include, but are not limited to, using clean and renewable energy in our future mining operations, optimizing and minimizing our water utilization, minimizing our environmental footprint, ensuring workforce diversity and hiring from local communities, health, safety and environmental performance, support of local cultural heritage and biodiversity protection.

References to our mineral projects refers to our interests in such projects which may be a direct ownership interest in mineral titles (including through subsidiary entities), a right to acquire mineral titles through an earn-in or option agreement, or, in the case of our investments in publicly listed companies in Canada, through our ownership of the equity of those companies that have an interest in such mineral project.

Our shares of common stock are listed on the NYSE American and the TSX under the ticker symbol "IE".

### Reverse Stock Split

On June 16, 2022, we effected a reverse stock split of our outstanding common stock at a ratio of 3-for-1 (the "Reverse Stock Split"). The number of authorized shares and the par value of the common stock were not adjusted as a result of the Reverse Stock Split. All references to common stock, options to purchase common stock, per share data and related information have been retrospectively adjusted to reflect the effect of the Reverse Stock Split for all periods presented.

### Business Developments in the Year

On May 15, 2023, we signed a Common Stock Subscription Agreement ("the Subscription Agreement") with Ma'aden. On July 6, 2023, we completed the closing of the transactions contemplated by the Subscription Agreement (the



“Ma’aden Transactions”) and entered into an investor rights agreement, a shareholders’ agreement and the other instruments contemplated thereby.

The Ma’aden Transactions included the establishment of a 50/50 exploration joint venture between Ma’aden and Ivanhoe Electric to explore for minerals on ~48,500 km<sup>2</sup> of underexplored Arabian Shield in Saudi Arabia, and a strategic investment by Ma’aden in Ivanhoe Electric common stock. On July 6, 2023, we issued to Ma’aden an aggregate of 10,269,604 shares of common stock of our Company, constituting 9.9% of the total outstanding number of shares of common stock immediately following closing of the Ma’aden Transactions, for gross proceeds of approximately \$127.1 million, representing an aggregate purchase price of \$12.38 per share. Of the \$127.1 million total proceeds from the private placement, \$66.0 million has been contributed to the joint venture to fund its exploration activities, including the purchase of three new-generation Typhoon<sup>TM</sup> machines from I-Pulse Inc. The remaining \$61.1 million has been retained by Ivanhoe Electric to advance our portfolio of US mineral projects, and for working capital and general corporate purposes.

On July 10, 2023, we filed an automatic shelf registration statement on Form S-3 to permits us to publicly offer and sell securities from time to time, including common stock, preferred stock, debt securities, warrants, subscription rights and units. We may offer and sell securities under the Form S-3 from time to time.

On September 6, 2023, we completed and announced the IA. The IA is a preliminary technical and economic study for the Santa Cruz Project and associated high-grade mineral resources included in the Santa Cruz and East Ridge deposits. The study analyzes the potential for a high-grade underground copper mining operation supported by modern technologies to reduce environmental impact and powered predominantly by renewable energy.

On September 18, 2023, we closed an underwritten public offering consisting of 11,851,852 shares of our common stock at a public offering price of \$13.50 per share. The aggregate gross proceeds to the Company from the offering were approximately \$160 million, before deducting underwriting discounts and commissions and estimated offering expenses payable by the Company.

In addition, we received notice from the underwriters on September 18, 2023, of the full exercise of their option to purchase an additional 1,777,777 shares of common stock from the Company. The aggregate gross proceeds from the exercise of the underwriters’ option was approximately \$24 million, before deducting underwriting discounts and commissions and estimated offering expenses payable by the Company. The sale of the underwriters’ option shares closed on September 21, 2023.

On October 23, 2023, we entered into a subscription agreement with Ma’aden whereby Ma’aden agreed to purchase 1,513,650 shares of our common stock at a purchase price of \$13.50 per share in a private placement, for aggregate gross proceeds of approximately \$20.4 million. The subscription agreement is as a result of the “top-up right” granted to Ma’aden under the July 6, 2023 investor rights agreement which enables Ma’aden to purchase additional shares of our common stock to maintain its 9.9% stock ownership position in the event of any issuances. The sale of the shares closed on October 31, 2023.

## Selected Financial Information

The selected financial information set forth below is presented in accordance with U.S. GAAP and is derived from our audited consolidated financial statements for the years ended December 31, 2023 and 2022. We did not declare or pay any dividends or distributions in any financial reporting period.

(In thousands, except per share amounts)	Year Ended	Year Ended
	December 31, 2023	December 31, 2022
Revenue	\$ 3,903	\$ 8,440
Cost of sales	(2,986)	(3,135)
Gross profit	917	5,305
Expenses:		
Exploration expenses	126,719	105,286
General and administrative expenses	48,204	26,971
Research and development expenses	6,120	5,040
Net loss attributable to:		
Common stockholders or parent	199,377	149,813
Comprehensive loss attributable to:		
Common stockholders or parent	200,261	149,501
Basic and diluted loss per share attributable to common stockholders or parent	\$ 1.95	\$ 1.91
Total assets	487,226	260,486
Total non-current liabilities	71,223	40,606

## Segments

We account for our business in three business segments – (i) critical metals, (ii) data processing and software licensing services and (iii) energy storage systems.

## Significant Components of Results of Operations

### *Revenue, Cost of Sales and Gross Profit*

We have not generated any revenue from our mining projects because they are in the exploration stage. We do not expect to generate any revenue from our mining projects for the foreseeable future.

We generate some revenue from our technology businesses CGI and VRB, which are included in the data processing and energy storage systems business segments, respectively.

CGI generates revenue comes from the sale of data processing services to the mining and oil and gas industries. In prior years, CGI has also generated revenue from software licensing.

VRB generates revenue from developing, manufacturing and selling vanadium redox flow energy storage systems.

### *Exploration Expenses*

Exploration expenses include topographical, geological, geochemical and geophysical studies, exploratory drilling, trenching, sampling and activities in relation to identifying a mineral resource and then evaluating the technical feasibility and commercial viability of extracting the mineral resource, as well as value-added taxes in relation to these direct exploration and evaluation costs incurred in foreign jurisdictions where recoverability of those taxes is uncertain. Exploration expenses also include salaries, benefits and non-cash stock-based compensation expenses of the employees performing these activities.

Exploration expenses also include payments under earn-in and option agreements where the option right is with respect to ownership interests in legal entities owning the underlying mineral project in the exploration project phase. Through our earn-in and option agreements, we have the right (and in some cases, the obligation) to fund and conduct exploration on the underlying mineral project prior to determining whether to acquire a minority or majority ownership interest through further funding the costs of such exploration and, in some cases, through direct payments to the owners of the project. In the event we cease making expenditures on an exploration mineral project or fail to incur the agreed level of

exploration expenditures, we will not obtain an ownership right beyond any which may have been acquired as of the date of termination.

Included in exploration expenses are exploration costs that we incur in relation to generating new projects. These activities may or may not proceed to earn-in agreements depending on our evaluation. These are categorized as “Project generation and other”.

### ***General and Administrative Expenses***

Our general and administrative expenses consist of salaries and benefits, stock-based compensation, professional and consultant fees, insurance and other general administration costs. Our general and administrative expenses have increased significantly now that we are operating as a public company and have added to our management team. In particular, we incurred increased general and administrative expenses costs in 2023 compared to 2022 for salaries, non-cash stock-based compensation, compliance related costs and directors’ and officers’ insurance expense.

### **Year Ended December 31, 2023 Compared to Year Ended December 31, 2022**

For the year ended December 31, 2023 we recorded a net loss attributable to common stockholders of \$199.4 million (\$1.95 per share), compared to \$149.8 million (\$1.91 per share) for the year ended December 31, 2022, which was an increase of \$49.6 million. Significant contributors to this increase in the year ended December 31, 2023 included an increase of \$21.4 million in exploration expenditures, an increase of \$21.2 million in general and administrative expenses, an increase of \$32.2 million in share of loss of equity method investees, a decrease of \$4.5 million in revenue compared to the year ended December 31, 2022 offset by a decrease of \$19.0 million in non-cash loss on revaluation of convertible debt as compared to the year ended December 31, 2022.

Exploration expenses were \$126.7 million for the year ended December 31, 2023 an increase of \$21.4 million from \$105.3 million for the year ended December 31, 2022. Exploration expenses consisted of the following:

(In thousands)	Year Ended December 31, 2023	Year Ended December 31, 2022
Exploration Expenses:		
Santa Cruz, USA	\$ 57,203	\$ 61,172
San Matias, Colombia	28,068	18,454
Tintic, USA	13,131	2,282
Hog Heaven, USA	7,812	2,216
Lincoln, USA	3,684	1,312
White Hill, USA	1,451	—
Carolina, USA	1,337	1,307
Pinaya, Peru	958	2,616
Project generation and other	13,075	15,927
<b>Total</b>	<b>\$ 126,719</b>	<b>\$ 105,286</b>

During the year ended December 31, 2023, expenditures largely focused on exploration activities at:

- the Santa Cruz Project where \$57.2 million of exploration expenditure was incurred in the year ended December 31, 2023 compared to \$61.2 million incurred in the year ended December 31, 2022. Activities during the year ended December 31, 2023, at Santa Cruz were focused on a program of exploration and infill resource, geotechnical, hydrological and metallurgical drilling, advancing technical studies, completing the updated mineral resource estimate released in February 2023 and the finalization of the IA and the National Instrument 43-101 Preliminary Assessment and Technical Report ("PEA") which were released on September 6, and September 11, 2023.
- the San Matias Project where \$28.1 million of exploration expenditure was incurred by Cordoba in the year ended December 31, 2023 compared to \$18.5 million in the year ended December 31, 2022. Activities during the year ended December 31, 2023, focused on continuing work on the National Instrument 43-101 feasibility study on the Alacran deposit which was completed in December 2023. Activities during the year ended December 31, 2023, included infill geotechnical, metallurgical, hydrological and infill resource drilling, feasibility metallurgical test work, infrastructure, mine, mill and tailings facility design work, investigation of power supply options, environmental studies and market investigations;

- the Tintic Project where \$13.1 million of exploration expenditure was incurred in the year ended December 31, 2023 compared to \$2.3 million in the year ended December 31, 2022. Activities during the year ended December 31, 2023 at Tintic were focused on completing an initial diamond drill hole and commencing a two drill rig exploration program that is testing new areas of the historic Main Tintic Mining District. Drilling has focused on deep targets guided by geophysical data; and
- the Hog Heaven Project in Montana where \$7.8 million of exploration expenditure was incurred in the year ended December 31, 2023 compared to \$2.2 million in the year ended December 31, 2022. Activities during the year ended December 31, 2023 at Hog Heaven included a drilling program that commenced in June 2023. The ongoing drill program is designed to search for additional silver, gold, and copper-rich high-sulfidation epithermal mineralization, which was the focus of historical mining activities and is also intended to search for porphyry copper mineralization at depth. During 2023, we completed 12 drill holes, totaling 10,905 meters. In November 2023, we conducted a Typhoon<sup>TM</sup> geophysical survey covering approximately 10 km<sup>2</sup> of land.

