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**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, 2022

OR

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

For the transition period from      to

Commission File Number 001-41436

**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.)

**606 – 999 Canada Place**  
**Vancouver, BC Canada**

V6C 3E1

(Address of principal executive offices)

(Zip Code)

Registrant's telephone number, including area code **(604) 689-8765**

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 type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input checked="" type="checkbox"/>	Smaller reporting company	<input checked="" type="checkbox"/>
		Emerging growth company	<input checked="" 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, 2022 (the last business day of the registrant’s most recently completed second fiscal quarter) was approximately \$504.8 million.

The number of shares of Registrant’s Common Stock outstanding as of March 14, 2023 was 92,971,865.

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#### DOCUMENTS INCORPORATED BY REFERENCE

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Portions of the registrant’s definitive proxy statement to be filed within 120 days of December 31, 2022 in connection with its 2023 Annual Meeting of Stockholders are incorporated by reference into Part III, Items 11-14 of this Form 10-K.

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## 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.

“**Development**” is work carried out for the purpose of accessing a mineral deposit. In an underground mine, this work includes shaft sinking, crosscutting, drifting and raising. In an open pit mine, development includes the removal of overburden.

“**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 study of a mineral deposit in which all geological, engineering, legal, operating, economic, social, environmental and other relevant factors are considered in sufficient detail that it could reasonably serve as the basis for a final decision by a financial institution to finance the development of the deposit for mineral production.

“**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 Resources**” or “**Indicated Resources**” 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.

“**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.

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

“**kt**” means kilotonnes.

“**kW**” means kilowatts.

“**m<sup>2</sup>**” is 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 Reserves**” means the economically mineable part of a Measured or Indicated Resource demonstrated by at least a preliminary feasibility study. This study must include adequate information on mining, processing, metallurgical, economic and other relevant factors that demonstrate, at the time of reporting, that economic extraction can be justified. A Mineral Reserve includes diluting materials and allowances for losses that may occur when the material is mined.

“**Mineral Resources**” means a concentration or occurrence of diamonds, natural solid inorganic material, or natural solid fossilized organic material including base and precious metals, coal, and industrial minerals in or on the earth’s crust in such form and quantity and of such a grade or quality that it has reasonable prospects for economic extraction. The location, quantity, grade, geological characteristics and continuity of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge.

“**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 a) the sale price of the metal products less certain transportation, treatment and refining costs, or b) for Cordoba’s San Matias project as below:

$$\text{NSR}_{\text{Cu}} = \text{Cu}_{\%} * \text{MiningRec}_{\%} * \text{MillCuRec}_{\%} * 51.53\% \text{ Cu (On Site Value)}$$

$$\text{NSR}_{\text{Au}} = \text{Au}_{\text{g/t}} * \text{MiningRec}_{\%} * \text{MillAuRec}_{\%} * 46.55_{\$/\text{g}} \text{ (On Site Value)}$$

$$\text{NSR}_{\text{Ag}} = \text{Ag}_{\text{g/t}} * \text{MiningRec}_{\%} * \text{MillAgRec}_{\%} * 0.54_{\$/\text{g}} \text{ (On Site Value)}$$

$$\text{NSR} = \text{NSR}_{\text{Cu}} + \text{NSR}_{\text{Au}} + \text{NSR}_{\text{Ag}}$$

- 98% dilution was applied to estimated Cu, Au, and Ag grades.

“**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.

“**Probable Mineral Reserve**” means the economically mineable part of an Indicated, and in some circumstances a Measured Mineral Resource demonstrated by at least a preliminary feasibility study. This study must include adequate information on mining, processing, metallurgical, economic, and other relevant factors that demonstrate, at the time of reporting, that economic extraction can be justified.

“**Proven Mineral Reserve**” means the economically mineable part of a Measured Mineral Resource demonstrated by at least a preliminary feasibility study. This preliminary feasibility study must include adequate information on mining, processing, metallurgical, economic, and other relevant factors that demonstrate, at the time of reporting, that economic extraction can be justified.

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

“**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.