General and administrative expenses were \$48.2 million for the year ended December 31, 2023, an increase of \$21.2 million from \$27.0 million in the year ended December 31, 2022. Several items contributed to the increase, including:

- a \$15.0 million increase in non-cash stock-based compensation expense from \$2.0 million for the year ended December 31, 2022 to \$17.0 million for the year ended December 31, 2023 primarily due to Ivanhoe Electric stock option and RSU grants that have occurred from November 2022 onwards.
- a \$1.9 million increase in directors and officers insurance expenses from \$3.4 million for the year ended December 31, 2022 to \$5.3 million for the year ended December 31, 2023 in relation to the director and officers insurance policy that we entered into when we became a public company in June 2022; and
- a \$1.9 million increase in salary and wages from \$2.0 million for the year ended December 31, 2022 to \$4.7 million for the year ended December 31, 2023 due to adding more people to our management and administrative teams following our IPO in June 2022.

During the year ended December 31, 2023, we recorded \$36.0 million share of loss of equity method investees which was an increase of \$32.2 million from the \$3.7 million share of loss of equity method investee recorded for the year ended December 31, 2022. The \$36.0 million share of loss of equity method investees is largely attributable to our recognition of a \$34.4 million loss from our 50% share of the loss from the Ma'aden joint venture due to the land access rights of \$66.0 million being expensed in accordance with our accounting policy for exploration and evaluation costs.

During the year ended December 31, 2022, we recorded a non-cash \$19.0 million loss on revaluation of convertible debt which related to the convertible notes that were automatically converted into shares of common stock upon the completion of our initial public offering on June 30, 2022. There was no similar expense in 2023.

Revenue for the year ended December 31, 2023 was \$3.9 million, a decrease of \$4.5 million from \$8.4 million for the year ended December 31, 2022.

	Year Ended December 31, 2023	Year Ended December 31, 2022	Percentage change year-over-year
<i>(In thousands)</i>			
CGI: Software licensing and data processing services:			
Revenue	\$ 1,300	\$ 7,729	(83)%
Cost of sales	(497)	(577)	(14)%
Gross profit	803	7,152	(89)%
VRB: Energy storage systems:			
Revenue	\$ 2,603	\$ 711	266 %
Cost of sales	(2,489)	(2,558)	(3)%
Gross profit (loss)	114	(1,847)	106 %
Total			
Revenue	\$ 3,903	\$ 8,440	(54)%
Cost of sales	(2,986)	(3,135)	(5)%
Gross profit	917	5,305	(83)%

CGI's software licensing and data processing services to the mining and oil and gas industries represented 33% of our revenue for the year ended December 31, 2023 (\$1.3 million) and 92% for the year ended December 31, 2022 (\$7.7 million). The decrease of \$6.4 million in CGI's revenue from 2023 to 2022 was a direct result of the year ended December 31, 2022 including revenue from a customer who licensed certain software from CGI for a one-time fee of \$6.5 million. There were no similar agreements in 2023 and we cannot provide any assurance that CGI will enter into any similar contracts in the future.

CGI's gross profit for the year ended December 31, 2023 was \$0.8 million, a \$6.3 million or 89% decrease from \$7.2 million for the year ended December 31, 2022. The 2022 licensing of certain software for a one-time fee of \$6.5 million had a direct impact on gross profit as the licenses had no underlying carrying value and therefore resulted in a \$6.5 million gross profit being recognized for the year ended December 31, 2022.

VRB's energy storage system revenue represented 67% of our revenue for the year ended December 31, 2023 (\$2.6 million) and 8% for the year ended December 31, 2022 (\$0.7 million). During the year ended December 31, 2023, VRB delivered, installed and commissioned energy storage systems of 2.18MW/6.25MWh to customers, which resulted in \$2.6 million of revenue being recognized.

VRB's gross profit for the year ended December 31, 2023 was \$0.1 million, a \$2.0 million or 106% increase from the \$1.8 million gross loss for the year ended December 31, 2022. VRB's gross loss for the year ended December 31, 2022 was largely due to an inventory impairment of \$1.9 million being recognized in relation to the termination of a tolling agreement with a producer of ammonium metavanadate.

Research and development expenses for the year ended December 31, 2023 were \$6.1 million, an increase of \$1.1 million from the same period in 2022. The increase is primarily attributable to incurring \$2.9 million of Typhoon related research and development activities for the year ended December 31, 2023 compared to \$0.2 million for the year ended December 31, 2022. In 2023, we commenced design and development activities for our next generation of Typhoon<sup>TM</sup> equipment.

## Stock-Based Compensation

During the year ended December 31, 2023, we granted stock options to certain employees of the Company. The fair value of the option grants was determined using the Black-Scholes option-pricing model as follows:

	February 1, 2023 Grant Date	March 1, 2023 Grant Date	July 1, 2023 Grant Date	August 9, 2023 Grant Date	December 1, 2023 Grant Date
Number of options granted	500,000	100,000	100,000	200,000	50,000
Exercise price	\$13.23	\$15.46	\$13.04	\$16.03	\$11.75
Black-Scholes option-pricing model fair value	\$7.22	\$8.53	\$6.95	\$8.46	\$5.96

In addition, in January 2023, we granted 750,000 RSUs to a new senior officer of the Company which had a fair value on the grant date of \$12.15 per share.

## Liquidity, Capital Resources and Capital Requirements

### Cash Resources

We have recurring net losses and negative operating cash flows and we expect that we will continue to operate at a loss for the foreseeable future.

We generate revenue from our technology businesses. We have not generated any revenue from our mining projects and do not expect to generate any revenue from our mining projects for the foreseeable future.

We have funded our operations primarily through the sale of our equity and convertible securities.

At December 31, 2023, and 2022, we had cash and cash equivalents of \$205.0 million and \$139.7 million, respectively, and a working capital of \$176.8 million and \$133.6 million, respectively. Of the total cash and cash equivalents at December 31, 2023, and December 31, 2022, \$15.0 million and \$20.7 million, respectively, was not available for the general corporate purposes of the Company as these amounts were held by non-wholly-owned subsidiaries.



As at February 26, 2024, we believe that we will have sufficient cash resources to carry out our business plans for at least the next 12 months, after which we expect to need additional financing to further advance our projects and conduct our business. We have based these estimates on our current assumptions which may require future adjustments based on our ongoing business decisions as well as, in particular, exploration success at our mineral projects. Accordingly, we may require additional cash resources earlier than we currently expect or we may need to curtail currently planned activities.

Our significant operational expenses include the payments that we anticipate making under the various earn-in and option agreements to which we are a party. These agreements are structured to provide us with flexibility whereby our ability to continue to explore on a mineral project is contingent on funding agreed specified levels over specified time intervals. See Item 1. Business — Mineral Project Obligations and Payments.

We may seek additional financing at any time through debt, equity, project specific debt, and/or other means. Our continued operations are dependent on our ability to obtain additional financing or to generate future cash flows. However, there can be no assurance that we will be successful in our efforts to raise additional capital on terms favorable to us, or at all.

#### *Cash Balances as of December 31, 2023*

The table below discloses the amounts of cash disaggregated by currency denomination as of December 31, 2023 in each jurisdiction that our affiliated entities are domiciled.

	Currency by Denomination (in USD Equivalents)					Total
	US dollars	Canadian dollars	Chinese Renminbi	Colombian Pesos	Other	
<i>(In thousands)</i>						
<b>Jurisdiction of Entity:</b>						
USA	\$ 189,081	\$ 188	\$ —	\$ —	\$ —	\$ 189,269
Singapore	6,609	—	—	—	—	6,609
Canada	2,905	475	—	—	—	3,380
Colombia	—	—	—	3,233	—	3,233
China	—	—	930	—	—	930
Cayman Islands	806	2	—	—	—	807
British Virgin Islands	683	2	—	—	—	685
Other	35	1	—	—	94	130
<b>Total</b>	<b>\$ 200,119</b>	<b>\$ 667</b>	<b>\$ 930</b>	<b>\$ 3,233</b>	<b>\$ 94</b>	<b>\$ 205,043</b>

Our subsidiary VRB, domiciled in the Cayman Islands, is subject to certain foreign exchange restrictions with respect to its PRC subsidiaries. There are foreign exchange policies in the PRC that limit the amount of capital that can be directly transmitted offshore from VRB's PRC subsidiaries to VRB. Since their incorporation, these PRC subsidiaries have had accumulated losses and have not declared or paid any dividends or made any distribution of earnings.

There were no cash transfers to or from our PRC subsidiaries in the form of intercompany loans during the years ended December 31, 2023 and 2022.

Refer to Note 17 of our consolidated financial statements which outlines other restrictions on transfers of net assets from our consolidated subsidiaries to the Company.

#### *Note Payable*

In May 2023, as part of the consideration for the acquisition of 5,975 acres of surface title and associated water rights at the Santa Cruz Project we issued to the vendor a secured promissory note in the principal amount of \$82.6 million. The promissory note included an annual interest rate of prime plus 1% and is to be paid in installments. In November 2023, Ivanhoe Electric repaid \$34.3 million, plus accrued interest of the promissory note. Four equal principal payments of \$12.1 million remain to be paid on the first, second, third and fourth anniversaries of the November 2023 payment, plus applicable accrued interest.

#### *Convertible Bond — VRB.*

On July 8, 2021, VRB issued a convertible bond for gross proceeds of \$24.0 million. The bond has a five-year term and interest accrues at a rate of 8% per annum. Prior to the maturity date, the convertible bond will be automatically

converted into equity of VRB upon an equity financing or sale event, at a price per share equal to the lower of (A) the transaction price of the equity financing or sale event, and (B) the valuation cap price of \$158.0 million divided by the total shares outstanding at the time of the event. If no equity financing or sale event occurs, VRB must repay the outstanding principal and interest on maturity.

#### *Bridge Loan — Cordoba.*

In November 2023, JCHX advanced a short-term loan of \$4 million to Cordoba in connection with the strategic arrangement for the joint development of Cordoba's Alacran Project. The short-term loan bears simple interest at 12% per annum which is payable on its maturity date, which is the earlier of (i) 12 months after the date of the loan agreement, and (ii) the date the second installment of \$40 million becomes payable by JCHX under the \$100 million strategic arrangement. If the maturity date occurs as the date of the second installment, the outstanding amount under the Loan may be deducted from the second installment. In early January 2024, the \$4 million loan was fully settled.

## **Cash Flows**

The following table presents our sources and uses of cash for the periods indicated:

(In thousands)	Year Ended December 31, 2023	Year Ended December 31, 2022
<b>Net cash (used in) provided by:</b>		
Operating activities	(150,515)	\$ (115,734)
Investing activities	(150,766)	(48,384)
Financing activities	366,454	254,410
Effect of foreign exchange on cash	210	(482)
<b>Total change in cash</b>	<b>\$ 65,383</b>	<b>\$ 89,810</b>

#### *Operating activities.*

Net cash used in operating activities for all periods presented largely was spent on our exploration expenses and our general and administrative costs. We do not generate adequate cash from operations to cover our operating expenses and therefore rely on our financing activities to provide the cash resources to fund our operating and investing activities.

Net cash used in operating activities for the year ended December 31, 2023 was \$150.5 million, an increase of \$34.8 million from the \$115.7 million of net cash used for the year ended December 31, 2022.

#### *Investing activities.*

Our investing activities generally relate to acquisitions of mineral property interests, purchases of shares in companies that we may partner with and capital expenditures at our projects. To date, due to our mining projects being in the exploration stage we have not incurred material capital expenditures.

Net cash used in investing activities for the year ended December 31, 2023 of \$150.8 million was mainly attributable to \$80.5 million related to acquisitions of exploration properties and \$68.7 million for purchases of investments subject to significant influence. The \$80.5 million of payments for mineral interests included \$76.6 million paid to acquire land at the Santa Cruz Project and \$3.5 million of option payments at our Tintic Project. The \$68.7 million for purchases of investments subject to significant influence primarily consists of our \$66.0 million investment in the Ma'aden Joint Venture.

#### *Financing activities.*

During the year ended December 31, 2023 there was \$366.5 million of net cash provided by financing activities which was primarily from the \$319.6 million in net proceeds we raised through issuances our common stock. We raised net proceeds of \$123.7 million as a result of the July 2023 private placement with Ma'aden and raised net proceeds of \$175.5 million from our September 2023 public offering. In October 2023, we received approximately \$20.0 million from Ma'aden exercising their "top-up right" to maintain their 9.9% interest. In addition, we received \$3.4 million of proceeds from the exercise of employee stock options during the year ended December 31, 2023. Our subsidiary, Cordoba, raised \$39.5 million during the year ended December 31, 2023 in relation to financing its Alacran project through its strategic arrangement with JCHX.

During the year ended December 31, 2022, there was \$254.4 million of net cash provided by financing activities representing the \$158.1 million of net cash raised upon the closing of our initial public offering on June 30, 2022, and \$86.2 million raised from the sale of the Series 2 Convertible Notes. In addition, Cordoba, received a \$10.0 million bridge loan from JCHX in connection with the strategic arrangement for the joint development of the Alacran Project.

## Material Cash Obligations

As of December 31, 2023, we had the following material known cash obligations in addition to our discretionary mineral project obligations described above:

	Material Cash Obligations (in thousands)				
	Total	2024	2025-2026	2027-2028	2029 onwards
Note payable <sup>(1)</sup>	\$ 48,324	\$ 12,081	\$ 24,162	\$ 12,081	\$ —
Long-term debt obligations <sup>(2)</sup>	24,000	—	24,000	—	—
Typhoon purchase obligations	6,010	4,153	1,857	—	—
Loan from related party <sup>(3)</sup>	4,000	4,000	—	—	—
Total material cash obligations	<u>\$ 82,332</u>	<u>\$ 20,233</u>	<u>\$ 50,018</u>	<u>\$ 12,081</u>	<u>\$ —</u>

- (1) The promissory note was issued as part of the consideration for the acquisition of certain land for the Santa Cruz Project. Four equal principal payments of \$12.1 million remain to be paid on the first, second, third and fourth anniversaries of November 2023, plus applicable accrued interest.
- (2) The \$24.0 million convertible bond issued by VRB that matures in 2026 if not converted to common shares of VRB prior to such date. As of December 31, 2023, the value of the convertible bond including accrued interest was \$28.4 million.
- (3) JCHX advanced a short-term loan of \$4 million to Cordoba in connection with the strategic arrangement for the joint development of Cordoba's Alacran Project. The loan was fully repaid in January 2024.

## Off Balance Sheet Arrangements

As of December 31, 2023, we were not involved in any off-balance sheet arrangements that have or are reasonably likely to have a material effect on our financial condition, results of operations, or liquidity.

## Related Party Transactions

See Note 19 of our consolidated financial statements for the years ended December 31, 2023 and 2022.

## Critical Accounting Estimates

Our management's discussion and analysis of our financial condition and results of operations is based on our consolidated financial statements which have been prepared in accordance with U.S. GAAP. The preparation of these financial statements requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses, as well as the disclosure of contingent assets and liabilities as of the date of our financial statements.

Below are the accounting matters that we believe are critical to our financial statements due to the degree of uncertainty regarding the estimates or assumptions involved and the magnitude of the asset, liability, revenue, expense, gain or loss being reported. Actual results may vary from our estimates in amounts that may be material to the financial statements. An accounting estimate is deemed to be critical if it requires an accounting estimate to be made based on assumptions about matters that are highly uncertain at the time the estimate is made, and if different estimates that reasonably could have been used or changes in the accounting estimates that are reasonably likely to occur periodically, could materially impact our financial statements.

We base our assumptions and estimates on historical experience and various other sources that we believe to be reasonable under the circumstances. Actual results may differ from the estimates we calculate due to changes in circumstances, global economics and politics and general business conditions. A summary of our significant accounting policies are detailed in Note 2 to our consolidated financial statements included in this Annual Report. We have outlined below those policies identified as being critical to the understanding of our business and results of operations and that require the application of significant management judgment in developing estimates.

### *Recoverable value of exploration mineral interests*

We review and evaluate exploration mineral interests for impairment when events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. The recoverability of our exploration mineral interests and intangible assets did not involve significant estimation in the periods presented as circumstances did not indicate the carrying amount of our assets may not be recoverable. However, the recoverability of our recorded mineral interests is subject to market factors that could significantly affect the recoverability of our assets, such as commodity prices, results of exploration activities that may affect our intentions to continue under option or earn-in agreements and geopolitical circumstances, particularly in Colombia. By nature, significant changes in these factors are reasonably possible to occur periodically, which could materially impact our financial statements.

### *Stock-based compensation*

Compensation expense for options granted to employees, directors and certain service providers is determined based on estimated fair values of the options at the time of grant using the Black-Scholes option pricing model, which takes into account, as of the grant date, the fair market value of the shares, expected volatility, expected life, expected dividend yield and the risk-free interest rate over the expected life of the option. The use of the Black-Scholes option pricing model requires input estimation of the expected life of the option and volatility, which can have a significant impact on the valuation model and resulting expense recorded.

We granted 950,000 stock options during the year ended December 31, 2023. The table below details the options granted and the Black-Scholes option pricing model assumptions used to compute the fair value of the options:

	February 1, 2023 Grant Date	March 1, 2023 Grant Date	July 1, 2023 Grant Date	August 9, 2023 Grant Date	November 1, 2023 Grant Date
Number of options granted	500,000	100,000	100,000	200,000	50,000
Exercise price	\$13.23	\$15.46	\$13.04	\$16.03	\$11.75
Black-Scholes option-pricing model fair value	\$7.22	\$8.53	\$6.95	\$8.46	\$5.96
Black-Scholes option-pricing model assumptions:					
Risk-free interest rate	3.7%	4.5%	4.4%	4.4%	4.2%
Dividend yield	nil	nil	nil	nil	nil
Estimated volatility	69.8%	69.5%	66.2%	65.4%	64.7%
Expected option life	4 years	4 years	4 years	4 years	4 years

The risk-free interest rate assumption was based on the U.S. treasury constant maturity yield at the date of the grant over the expected life of the option. No dividends are expected to be paid. We calculated the estimated volatility based on the historical volatility of a group of peer companies' common stock and a group of relevant stock market indices over the expected option life as we only commenced publicly trading in June 2022. The computation of expected option life was determined based on a reasonable expectation of the option life prior to the option being exercised or forfeited.

### *Income taxes*

We make estimates and judgments in determining the provision for income tax expense, deferred tax assets and liabilities and liabilities for unrecognized tax benefits, including interest and penalties. We are subject to income tax laws in many jurisdictions, including the United States, Canada, Colombia, Peru, Australia, the Ivory Coast and the PRC.

We report income tax in accordance with U.S. GAAP, which requires the establishment of deferred tax accounts for all temporary differences between the financial reporting and tax bases of assets and liabilities, using currently enacted tax rates. In addition, deferred tax accounts must be adjusted to reflect new rates if enacted into law.