- We operate no mines, and the development of our mineral projects into mines is highly speculative, involves 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.
- The mineral resource calculations are only estimates and may change adversely.
- 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.
- The prices of the minerals for which we are principally exploring change on a daily basis, and a substantial or extended decline in the prices of these minerals could materially and adversely affect our business.
- We do not own the majority of the mineral subsurface and surface rights at the Santa Cruz and Tintic Projects.
- Actual capital costs, operating costs, production and economic returns may differ significantly from those we have anticipated.
- 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.
- 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 mine closure may be burdensome and costly.
- We may face opposition from organizations that oppose mining, which may disrupt or delay our mining projects.
- Our future capital and operating cost estimates at any of our mining projects may not be accurate.
- A significant portion of any future revenue from our operations is expected to come from a small number of mines.
- 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 the mineral projects may be uncertain or defective, which could put our investment in such mineral projects at risk.
- Failure to make 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 the mineral projects or damage to existing infrastructure may occur.
- Our future mining operations may require access to abundant water sources.
- An increase in prices of power and water supplies, including infrastructure, could negatively affect our business.
- 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.
- Our subsidiary, Cordoba Minerals Corp. (“Cordoba”), operates in a jurisdiction, Colombia, which has heightened security risks.
- Our subsidiary, Kaizen Discovery, Inc. (“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.
- Lack of reliability and inaccuracies of historical information could hinder our exploration plans.
- We may be exposed to infringement or misappropriation claims by third parties.
- Currency fluctuations may affect our results of operations 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.
- 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 disruption.
- We may be subject to claims and legal proceedings that could materially and adversely impact our business, financial condition or results of operations.
- We will require substantial capital investment in the future.
- 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.
- Our activities and business could be adversely affected by the effects of health epidemics, including the ongoing COVID-19 pandemic.
- While our equity ownership in certain of our listed company portfolio may be significant, we may not be able to exert control or direction over those companies or their business.
- We have mineral projects or investments in mineral projects in countries where the governments extensively regulate mineral exploration and mining operations.



- Our foreign mining projects and investments are subject to risk typically associated with operating in foreign countries.
- Uncertainty in governmental agency 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.
- If a substantial number of shares become available for sale and are sold in a short period of time, the market price of our common stock could decline.
- The price of our common stock may be volatile and fluctuate substantially.
- 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.
- Robert Friedland, our founder and Executive Chairman, and I-Pulse, one of our principal stockholders for which Mr. Friedland is Chairman of the board of directors, have a substantial degree of influence over the outcome of all matters submitted to stockholders, which may delay or prevent a change of control.
- Our amended and restated certificate of incorporation and amended and restated by-laws contain provisions that may make a take over of the Company more difficult.
- 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.
- We do not currently intend to pay dividends on our common stock and consequently, your ability to achieve a return on your investment will depend on appreciation in the price of our common stock.
- We are an “emerging growth company” and a “smaller reporting company,” and are subject to reduced disclosure requirements.
- 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.

**Risks Specific to VRB include:**

- 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.
- Developments in alternative technology may adversely affect the demand for VRB’s battery products.
- VRB may experience significant delays in the design, production and launch of our battery projects.
- VRB batteries rely on software and hardware that is highly technical, and if these systems contain errors, bugs or vulnerabilities, our business could be adversely affected.

- We may not be able to substantially increase our manufacturing output in order to fulfill orders from our customers.
- If we are unable to successfully obtain, maintain, protect or enforce our intellectual property and proprietary rights, we may incur significant expenses and our business may be adversely affected.
- Changes in the policies of the Government of the People’s Republic of China (“PRC”), and its laws, may materially affect VRB.
- Any revocation of approvals by, any failure to obtain approvals from, or any adverse changes in foreign investment policies of, the PRC government may have a material adverse impact on our business.
- 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.

## **Part I**

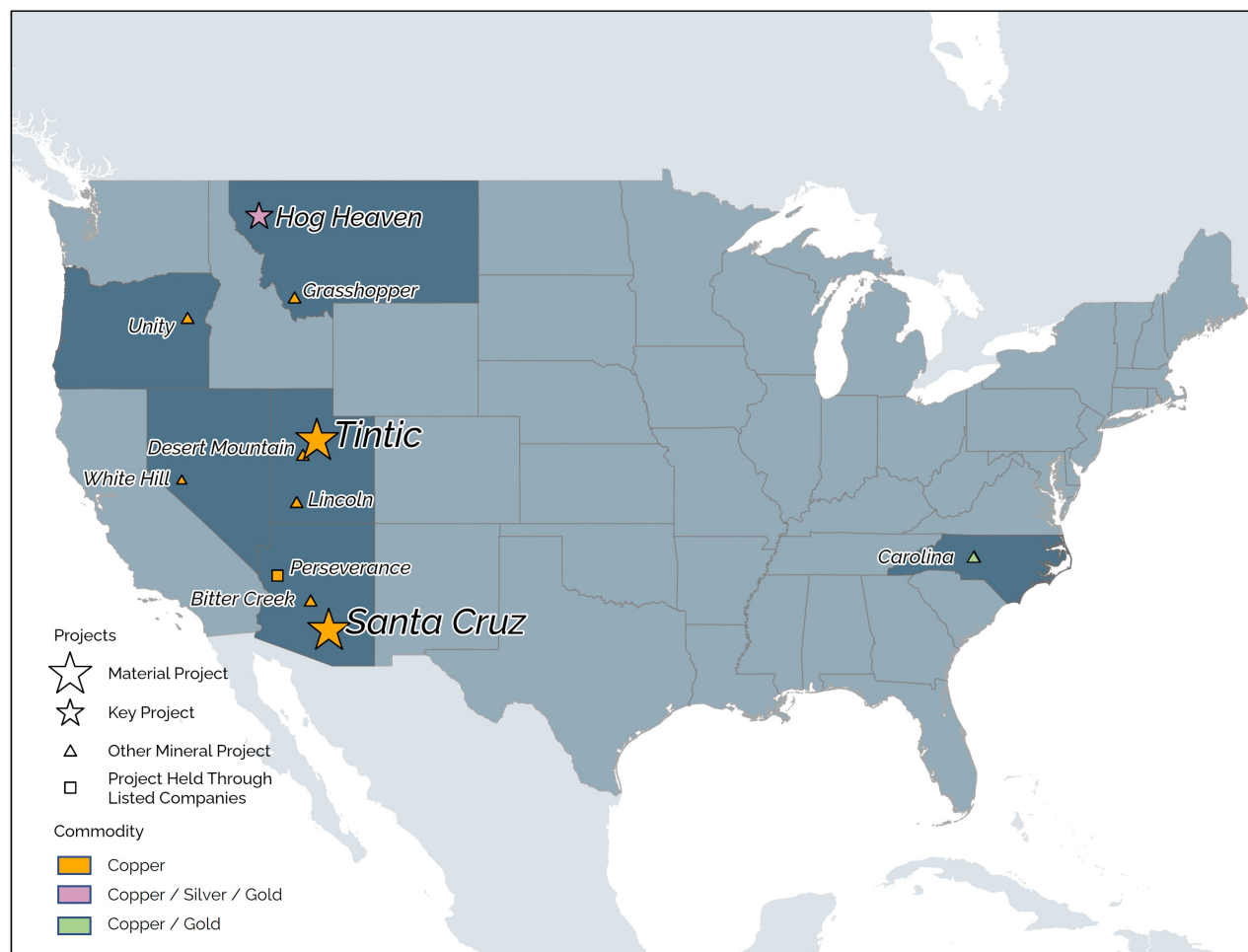
### **Item 1. Business**

#### **Overview**

We are a United States domiciled minerals exploration and development 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 underexplored 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 are committed to building upon our team’s strong ESG track record, including at Ivanhoe Mines Ltd. (“Ivanhoe Mines”), founded by Robert Friedland, our founder and Executive Chairman, leveraging best practices and seeking to establish Ivanhoe Electric as an ESG 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, optimizing and minimizing our water resource utilization, minimizing our environmental footprint, ensuring workforce diversity and hiring from local communities, following best practices to meet the highest health, safety and environmental standards as well as protecting local cultural heritage and biodiversity. Most importantly, our products play a critical ESG role by supporting electrification and enabling the clean energy transition.