Realization of deferred tax assets is contingent on the generation of future taxable income. As a result, we consider whether it is more likely than not that all or a portion of such assets will be realized during periods when they are available, and if not, we provide a valuation allowance for amounts not likely to be recognized. In determining our valuation allowance, we have not assumed future taxable income from sources other than the reversal of existing temporary differences. The extent to which a valuation allowance is warranted may vary as a result of changes in our estimates of future taxable income. In addition to the potential generation of future taxable income through the establishment of

economic feasibility, development and operation of mines on our exploration assets, estimates of future taxable income could change in the event of disposal of assets, the identification of tax-planning strategies or changes in tax laws that would allow the benefits of future deductible temporary differences in certain entities or jurisdictions to be offset against future taxable temporary differences in other entities or jurisdictions.

We recognize the effect of uncertain income tax positions if those positions are more likely than not of being sustained. The amount recognized is subject to estimates and our judgment with respect to the likely outcome of each uncertain tax position. The amount that is ultimately incurred for an individual uncertain tax position or for all uncertain tax positions in the aggregate could differ from the amount recognized. We had no uncertain tax positions as of December 31, 2023.

**Item 7A. Quantitative and Qualitative Disclosures About Market Risk**

Not applicable.



**IVANHOE ELECTRIC INC.**

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

(Tabular amounts expressed in thousands of U.S. dollars, unless otherwise indicated)

**10. Note payable:**

	<b>Note payable</b>
Balance at December 31, 2022	\$ —
Issuance	82,590
Finance expense	4,314
Payment	(37,988)
Balance at December 31, 2023	<u>\$ 48,916</u>
Current portion	12,672
Non-current portion	36,244
Balance at December 31, 2023	<u>\$ 48,916</u>

In connection with the land acquisition described in Note 7, the Company issued a secured promissory note in the amount of \$82.6 million. The promissory note includes an annual interest rate of prime plus 1% and is to be paid in installments, as follows:

- \$34.3 million, plus accrued interest, paid in November 2023;
- four equal principal payments of \$12.1 million on the first, second, third and fourth anniversaries of the November 2023 payment, plus applicable accrued interest.

## **Item 9. Changes in and Disagreements With Accountants on Accounting and Financial Disclosures**

None

### **Item 9A. Controls and Procedures**

#### **Disclosure Controls and Procedures**

Our management, under the supervision and with the participation of our Chief Executive Officer and our Chief Financial Officer, our principal executive and principal financial officers, respectively, conducted an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act of 1934, as amended, as of the end of the period covered by this Annual Report. Based on an evaluation under the supervision of our Chief Executive Officer and our Chief Financial Officer, it was concluded that, as of the end of the period covered by this report, our disclosure controls and procedures were effective:

- (a) to ensure that information that we are required to disclose in reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in SEC rules and forms and
- (b) to include, without limitation, controls and procedures designed to ensure that information required to be disclosed by us in reports filed or submitted under the Exchange Act is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

#### **Management's Annual Report on Internal Control over Financial Reporting**

Management of Ivanhoe Electric is responsible for establishing and maintaining adequate internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting. Ivanhoe Electric's management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2023, in accordance with the criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). Based on the management's assessment, Ivanhoe Electric's internal control over financial reporting was effective as of December 31, 2023.

Deloitte LLP, an Independent Registered Public Accounting Firm, has audited the Company's internal control over financial reporting as of December 31, 2023, and as stated in the Report of Independent Registered Public Accounting Firm, they have expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting as of December 31, 2023.

#### **Inherent Limitations over Internal Controls**

The Company's internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. GAAP. The Company's internal control over financial reporting includes those policies and procedures that:

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

Management, including the Company's Chief Executive Officer and Chief Financial Officer, does not expect that the Company's internal controls will prevent or detect all errors and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of internal controls can provide absolute assurance that all control issues and instances of fraud, if any, have been detected. Also, any evaluation of the effectiveness of controls in future periods are subject to the risk that those internal controls may become inadequate because of changes in business conditions, or that the degree of compliance with the policies or procedures may deteriorate.

**Attestation Report of the Independent Registered Public Accounting Firm**

This Annual Report includes an attestation report of our registered public accounting firm regarding internal control over financial reporting, as presented in Item 8.

**Changes in Internal Control over Financial Reporting**

There were no changes in our internal control over financial reporting identified in connection with the evaluation required by Rule 13a-15(d) and 15d-15(d) of the Exchange Act that occurred during the quarter ended December 31, 2023 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

**Item 9B. Other Information**

During the quarterly period ended December 31, 2023, no director or officer (as defined in Rule 16a-1(f) under the Exchange Act) adopted or terminated any Rule 10b5-1 trading arrangement or non-Rule 10b5-1 trading arrangement.

**Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections**

Not applicable.

## Part III

### Item 10. Directors, Executive Officers and Corporate Governance

The following table sets forth information regarding our directors and executive officers as of February 22, 2024.

Name	Age	Position
Robert Friedland	73	Executive Chairman of the Board of Directors
Taylor Melvin	54	Chief Executive Officer, President and Director
Russell Ball	55	Director
Hirofumi Katase	64	Director
Priya Patil	61	Director
Patrick Loftus-Hills	57	Director
Ronald Vance	71	Director
Victoire de Margerie	60	Director
Sofia Bianchi	67	Director
Jordan Neeser	41	Chief Financial Officer
Quentin Markin	51	Executive Vice President, Business Development and Strategy Execution
Mark Gibson	55	Chief Geophysics Officer
Graham Boyd	38	Senior Vice President, U.S. Projects
Glen Kuntz	56	Senior Vice President, Mine Development
Cassandra Joseph	52	General Counsel and Corporate Secretary
Stephani Terhorst	45	Vice President, Human Resources

### Biographical Information

**Robert Friedland** has served as Executive Chairman of the Board of Directors since November 21, 2022. Prior to that time, Mr. Friedland was CEO from 2020 and Chairman of the Board from 2021. Mr. Friedland has over 30 years of experience and has been recognized by leaders of the international financial sector and mineral resource industries as an entrepreneurial explorer, technology innovator and company builder. Mr. Friedland has been the Director, President and CEO of Ivanhoe Capital Corporation (“Ivanhoe Capital”), since 1988, the executive Co-Chairman since September 2018 (previously the Executive Chairman from May 2012 until September 2018) of Ivanhoe Mines Ltd. and the Co-Chair Director of SK Global Entertainment, Inc. from February 2017 to December 2021. Additionally, since December 2015 Mr. Friedland has been the Chief Executive Officer of HPX, an 85% owner of the Nimba high-grade iron Ore deposit in Guinea. Mr. Friedland was the Director, Chairman and President of Ivanhoe Pictures, Inc. from May 2013 to December 2021, and currently the Chairman of VRB Energy Inc. As one of the most recognized mining personalities and achievers in the world, Mr. Friedland is dedicated to serving on numerous boards in the natural resources sector. These positions include: Co-Chairman and Director of Sunrise Energy Metals Limited (formerly Clean TeQ Holdings Limited); Chairman of I-Pulse Inc. and a director of Kietta SASand of Pure Lithium Corporation. From June 2020 to June 2021, Mr. Friedland served as Chairman of Gold X Mining Corp., which was acquired by Gran Colombia in June 2021, at which time Mr. Friedland left the board of directors. Mr. Friedland founded Ivanhoe Capital Acquisition Corp., a NYSE-listed special purpose acquisition corporation that completed its merger with SES AI Corporation (“SES”), a lithium-metal battery developer, in February 2022. Since April 2022, Mr. Friedland has served as the chairman of Energy Capital Group. Mr. Friedland graduated with a degree in political science from Reed College.

**Taylor Melvin** has served as our Chief Executive Officer, President and member of our Board of Directors since November 2022. Mr. Melvin has over 20 years of experience in the natural resources sector as a senior corporate development professional and investment banker. He was President and Chief Executive Officer of Battery Metals Streaming Corp. from March 2022 to August 2022, and Vice President, Corporate Development for Freeport-McMoRan Inc. (NYSE: FCX), a leading international mining company focused on copper, headquartered in Phoenix, Arizona, from August 2018 to March 2022, after having served as its Director – Finance & Business Development since 2008. Prior to joining Freeport in 2008, Mr. Melvin was an Executive Director in J.P. Morgan’s Natural Resources investment banking group in New York. Mr. Melvin received his Bachelor of Science in Business Administration and his MBA from the University of North Carolina at Chapel Hill.

**Russell Ball** has served as a director since June 30, 2022 and is the Chair and a member of the Audit Committee and member of the Compensation Committee and Nominating Committee. Mr. Ball is an international mining executive with thirty years of experience. He was the Chief Executive Officer of Calibre Mining Corp. (TSX: CXB) from October 2019 to February 2021 and Chair of the board from November 2018 to February 2021. From May 2013 to December 2017, Mr. Ball held various executive positions with Goldcorp Inc. (TSX: G; NYSE: GG) and was Goldcorp's Executive Vice President Corporate Development and Chief Financial Officer from March 2016 to November 2017. Prior to that, Mr. Ball held various positions with Newmont Mining Corporation (NYSE: NEM) from 1994 to 2013 and was Executive Vice President and Chief Financial Officer from 2008 to May 2013. Mr. Ball is a Non-Executive Chair of the board of Faraday Copper Corp. (TSX:FDY) and is a director of Southern Silver Exploration Corp (TSX.V: SSL). Mr. Ball qualified as a Chartered Accountant (South Africa) and as a Certified Public Accountant in the United States. He holds a Masters in Accounting and a Post-Graduate Diploma in Accounting from the University of Natal (South Africa).