## Our United States Mineral Projects

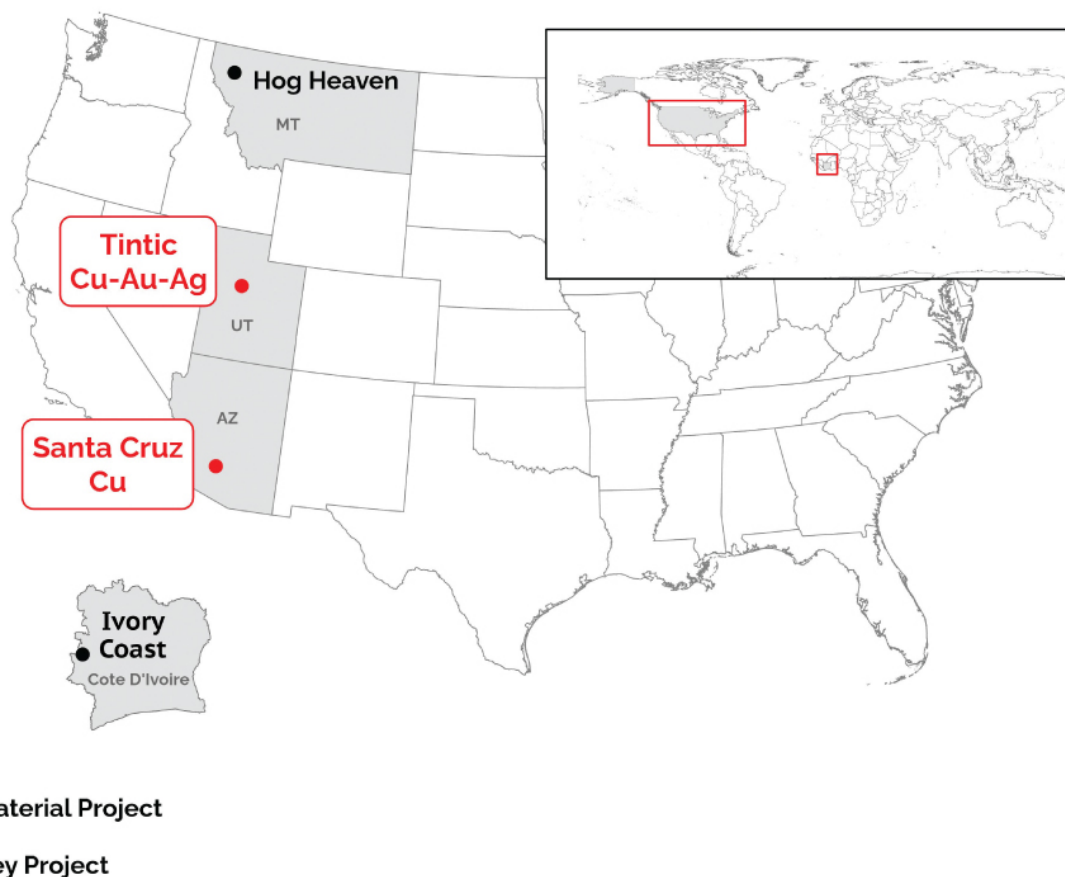


### Material and Key Mineral Projects

Our two material mineral projects are the Santa Cruz Project in Arizona and the Tintic Project in Utah. Santa Cruz is a copper project situated in a prolific mining region that hosts some of the largest copper mines in the United States. Tintic is an exploration project located 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 porphyry copper-gold deposit. We have the option to acquire 100% of the mineral rights constituting the Santa Cruz and Tintic projects and we own or have option agreements in place to own the majority of the surface land at our Tintic Project.

Our other key mineral projects are the Hog Heaven Copper-Silver-Gold Project (“Hog Heaven”), located in Montana, and the Sama Nickel-Copper-Palladium Project, located in the Ivory Coast, in which we have both direct and indirect interests.

We use several criteria to distinguish between our material properties, key properties and exploration projects. In particular, we have evaluated each property using the following criteria (without ranking the criteria in any particular order): stage of development of the mineral property; level of ownership of the mineral property and/or level of ownership we have the right to obtain in the future; size and quality of any mineral reserve or mineral resource; prospectivity of each mineral property based on exploration results obtained; current and proposed programs of exploration; current and/or expected proposed expenditure and financing needs for each mineral property; and historical activities and expenditures incurred.



#### *Typhoon™ and Computational Geosciences*

In addition to our portfolio of material and key mineral projects, 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 owned by our wholly-owned subsidiary Geo27, Inc. (“Geo27”). We also own a 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. We also are the exclusive worldwide licensee of certain technology from I-Pulse Inc. (“I-Pulse”). I-Pulse is the parent of our predecessor company, High Power Exploration Inc. (“HPX”).

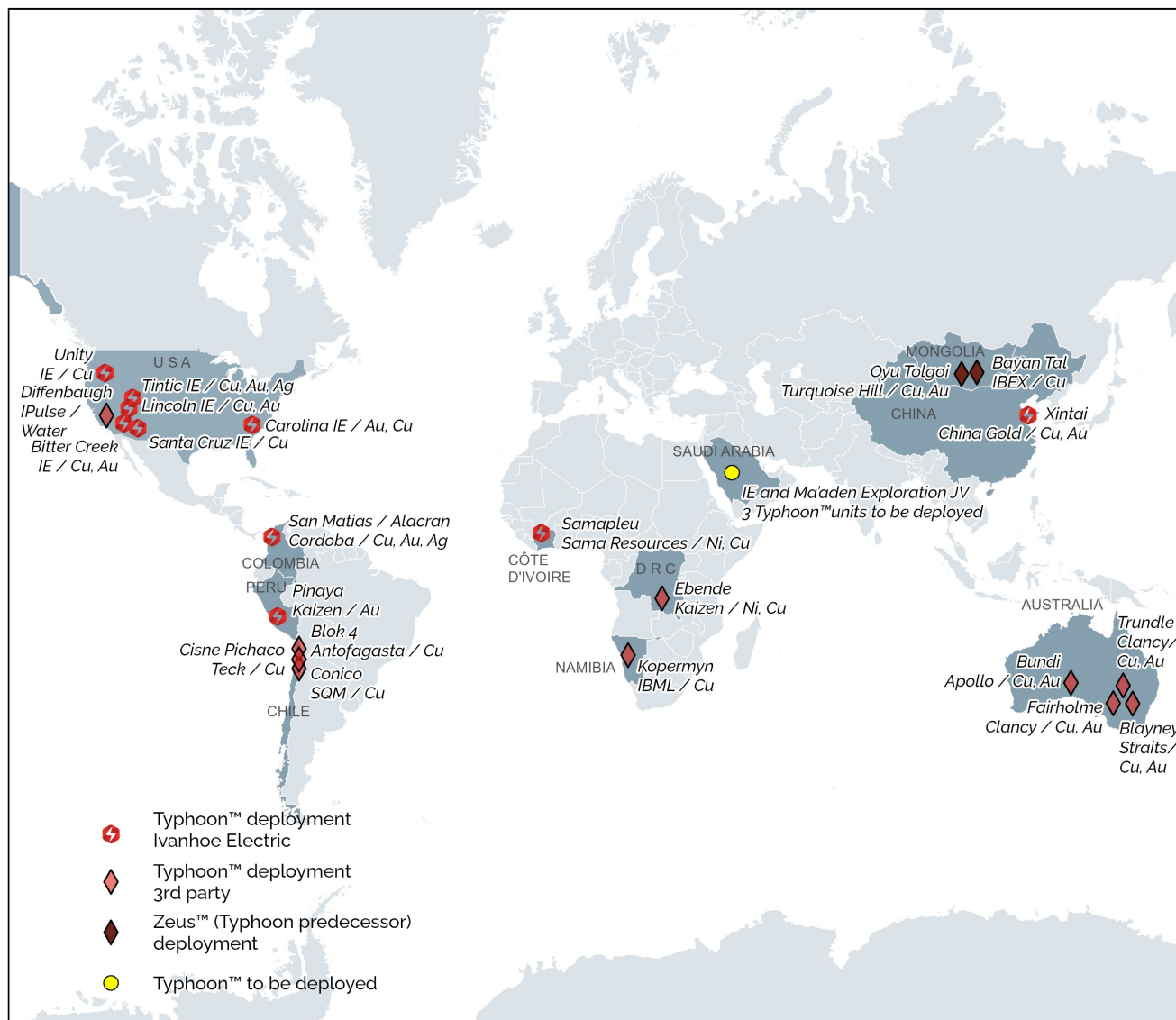
The Typhoon™ technology allows us to cost effectively and efficiently generate geophysical images of large-scale mineral deposits to depths of one and a half kilometers or more. The CGI software technology consists of sophisticated codes to process geophysical data and build 3D subsurface images that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