**Hirofumi Katase** has served as a director since January 2022. Mr. Katase has served as Executive Vice Chairman, Director General of Industrial Science and Technology and a member of the Board of Directors of I-Pulse Inc. since December 2017. Mr. Katase is also President of I-Pulse Japan Co., Ltd., I-Pulse's operating subsidiary in Japan. He is a CEO of G-Pulse Inc., a subsidiary of I-Pulse developing a drilling technology based on high pulsed power. Prior to these roles, he most recently served as Japan's Vice Minister for International Affairs at the Ministry of the Economy, Trade and Industry ("METI") from June 2016 to July 2017. He held numerous management positions in trade, energy and industrial policy at METI since joining in 1982. During his time at METI, Mr. Katase served in multiple Director General positions, including for the Industrial Science and Technology Policy and Environment Bureau and Trade Policy Bureau, where he led efforts that contributed to the signing of the Trans-Pacific Partnership, among other international agreements. He also was previously Deputy Secretary-General of the Secretariat of Strategic Headquarters for Space Policy at the Cabinet Office, where he helped establish the Office of National Space Policy, the headquarters responsible for Japan's development of space policy and deployment of space infrastructure. He was also a Director of the Oil and Natural Gas division at METI, where he led Japan's upstream hydrocarbon policy for four years. At METI, he also served as a Director of the Aerospace and Defense Industry division where he worked on launching the Mitsubishi Regional Jet (MRJ) program and cultivated international partnerships for the development of aircraft and aircraft engines. He has been a director of MinebeaMitsumi, a manufacturing company, since June 2021. Mr. Katase earned a Bachelor's degree in law from the University of Tokyo and a Master's degree in applied economics from the University of Michigan.

**Patrick Loftus-Hills** has served as a director since March 2023 and is a member of the Compensation Committee and Nominating Committee. Mr. Loftus-Hills brings over 35 years of experience in the global mining industry and is currently a Senior Advisor at Moelis & Company, a New York-based investment bank. He is also a former Partner and Managing Director at Moelis & Company. Prior to joining Moelis & Company in 2011, Mr. Loftus-Hills was the Joint Head of the Asian Industrials Group and Head of Natural Resources at UBS in Hong Kong and held leadership roles in the UBS global mining team in New York and Australia. He spent over 25 years in investment banking advising global mining companies on a range of transactions, including cross-border M&A and capital raises. He is also a Managing Member - Advisor of Sweetwater Royalties LLC, an Orion Resource Partners portfolio company, Chairman of the Monash University US Leadership Council, Co-Chairman of the US Friends of the Australian Chamber Orchestra and Vice Chairman of the AUS USA Foundation. He holds Law and Science degrees from Monash University in Australia.

**Victoire de Margerie** has served as a director of Ivanhoe Electric since June 30, 2022. Prof. de Margerie is the Executive Chairman/Reference Shareholder of Rondol Industrie SAS, an extrusion technology company, since 2012, a Director of Eurazeo (Euronext Paris) since 2012 and a Director and Chair of the Technology & Growth Committee of Verkor (France - EV Batteries) since 2023. Prof. de Margerie has spent 38 years in the Materials Industry in Canada, France, Germany, the United Kingdom and the United States, first as an executive and since 2006 as a Board Director. Prof. de Margerie was a Director and Chair of the Innovation & Growth Committee of Arkema SA (Euronext Paris: AKE) from 2012 to 2022, and a Director of Babcock International Group (LSE: BAB) from 2016 to 2021. She was previously a Director of European industrial companies such as Italcementi, Morgan Ceramics, Outokumpu & Norsk Hydro. Prof. de Margerie is also Founder & Vice Chairman of World Materials Forum since 2014, she was elected an Academician at the National Academy of Technologies of France in 2019 and she joined the board of Mines ParisTech in 2021. She graduated from HEC Paris and Sciences Po Paris and holds a PhD in Management Science from Université de Paris 2, Pantheon Assas.

**Priya Patil** has served as a director of Ivanhoe Electric since June 30, 2022 and is the Chair of Compensation and Nominating Committee and a member of the Audit Committee. Ms. Patil is an experienced corporate director, former senior public company executive, and investment banker. In 2016, she began serving as an independent corporate director of public companies and as a volunteer board member of universities and other economy-focused organizations since 2003. She was Head, Business Development (Diversified Industries) of the TSX from 2014 to 2016. She was Managing Director, Partner and Founding Partner (Eastern Operations) of PI Financial Corp. and a Managing Director, Partner and Head of



Investment Banking of Loewen Ondaatje McCutcheon. Ms. Patil was the global general corporate counsel of Breakwater Global Resources Ltd, a Canadian and U.S. listed mining company. She started her career as an attorney with Brobeck, Phleger & Harrison LLP in Palo Alto, California. Ms. Patil was a director of Rambler Metals & Mining PLC (AIM of LSE: RMM), Chair of its Compensation, Governance and Nominations Committee and a member of its Audit and Safety, Health, Environment and Community committees. She also served on the board of Signature Resources Inc. (TSX-V: SIG). From 2016 to 2019, she was an independent corporate director of Alexandria Minerals Corporation, Chair of its Audit Committee and a member of the Management & Special Committee. Ms. Patil holds a J.D. from the University of Ottawa and a B.Sc. (Statistics and Computer Sciences), University of Bombay. Ms. Patil has completed the Directors Education Program at the Rotman School of Management (University of Toronto) and the Innovation Governance Program of the Council of Canadian Innovators. She is a member of the State Bar of California, the Ontario Bar (Law Society of Ontario) and Charter of the Institute of Corporate Directors (ICD.D).

**Ronald Vance** has served as a director since June 2023 and a member of the Audit Committee. Mr. Vance is a corporate director and retired senior executive with a distinguished track record in corporate development, corporate finance advisory and marketing management. He has over 40 years of experience in mining and corporate development. Mr. Vance retired from Teck Resources Limited where he served as Senior Vice President, Corporate Development from 2006 to 2014. Prior to joining Teck Resources, Mr. Vance worked as a Managing Director of Rothschild (Denver) Inc. from 1991 to 2000 and as Managing Director/Senior Advisor of Rothschild Inc. from 2000 to 2005. Mr. Vance is currently an independent director of Royal Gold Inc. (NASDAQ: RGLD) and serves as a member of its Audit and Finance Committee. Mr. Vance served as Chairman of the Board of Southern Peaks Mining, L.P. in 2018.

**Sofia Bianchi** has served as a director since July 2023. Ms. Bianchi has 37 years of finance experience and has held several executive and director positions internationally. She is currently the founding partner at Atlante Capital Partners, an investment firm focused on financial restructuring, since May 2016. She also serves as Chair of Canagold Resources Ltd. (CCM:CA) since July 2022, as a Non-Executive Director of Saudi Arabian Mining Company (Ma'aden) (Saudi Stock Exchange Tadawul) since December 2022, and as a Non-Executive Director of Manara Minerals Investment Company of Riyadh, Saudi Arabia, a venture between Ma'aden and the Public Investment Fund (PIF) to invest in mining assets globally since June 2003. She is also a Non-Executive Director of Sitex SA and Spitex Perspecta AG (SOL SpA Group), companies specializing in home-based healthcare, since 2017 and 2019, respectively; and an Independent Non-Executive Director of Yellow Cake plc. (AIM:YCA), a uranium company, since 2018. Formerly Ms. Bianchi served as Head of Special Situations at the CDC Group and served on the boards of Feronia Inc. (TSX) from January 2019 to July 2020 and ARM Cement PLC (Nairobi Securities Exchange) from January 2018 to January 2019 during the companies' financial and operational restructuring. Ms. Bianchi also served as a Director of Endeavour Mining Corporation (TSX & LSE) from November 2019 to May 2022 and as a Director of Kenmare Resources Plc (LSE & Dublin Stock Exchange) from April 2008 to May 2017. Ms. Bianchi holds a Master's degree in finance from the University of Pennsylvania – Wharton Business School, and a Bachelor of Arts degree in Economics from George Washington University.

**Jordan Neeser** has served as our Chief Financial Officer since November 21, 2022. Mr. Neeser is a finance executive with 20 years of experience in financial reporting, corporate development, and corporate finance, primarily in the mining sector. Most recently Mr. Neeser was CFO and Corporate Secretary at TSX listed Gold Standard Ventures from March 2021 to August 2022, when it was acquired by Orla Mining (TSX:OLA) in August, 2022. Mr. Neeser was previously CFO of Conifex Timber (TSX:CFF) from December 2018 to March 2021, and before that spent eight years with First Quantum (TSX:FM) as both Group Controller and Director, Business Development. Mr. Neeser started his career with KPMG, is a Chartered Public Accountant, Chartered Accountant, and holds a Bachelor of Commerce degree from the University of British Columbia, Vancouver, Canada.

**Quentin Markin** has served as our Executive Vice President, Business Development and Strategy Execution since January 1, 2023. Mr. Markin is a seasoned mining lawyer with 24 years of experience, all with the Canadian firm Stikeman Elliott LLP, where he had been a partner since 2008. Over his career, he has lived and practiced in the world's mining centers — Sydney, London, Vancouver and Toronto. Mr. Markin's practice focused on M&A, project development and financing matters for mining companies globally and has been recognized by international legal consultancy Chambers for 11 years as a mining law expert. Mr. Markin has acted for the Company since its inception, as well as other Ivanhoe group companies, including Ivanhoe Mines, but also senior producers, junior exploration companies, and investment banks. His notable transactions outside of the Ivanhoe Group include the 2007 Cdn\$1.2 billion initial public offering of Franco-Nevada and the 2015 acquisition by OceanaGold of Romarco Minerals and its Haile Gold Mine located in South Carolina for around Cdn\$856 million. Mr. Markin received his Bachelor of Law Degree from the University of Ottawa, Canada, and holds an M.A. in International Relations from the Norman Patterson School of International Affairs, Ottawa, Canada.

**Mark Gibson** has served as our Chief Geophysics Officer since July 2023 and has served the function of our principal operating officer since April 2021. He also serves as the Chief Operating Officer of Kaizen since May 2016 and Chief

Operating Officer of Cordoba since August 2017. Mr. Gibson has more than 33 years of wide-ranging experience as a geoscientist and manager in the natural resources sector. Mr. Gibson joined HPX in 2011 as the company's founding executive and was instrumental in the formation of Kaizen in 2013 and HPX's strategic partnership with Cordoba in 2015. Mr. Gibson has served on the board Ivanhoe Electric's subsidiary Computational Geosciences Inc. since June 2011. Before joining HPX, Mr. Gibson worked with Anglo American, and was the founder of a geophysical service company focused on managing seismic surveys for the mining industry. Mr. Gibson holds a M.Sc. Geophysics from the University of Leeds; a B.Sc. (Hons) Geology from the University of Southampton and is a Registered Professional Geoscientist in the Province of British Columbia and is a registered Professional Natural Scientist (Pr.Sci.Nat) with the South African Council for Natural Scientific Professions.