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	21/09/2031
		International (PCT)			20/09/2032
		Australia	05/01/2017	AU2012311429	20/09/2032
		Brazil	19/01/2021	BR112014006276	20/09/2032
		Canada	22/05/2018	CA2849558	20/09/2032
		Indonesia			20/09/2032
		Turkey	21/04/2015	TR201403350B	20/09/2032
		USA	28/02/2017	US9584037	20/09/2032
Patent	Current generator and method for generating current pulses	France	04/04/2014	FR2988933	29/03/2032
		International (PCT)			28/03/2033
		Australia	20/10/2016	AU2013241675	28/03/2033
		Canada	08/09/2020	CA2869170	28/03/2033
		Chile	30/10/2018	56649	28/03/2033
		Peru	20/05/2019	PE9489	28/03/2033
		USA	28/06/2016	US9379636	28/03/2033
Patent	Switch and system to inject current	France	25/01/2022	FR3105446	19/12/2039

Typhoon™ can and has been used to successfully 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. These anomalies may indicate the potential to expand the currently known copper oxide and sulfide mineralization at Santa Cruz. On November 8, 2022, we announced the discovery of the East Ridge oxide copper zone at Santa Cruz, which was related to one of the anomalies identified by Typhoon™ and on which we conducted exploration drilling following the survey. On November 29, 2022, we announced the discovery of a new zone of sulfide mineralization called the Far Southwest Anomaly which was drill tested below 1,000 meters of overlying basin-fill gravel and conglomerates. Typhoon™ has also been utilized at many of our other projects. Current and historical deployment of Typhoon™ by us, HPX and third-party clients is shown on the map below.

We also hold a worldwide, exclusive license to certain legacy technology from I-Pulse to, among other things, use, develop, sell and commercialize products and services incorporating such legacy technology within the field of geological surveying for mineral exploration. The license from I-Pulse is perpetual (subject to the expiration of the patents owned by I-Pulse underlying a portion of the I-Pulse technology). The license is also terminable by us on 120 days' written notice to I-Pulse, and by either party only upon material breach of the license agreement under which the I-Pulse license was granted or insolvency of the other party.



## 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 petroleum waste. In July 2021, BCPG Public Company Limited (“BCPG”), one of Asia-Pacific’s largest renewable energy companies, invested US\$24 million in convertible bonds issued by VRB. As of December 31, 2022, we owned approximately 90.0% of the outstanding shares of VRB.

## History

We were incorporated in Delaware on July 14, 2020, as a wholly-owned subsidiary of HPX.

On April 30, 2021, HPX completed a reorganization 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 in Guinea; (ii) certain property, plant and equipment; and (iii) certain financial assets, in exchange for shares of our common stock.



HPX then distributed the shares of our 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.

On June 30, 2022, we completed our initial public offering (“IPO”) in which we 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.