**Graham Boyd** has served as our Senior Vice President, Exploration since August 7, 2023 and prior to that was our Senior Vice President and Vice President, U.S. Projects since November, 2022 and June, 2021, respectively. Mr. Boyd is a Geologist with over 17 years of base and precious metals experience, having worked principally in Australia, North America and South America. Prior to joining the Company, Mr. Boyd held various roles within HPX including as Principal and Senior Geologist since 2013, and has been responsible for identification, review, acquisition and execution of numerous exploration projects, particularly those that form our portfolio of projects in the United States. While with HPX, Mr. Boyd was a leader in the delineation and exploration success of the Alacran and San Matias Cu-Au- Ag deposits in Colombia. Prior to HPX, Mr. Boyd held roles with Ivanhoe Australia and Ivanhoe Mines Mongolia, since 2006. At Ivanhoe Australia, Mr. Boyd was a member of the discovery team for the world's highest grade Mo-Re deposit, Merlin, and he also was a key contributor to delineation and resource development of the Mount Dore Cu and Mt Elliott- SWAN Cu-Au deposits. Prior to roles in the Ivanhoe Group, Mr. Boyd worked on copper porphyries in British Columbia, and diamond exploration in Nunavut and Quebec. Mr. Boyd holds a Bachelor of Science in Geoscience from the University of Victoria.

**Glen Kuntz** has served as our Senior Vice President, Mine Development since November 21, 2022 and prior to that was our Chief Technical and Innovation Officer since January 2022. He is also Vice President of Mesa Cobre Corporation, one of our subsidiaries, effective April 2022. Mr. Kuntz is a Qualified Person, Professional Geologist and mining executive with over 30 years of experience focused on exploration, development and operations (underground and open pit), technology, and studies across a variety of commodities and mining types/methods throughout the Americas, Africa and Australia. Prior to joining the Company, Mr. Kuntz was a consulting specialist geology/mining at Nordmin since March 2018 and before that a director of exploration projects at Yamana Gold Inc. from 2015 to 2018. Mr. Kuntz was also President and CEO of Mega Precious Metals Inc., a successful junior exploration company, from 2012 to 2015 which was acquired by Yamana Gold, and its Chief Operating Officer from 2011 to September, 2012. Mr. Kuntz gained significant development/production experience in a variety of other senior positions with Runge Ltd., Placer Dome Corporation, and Rea Gold Corporation. Mr. Kuntz holds a Bachelor of Science in Geology from the University of Manitoba.

**Cassandra Joseph** has been the Company's General Counsel and Corporate Secretary since February 1, 2023. Ms. Joseph is an accomplished U.S. mining industry legal executive with over 20 years of experience in corporate, environmental and intellectual property law. Before joining the Company, Ms. Joseph was Senior Vice President and General Counsel for Nevada Copper in Reno, Nevada from May 2019 to January 2023. Prior to Nevada Copper, she served as Vice President, Associate General Counsel, Corporate Secretary, and Chief Compliance Officer from 2015 to 2019 for Reno, Nevada-based Tahoe Resources prior to its sale to Pan American Silver. Ms. Joseph also worked in the Nevada Attorney General's Office, representing the Division of Environmental Protection, the Division of Water Resources, and other agencies within the Department of Natural Resources. She holds a Juris Doctor from Santa Clara University School of Law and a Bachelor of Arts from the University of California, Berkeley.

**Stephani Terhorst** has been the Company's Vice President Human Resources since March 2023. Ms. Terhorst is an accomplished human resources and employee benefits professional with 25 years of Human Resources experience, primarily in the coal and aggregates mining sector. Prior to joining the Company, Ms. Terhorst was the Senior Director of Human Resources and Benefits with NACCO Industries, a coal producer in Dallas, Texas since 2016. She has also served as Director of Human Resources for Jennmar Corporation, which manufactures various underground mining products. Ms. Terhorst holds Certified Employee Benefits Specialist, Professional in Human Resources, and Group Benefits Associate certifications. She holds a Bachelor's degree in Human Resources Management from the University of Pittsburgh and a Master's degree in Human Resources and Industrial Relations from St. Francis University.

## **Code of Business Conduct and Ethics**

Our Board of Directors has adopted a Code of Business Conduct and Ethics ("Code of Conduct") applicable to our employees, directors and officers, in accordance with applicable United States federal securities laws and the corporate governance requirements of the NYSE American. A current copy of the Code of Conduct is available on the Corporate Governance section of our website.

The Board of Directors is responsible for overseeing the Code of Conduct. Any waivers of the Code of Conduct for directors or executive officers must be approved by our Board of Directors and disclosed on Form 8-K within four business days after the occurrence of the event. We expect that any amendments to the Code of Conduct, or any waivers of its requirements with respect to our executive officers and directors, will be disclosed on our website at the address indicated above, which is our recognized channel of communication for investors for purposes of Regulation FD. Our website and the information contained therein or connected thereto shall not be deemed to be incorporated into this Annual Report.

The information required by this item is incorporated by reference to our definitive Proxy Statement for our 2024 Annual Meeting of Stockholders (the "2024 Proxy Statement"), which will be filed with the SEC not later than 120 days after December 31, 2023.

## Item 11. Executive Compensation

The information required by this item is incorporated by reference to the 2024 Proxy Statement.

## Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The information required by this item is incorporated by reference to the 2024 Proxy Statement.

### Equity Compensation Plan Information

Information about our equity compensation plans at December 31, 2023 was as follows:

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights A	Weighted-average exercise price of outstanding options, warrants and rights <sup>(1)</sup> B	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column A) C
Equity compensation plans approved by stockholders (2022 LTIP)	4,842,504 <sup>(2)</sup>	\$12.34	4,563,142 <sup>(3)(4)</sup>
Equity compensation plans not approved by stockholders (2021 LTIP)	2,662,349	\$2.49	0
Total	7,504,853	\$8.11	4,563,142

(1) The weighted-average exercise price does not reflect the shares that will be issued in connection with the settlement of RSUs or DSUs, since RSUs and DSUs have no exercise price.

(2) Consists of 3,536,588 shares of common stock issuable upon the exercise of stock options, 1,250,000 shares of common stock deliverable upon settlement of RSUs, and 55,916 shares of common stock deliverable upon settlement of DSUs.

(3) Consists of shares issuable under outstanding options under the LTIP as of December 31, 2023. Following the adoption of the LTIP, no further awards will be made under the Prior Incentive Plan. Shares issuable under the LTIP may be used for any type of award authorized under the LTIP, including stock options, stock appreciation rights, restricted stock, restricted stock units, deferred stock units, other stock or cash-based awards, and dividend equivalents.

(4) As of January 1, 2024, the number of securities available for future issuance under the 2022 LTIP increased by 6,001,263 pursuant to the Plan terms.

## Item 13. Certain Relationships and Related Transactions, and Director Independence

The information required by this item is incorporated by reference to the 2024 Proxy Statement.

## Item 14. Principal Accounting Fees and Services

Our independent registered public accounting firm is Deloitte LLP (PCAOB ID No. 1208).

The information required by this item is incorporated by reference to the 2024 Proxy Statement.

## Part IV

### Item 15. Exhibits, Financial Statement Schedules

The following documents are filed as part of this Annual Report on Form 10-K:

- (1) Financial Statements. See Item 8 “Financial Statements and Supplemental Information” elsewhere in this Annual Report on Form 10-K.
- (2) Financial Statement Schedules. None. Financial statement schedules have been omitted because they are not applicable.
- (3) Exhibits. The following exhibits are filed (or incorporated by reference herein) as part of this Annual Report on Form 10-K:

Exhibit Number	Description	Incorporated by Reference				Filed / Furnished Herewith
		Form	File No.	Exhibit	Filing Date	
<a href="#">2.1</a>	Contribution Agreement dated as of April 30, 2021, between the High Power Exploration Inc. and the Registrant	S-1	333-265175	2.1	May 24, 2022	
<a href="#">3.1</a>	Amended and Restated Certificate of Incorporation of the Registrant as currently in effect	8-K	001-41436	3.1	June 30, 2022	
<a href="#">3.2</a>	Amended and Restated By-Laws of the Registrant as currently in effect	8-K	001-41436	3.2	June 30, 2022	
<a href="#">4.1</a>	Description of Registrant’s Securities					*
<a href="#">4.2</a>	Stockholders Agreement dated as of April 30, 2021, by and among the Registrant, I-Pulse Inc., Ivanhoe Industries, LLC, Point Piper, LLC, Century Vision Holdings Limited and Iridium Opportunity Fund A LP	S-1	333-265175	4.4	May 24, 2022	
<a href="#">4.3</a>	First Amendment dated as of June 28, 2021 to the Stockholders Agreement dated as of April 30, 2021, by and among the Registrant, I-Pulse Inc., Ivanhoe Industries, LLC, Point Piper, LLC, Century Vision Holdings Limited and Iridium Opportunity Fund A LP	S-1	333-265175	4.5	May 24, 2022	
<a href="#">4.4</a>	Second Amended and Restated Stockholders Agreement dated as of April 5, 2022, by and among the Registrant, I-Pulse Inc., Ivanhoe Industries, LLC, Point Piper, LLC, and each of the investors signatory thereto	S-1	333-265175	4.6	May 24, 2022	
<a href="#">4.5</a>	Amended and Restated Registration Rights Agreement dated as of April 5, 2022, by and among the Registrant and the investors signatory thereto	S-1	333-265175	4.7	May 24, 2022	
<a href="#">10.1</a>	Assignment Agreement dated as of October 27, 2021 by and among the Registrant, Mesa Cobre Holding Corporation, Central Arizona Resources, LLC, Presidio Group Inc., Russell Mining Corp., and Gold Coast Mining Inc.	S-1	333-265175	10.1	May 24, 2022	
<a href="#">10.2</a>	Purchase and Sale Agreement between Mesa Cobre Holding Corporation and Wolff-Harvard Ventures, LLC dated May 10, 2023.	8-K/A	001-41436	10.1	May 11, 2023	
<a href="#">10.3</a>	Secured Promissory Note between Mesa Cobre Holding Corporation and Wolff-Harvard Ventures, LP dated May 23, 2023	8-K	001-41436	10.1	May 24, 2023	
<a href="#">10.4</a>	Deed of Trust and Assignment of Rents between Mesa Cobre Holding Corporation and First American Title Insurance Company for the benefit of Wolff-Harvard Ventures, LP dated May 23, 2023	8-K	001-41436	10.2	May 24, 2023	
<a href="#">10.5</a>	Technology License Agreement dated as of March 23, 2012, between High Power Exploration Inc. and I-Pulse Inc	S-1	333-265175	10.3	May 24, 2022	
<a href="#">10.6</a>	Technology License Agreement dated as of March 23, 2012, between High Power Exploration Inc. and HPX TechCo Inc. and GEO27 S.a.r.l	S-1	333-265175	10.4	May 24, 2022	
<a href="#">10.7</a>	Patent License Agreement Amendment and Novation dated as of March 23, 2012, between High Power Exploration Inc. and GEO27 S.a.r.l.	S-1	333-265175	10.5	May 24, 2022	
<a href="#">10.8</a>	Assignment and Novation Agreement, dated as of April 30, 2021, between High Power Exploration Inc. and each of I-Pulse Inc., HPX TechCo Inc. and GEO27 S.a.r.l.	S-1	333-265175	10.6	May 24, 2022	

<a href="#">10.9</a>	Option Agreement for Purchase and Sale, dated August 16, 2021, by and between Central Arizona Resources, LLC and DRH Energy, Inc.	S-1	333-265175	10.7	May 24, 2022	
<a href="#">10.10</a>	Amended and Restated Shareholders' Corporate Management and Cost Sharing Agreement dated as of December 4, 2013, as amended as of January 1, 2016, among the shareholders of Global Mining Management (BVI) Corp., Global Mining Management (BVI) Corp. and Global Mining Management Corporation	S-1	333-265175	10.9	May 24, 2022	
<a href="#">10.11#</a>	Purchase and Sale Agreement dated as of October 19, 2017	S-1	333-265175	10.10	June 21, 2022	
<a href="#">10.12#</a>	Purchase and Sale Agreement dated as of October 4, 2018	S-1	333-265175	10.11	June 21, 2022	
<a href="#">10.13#</a>	Purchase and Sale Agreement dated as of October 4, 2018	S-1	333-265175	10.12	June 21, 2022	
<a href="#">10.14#</a>	Purchase and Sale Agreement dated as of October 4, 2018	S-1	333-265175	10.13	June 21, 2022	
<a href="#">10.15#</a>	Purchase and Sale Agreement dated as of June 14, 2019	S-1	333-265175	10.14	June 21, 2022	
<a href="#">10.16</a>	Heads of Terms Between Saudi Arabian Mining Company (Ma'aden) and Ivanhoe Electric, Inc.	8-K	001-41436	10.1	January 11, 2023	
<a href="#">10.17##</a>	Common Stock Subscription Agreement between Ivanhoe Electric Inc. and Saudi Arabian Mining Company (Ma'aden) dated May 15, 2023	8-K	001-41436	10.1	May 15, 2023	
<a href="#">10.18</a>	Investor Rights Agreement between Ivanhoe Electric Inc. and Saudi Arabian Mining Company (Ma'aden) dated July 6, 2023	10-Q	001-41436	10.9	August 14, 2023	
<a href="#">10.19</a>	Shareholders Agreement by and among Ivanhoe Electric Inc., Ivanhoe Electric Mena Holdings Ltd., Ma'aden Ivanhoe Electric Exploration and Development Limited Company and Saudi Arabian Mining Company (Ma'aden) dated July 6, 2023	10-Q	001-41436	10.10	August 14, 2023	
<a href="#">10.20</a>	Amendment to Shareholders' Agreement in Respect of Ma'aden Ivanhoe Electric Exploration and Development Company dated November 1, 2023					*
<a href="#">10.21</a>	Amendment #2 to Shareholders' Agreement in Respect of Ma'aden Ivanhoe Electric Exploration and Development Limited Company dated January 1, 2024					*
<a href="#">10.22^</a>	Common Stock Subscription Agreement between Ivanhoe Electric Inc. and Saudi Arabian Mining Company (Ma'aden) dated October 23, 2023	8-K/A	001-41436	10.1	October 24, 2023	
<a href="#">10.23=</a>	Ivanhoe Electric Inc. Equity Incentive Plan	S-1	333-265175	10.15	May 24, 2022	
<a href="#">10.24=</a>	Long Term Incentive Plan	S-1	333-265175	10.16	June 21, 2022	
<a href="#">10.25=</a>	Form of Stock Option Agreement (Employees) pursuant to the Ivanhoe Electric, Inc. 2022 Long Term Incentive Plan	10-K	001-41436	10.24	March 14, 2023	
<a href="#">10.26=</a>	Form of Stock Option Agreement (CEO) pursuant to the Ivanhoe Electric, Inc. 2022 Long Term Incentive Plan	10-K	001-41436	10.25	March 14, 2023	
<a href="#">10.27=</a>	Form of Stock Option Agreement (Executive, 4-year vesting) pursuant to the Ivanhoe Electric, Inc. 2022 Long Term Incentive Plan	10-K	001-41436	10.26	March 14, 2023	
<a href="#">10.28=</a>	Form of Stock Option Agreement (Executive, 3-year vesting) pursuant to the Ivanhoe Electric, Inc. 2022 Long Term Incentive Plan	10-K	001-41436	10.27	March 14, 2023	
<a href="#">10.29=</a>	Form of Restricted Stock Unit Award Agreement (4-year vesting) pursuant to the Ivanhoe Electric, Inc. 2022 Long Term Incentive Plan	10-K	001-41436	10.28	March 14, 2023	
<a href="#">10.30=</a>	Form of Restricted Stock Unit Award Agreement (3-year vesting) pursuant to the Ivanhoe Electric, Inc. 2022 Long Term Incentive Plan	10-K	001-41436	10.29	March 14, 2023	
<a href="#">10.31=</a>	Form of Restricted Stock Unit Award Agreement (5-year vesting) pursuant to the Ivanhoe Electric, Inc. 2022 Long Term Incentive Plan					*
<a href="#">10.32=</a>	Form of Non-Employee Director Deferred Stock Unit Award Agreement (3-year grant)	10-K	001-41436	10.30	March 14, 2023	
<a href="#">10.33=</a>	Form of Non-Employee Director Deferred Stock Unit Award Agreement (annual grant)	10-K	001-41436	10.31	March 14, 2023	
<a href="#">10.34=</a>	Form of Non-Employee Director Deferred Share Unit Award Agreement	10-Q	001-41436	10.12	August 14, 2023	
<a href="#">10.35=</a>	Form of Non-Employee Director Deferred Share Unit Award Agreement (without election)					*
<a href="#">10.36=</a>	Cordoba Minerals Corp. Long Term Incentive Plan					*



<a href="#">10.37=</a>	Cordoba Minerals Corp. Stock Option Plan					*
<a href="#">10.38=</a>	VRB Energy Inc. (formerly JD Holding Inc.) Stock Option Plan					*
<a href="#">10.39</a>	Form of Indemnification Agreement	S-1	333-265175	10.19	June 21, 2022	
<a href="#">10.40</a>	Form of Director Indemnification Agreement	8-K	001-41436	Schedule 6 of 10.1	May 15, 2023	
<a href="#">10.41=</a>	Employment Agreement between the Ivanhoe Electric Inc. and Taylor Melvin dated October 21, 2022	10-Q	001-41436	10.1	November 14, 2022	
<a href="#">10.42=</a>	Employment Agreement between Ivanhoe Electric Inc. and Jordan Neeser dated November 17, 2022	8-K	001-41436	10.2	November 21, 2022	
<a href="#">10.43=</a>	Executive Employment Agreement dated December 30, 2022 between the Company and Stephani Terhorst					*
<a href="#">10.44=</a>	Executive Employment Agreement dated January 4, 2023 between the Company and Cassandra Joseph	10-Q	001-41436	10.2	May 15, 2023	
<a href="#">10.45=</a>	Executive Employment Agreement dated July 1, 2023 between the Company and Mark Gibson	10-Q	001-41436	10.1	August 14, 2023	
<a href="#">10.46=</a>	Amended and Restated Executive Employment Agreement dated August 2, 2023 between the Company and Glen Kuntz	10-Q	001-41436	10.2	August 14, 2023	
<a href="#">10.47=</a>	Amended and Restated Executive Employment Agreement dated August 7, 2023 between the Company and Quentin Markin	10-Q	001-41436	10.3	August 14, 2023	
<a href="#">10.48=</a>	Executive Employment Agreement dated August 7, 2023 between the Company and Graham Boyd	10-Q	001-41436	10.4	August 14, 2023	
<a href="#">10.49=</a>	Strategic Advisory Services Agreement between Cordoba Minerals Corp. and Robert Friedland dated December 3, 2020					*
<a href="#">10.50</a>	Underwriting Agreement dated as of September 14, 2023	8-K	001-41436	1.1	September 14, 2023	
<a href="#">14.1</a>	Code of Ethics	10-K	001-41436	14.1	March 14, 2023	
<a href="#">21.1</a>	Subsidiaries of the Registrant					*
<a href="#">23.1</a>	Consent of Deloitte LLP					*
<a href="#">23.2</a>	Qualified Person Consent SRK for report titled "S-K 1300 Technical Report Summary & Exploration Results Report, Tintic Project, Utah" dated February 23, 2024					*
<a href="#">23.3</a>	Qualified Person Consent Barco NI 43-101 Technical Report titled "NI 43-101 Technical Report and Feasibility Study, Alacran Project, Colombia" with an effective date of December 18, 2023					*
<a href="#">23.4</a>	Qualified Person Consent Cepuritis NI 43-101 Technical Report titled "NI 43-101 Technical Report and Feasibility Study, Alacran Project, Columbia" with an effective date of December 18, 2023					*
<a href="#">23.5</a>	Qualified Person Consent Duggan NI 43-101 Technical Report titled "NI 43-101 Technical Report and Feasibility Study, Alacran Project, Columbia" with an effective date of December 18, 2023					*
<a href="#">23.6</a>	Qualified Person Consent Frost NI 43-101 Technical Report titled "NI 43-101 Technical Report and Feasibility Study, Alacran Project, Columbia" with an effective date of December 18, 2023					*
<a href="#">23.7</a>	Qualified Person Consent Jones NI 43-101 Technical Report titled "NI 43-101 Technical Report and Feasibility Study, Alacran Project, Columbia" with an effective date of December 18, 2023					*
<a href="#">23.8</a>	Qualified Person Consent McCracken NI 43-101 Technical Report titled "NI 43-101 Technical Report and Feasibility Study, Alacran Project, Colombia" with an effective date of December 18, 2023					*
<a href="#">23.9</a>	Qualified Person Consent Muir NI 43-101 Technical Report titled "NI 43-101 Technical Report and Feasibility Study, Alacran Project, Colombia" with an effective date of December 18, 2023					*
<a href="#">23.10</a>	Qualified Person Consent Robinson NI 43-101 Technical Report titled "NI 43-101 Technical Report and Feasibility Study, Alacran Project, Colombia" with an effective date of December 18, 2023					*