### **Ma’aden Transaction**

On January 11, 2023, the Company entered into a binding Heads of Terms (the “Agreement”) with Saudi Arabian Mining Company Ma’aden (“Ma’aden”), the largest multi-commodity mining and metals company in the Middle East. The Agreement provides the binding framework of key terms for a strategic investment by Ma’aden of an aggregate of \$126.4 million in newly issued shares of common stock of the Company (the “Shares”) and the concurrent establishment of a 50/50 exploration joint venture in the Kingdom of Saudi Arabia described below (the “Joint Venture”).

Pursuant to the terms of the Agreement, we will agree to issue and sell to Ma’aden (directly or to a subsidiary) approximately 10.2 million shares of common stock at a purchase price of \$12.38 per share for aggregate gross proceeds of \$126.4 million in a private placement. We will contribute \$66.4 million of the proceeds from the issuance and sale of the Shares to fund the Joint Venture, including the purchase of three new Typhoon™ machines, and will retain \$60 million of the gross proceeds to advance our United States mineral projects, as well as for working capital and general corporate purposes.

After the issuance and sale of the Shares, Ma’aden will hold 9.9% of our common stock. We also will grant Ma’aden a 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 in the future, including stock issued as a result of (i) issuances to employees pursuant to any existing or future equity incentive plan, agreement or arrangement approved by the Board of Directors; (ii) the exercise or vesting of incentive securities; or (iii) shares issued as acquisition consideration. Ma’aden may exercise this right (the “top-up right”) upon the first occurrence after such dilution event in which we issue shares (or securities convertible into shares) for cash as part of an equity financing transaction. In the event that Ma’aden does not exercise its top-up right, the ownership threshold for purposes of the top-up right will be reduced to its ownership level after giving effect to the dilutive issuance. The top-up right will expire on the earlier of (i) five years from the date of completion of Ma’aden’s 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 its top-up rights, or (b) Ma’aden has sold, transferred or otherwise disposed of any Shares (other than to an affiliate or to the Public Investment Fund of the Kingdom 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.

We will also provide Ma’aden with the right to nominate one director to our Board of Directors for so long as Ma’aden owns at least 8% of the outstanding shares of common stock, bringing our board size to nine. Ma’aden will also agree to a five-year standstill preventing it from increasing its share ownership above 19.9% without the approval of the Board of Directors. The standstill will automatically be released in order for Ma’aden and its affiliates to make a competing offer if we enter into any agreement with a third party providing for a transaction that would result in a third party beneficially owning more than 50% of our outstanding common stock. Ma’aden will agree not to dispose of any of its Shares (except in open market, non-pre-arranged stock exchange transactions), if, as a result of such disposition, the purchaser of such shares would become the owner of greater than 9.9% of our common stock and is either a mining company or state-owned enterprise, other than the PIF.

Ma’aden will also agree for a five-year period to vote in favor of certain matters for so long as it continues to have a right to nominate a director, including to vote in favor of the election of all of our director nominees and to vote in favor of all matters on which our stockholders are entitled to vote that have been approved by a majority of the independent directors of the Board of Directors. We have also agreed that we will enter into a registration rights agreement with Ma’aden related to a future registration of the Shares.

### **Saudi Arabian Exploration Joint Venture**

The Agreement provides that we will establish a new Saudi exploration Joint Venture with Ma’aden, which will be owned 50/50 and have an initial term of five years, which may be extended up to 10 years upon mutual agreement of the



parties. The Joint Venture will be conducted through a newly established limited liability company established under Saudi law (“Saudi JVCo”). Ma’aden will make 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 will contribute \$66.4 million of the proceeds from the sale of the Shares to fund Saudi JVCo and the Joint Venture, and will provide Saudi JVCo with a royalty-free license to use Typhoon™ within the Kingdom of 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 will purchase three new generation Typhoon™ units from the Company’s former parent, I-Pulse, the first of which is expected to be delivered in the first quarter of 2024, for an aggregate contract price not to exceed \$13 million. Prior to the delivery of new Typhoon™ units, we will make available an existing Typhoon™ unit to commence surveying in Saudi Arabia according to the terms of the Agreement. The Joint Venture will also enter into a services agreement with CGI, pursuant to which CGI will be responsible for the supply of the services for the analysis of data and processing of the full spectrum of geophysical datasets in 3D produced by the Typhoon™ systems.