<a href="#"><u>23.11</u></a>	Qualified Person Consent Williamson NI 43-101 Technical Report titled “NI 43-101 Technical Report and Feasibility Study, Alacran Project, Colombia” with an effective date of December 18, 2023	*
<a href="#"><u>23.12</u></a>	Qualified Person Consent Leslie Cole NI 43-101 Technical Report titled “Pinaya Gold- Copper Project Technical Report” with an effective date of April 26, 2016	*
<a href="#"><u>23.13</u></a>	Qualified Person Consent Simpson NI 43-101 Technical Report titled “Pinaya Gold-Copper Project Technical Report” with an effective date of April 26, 2016	*
<a href="#"><u>23.14</u></a>	Qualified Person Consent SRK Consulting (U.S.), Inc. for report titled “S-K 1300 Initial Assessment & Technical Report Summary, Santa Cruz Project, Arizona” dated September 6, 2023	*
<a href="#"><u>23.15</u></a>	Qualified Person Consent of KCB Consultants Ltd. for report titled “S-K 1300 Initial Assessment & Technical Report Summary, Santa Cruz Project, Arizona” dated September 6, 2023	*
<a href="#"><u>23.16</u></a>	Qualified Person Consent of Life Cycle Geo, LLC for report titled “S-K 1300 Initial Assessment & Technical Report Summary, Santa Cruz Project, Arizona” dated September 6, 2023	*
<a href="#"><u>23.17</u></a>	Qualified Person Consent of M3 Engineering and Technology Corp. for report titled “S-K 1300 Initial Assessment & Technical Report Summary, Santa Cruz Project, Arizona” dated September 6, 2023	*
<a href="#"><u>23.18</u></a>	Qualified Person Consent of Nordmin Engineering Ltd. for report titled “S-K 1300 Initial Assessment & Technical Report Summary, Santa Cruz Project, Arizona” dated September 6, 2023	*
<a href="#"><u>23.19</u></a>	Qualified Person Consent of Call & Nicholas, Inc. for report titled “S-K 1300 Initial Assessment & Technical Report Summary, Santa Cruz Project, Arizona” dated September 6, 2023	*
<a href="#"><u>23.20</u></a>	Qualified Person Consent of Tetra Tech, Inc. for report titled “S-K 1300 Initial Assessment & Technical Report Summary, Santa Cruz Project, Arizona” dated September 6, 2023	*
<a href="#"><u>23.21</u></a>	Qualified Person Consent of INTERA Incorporated for report titled “S-K 1300 Initial Assessment & Technical Report Summary, Santa Cruz Project, Arizona” dated September 6, 2023	*
<a href="#"><u>23.22</u></a>	Qualified Person Consent of Haley & Aldrich, Inc. for report titled “S-K 1300 Initial Assessment & Technical Report Summary, Santa Cruz Project, Arizona” dated September 6, 2023	*
<a href="#"><u>23.23</u></a>	Qualified Person Consent of Met Engineering, LLC for report titled “S-K 1300 Initial Assessment & Technical Report Summary, Santa Cruz Project, Arizona” dated September 6, 2023	*
<a href="#"><u>23.24</u></a>	Qualified Person Consent of Todd McCracken NI 43-101 Technical Report titled “NI 43-101 Technical Report, Mineral Resource Estimate for the Samapleu and Grata Deposits Project” dated August 11, 2023	*
<a href="#"><u>23.25</u></a>	Qualified Person Consent of Chris Martin NI 43-101 Technical Report titled “NI 43-101 Technical Report, Mineral Resource Estimate for the Samapleu and Grata Deposits Project” dated August 11, 2023	*
<a href="#"><u>23.26</u></a>	Qualified Person Consent of Glen Kuntz	*
<a href="#"><u>23.27</u></a>	Qualified Person Consent of Sarah Bull	*
<a href="#"><u>31.1</u></a>	Certification of Principal Executive Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002	*
<a href="#"><u>31.2</u></a>	Certification of Principal Financial Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002	*

<a href="#">32.1+</a>	Certification of Principal Executive Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002						*
<a href="#">32.2+</a>	Certification of Principal Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002						*
<a href="#">96.1</a>	Technical Report Summary on the Santa Cruz Project, Arizona, U.S.A., SRK Consulting (U.S.), Inc., KCB Consultants Ltd., Life Cycle Geo, LLC, M3 Engineering and Technology Corp., Nordmin Engineering Ltd., Call & Nicholas, Inc., Tetra Tech, Inc., INTERA Incorporated, Haley & Aldrich, Inc., and Met Engineering, LLC, dated of September 6, 2023	8-K	001-41436	96.1	September 6, 2023		
<a href="#">96.2</a>	S-K 1300 Technical Report Summary & Exploration Results Report, Tintic Project, Utah, prepared by SRK Consulting (U.S.) Inc., dated February 23, 2024						*
<a href="#">97.1</a>	Ivanhoe Electric Inc. Clawback Policy						*
101.INS	Inline XBRL Instance Document – the instance document does not appear in the Interactive Data File because XBRL tags are embedded within the Inline XBRL document.						*
101.SCH	Inline XBRL Taxonomy Extension Schema Document						*
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document						*
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document						*
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document						*
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document						*
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)						*

+ The information contained in Exhibits 32.1 and 32.2 shall not be deemed “filed” for purposes of Section 18 of the Exchange Act of 1934, as amended, or the Exchange Act, or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference in any filing under the Securities Act or the Exchange Act (including this Annual Report on Form 10-K), unless the Registrant specifically incorporates the foregoing information into those documents by reference.

# Portions of this exhibit have been omitted because they are both (i) not material and (ii) would likely cause competitive harm to the Company if publicly disclosed.

## Certain schedules or portions thereof are omitted pursuant to Item 601(a)(5) of Regulation S-K. The Company agrees to provide on a supplemental basis a copy of any omitted schedule to the U.S. Securities and Exchange Commission or its staff upon request.

^ Certain schedules or portions thereof are omitted pursuant to Item 601(a)(6) of Regulation S-K. The Company agrees to provide on a supplemental basis a copy of any omitted schedule or portion to the U.S. Securities and Exchange Commission or its staff upon request.

= Indicates management contract or compensatory plan.

## Item 16. Form 10-K Summary

None.

## Signatures

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

Date: February 26, 2024

**Ivanhoe Electric Inc.**

/s/ Taylor Melvin

Taylor Melvin

Chief Executive Officer, President and Director

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

Signature	Title	Date
<u>/s/ Robert Friedland</u> Robert Friedland	Executive Chairman of the Board of Directors	February 23, 2024
<u>/s/ Taylor Melvin</u> Taylor Melvin	Chief Executive Officer, President and Director ( <i>Principal Executive Officer</i> )	February 26, 2024
<u>/s/ Jordan Neeser</u> Jordan Neeser	Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	February 26, 2024
<u>/s/ Russell Ball</u> Russell Ball	Director	February 22, 2024
<u>/s/ Sofia Bianchi</u> Sofia Bianchi	Director	February 22, 2024
<u>/s/ Victoire de Margerie</u> Victoire de Margerie	Director	February 23, 2024
<u>/s/ Hirofumi Katase</u> Hirofumi Katase	Director	February 22, 2024
<u>/s/ Patrick Loftus-Hills</u> Patrick Loftus-Hills	Director	February 23, 2024
<u>/s/ Priya Patil</u> Priya Patil	Director	February 23, 2024
<u>/s/ Ronald Vance</u> Ronald Vance	Director	February 22, 2024



# CORPORATE INFORMATION

## CORPORATE HEADQUARTERS

450 E Rio Salado Parkway, Suite 130  
Tempe, Arizona 85281

## CASA GRANDE OFFICE

501 N Florence Street, Suite 102  
Casa Grande, Arizona 85122

## VANCOUVER OFFICE

606 - 999 Canada Place  
Vancouver, British Columbia  
Canada V6C 3E1

## INVESTOR RELATIONS

**E** [info@ivanhoeelectric.com](mailto:info@ivanhoeelectric.com)

**T** +1-480-656-5821

## STOCK EXCHANGE LISTING

NYSE AMERICAN: **IE**

TSX: **IE**

## AUDITOR

**Deloitte LLP**

8 Adelaide Street West, Suite 200  
Toronto, Ontario  
Canada M5H 0A9

## REGISTRAR AND TRANSFER AGENT

**Computershare Trust Company**

**E** [web.queries@computershare.com](mailto:web.queries@computershare.com)

**T** 1-800-564-6253 (Toll Free North America)

**T** 1-514-982-7555 (International)

**T** 1-888-838-1405 (Broker Queries)

## WEBSITE

**[ivanhoeelectric.com](http://ivanhoeelectric.com)**





[ivanhoeelectric.com](http://ivanhoeelectric.com)

NYSE AMERICAN | TSX: IE