The Joint Venture will be governed by a board of directors and Technical Committee comprised of an equal number of representatives from each company. The Technical Committee will supervise the exploration activities of the Joint Venture including an initial “land identification stage” where the land Ma’aden is making 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 will be 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 will not be terminable, other than upon the occurrence of an event of default, by either party until the end of the exploration phase.

The Agreement is a framework agreement that sets out the binding parameters of the transactions described above. The Agreement will be replaced by definitive agreements which will include the key terms set out in the Agreement, which only may be changed if required to satisfy legal or regulatory requirements, for the establishment of the Joint Venture entity, or if required to meet the technical specifications and needs for the use of Typhoon™ in the Kingdom of Saudi Arabia. The Agreement will terminate automatically on the earliest to occur of the following: (i) the date on which the definitive agreements are executed by the parties or their respective affiliates; (ii) notwithstanding negotiation by the parties in good faith, in the event the parties have not been able to reach agreement on the definitive agreement, three months after the execution of the Agreement; and (iii) the bankruptcy, insolvency, liquidation, reorganization, dissolution, amalgamation, reconstruction of either party or any analogous proceeding relating to either party. The definitive agreements are expected to be executed by the end of the first quarter of 2023.

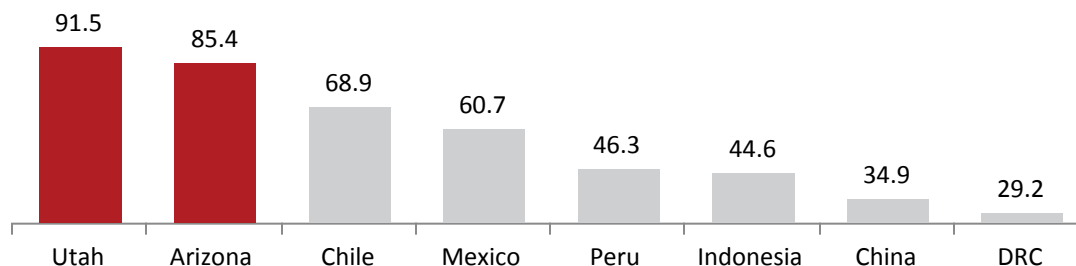
In addition to being subject to further confirmatory due diligence by each party and the execution of definitive agreements, the closing of the transactions is subject to the satisfaction of certain other conditions, including filing of a supplemental listing application with the NYSE American LLC (“NYSE American”), Toronto Stock Exchange (“TSX”) approval and other customary regulatory approvals, including, if applicable, the expiration or termination of all applicable waiting periods and requests for information (and any extensions thereof) under the Hart-Scott-Rodino Act and, if required, the parties receiving written confirmation from the Committee on Foreign Investment in the United States that it has completed its review or, if applicable, investigation and determination that there are no unresolved national security concerns with respect to the transactions contemplated by the Agreement.

We cannot assure you as to (i) the timing of entering into definitive agreements, including the potential failure to enter into definitive agreements at all; (ii) our and Ma’aden’s ability to satisfy the conditions to the proposed transactions on the anticipated timeline or at all; (iii) the satisfaction of conditions, including applicable regulatory clearances and approvals; (iv) that the Joint Venture, if established, will be successful in its exploration activities and fail to identify any economically viable mineral deposits; or (v) our ability to monetize its interest in an economically viable mineral deposit even if one is identified.

## **Key Business Highlights**

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

Our two material mineral projects are Santa Cruz and Tintic, 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.

**Arizona and Utah’s Jurisdiction Quality (out of 100)**

Source: Fraser Institute 2021 Policy Perception Index

### **Santa Cruz**

Santa Cruz is located in a prolific mining district in Arizona, with numerous major copper mines in close proximity. The Santa Cruz project is situated in the Ajo-Globe-Miami structural corridor in Arizona, which we estimate contains significant copper resources. Since 1980, Arizona has produced over 35 Mt of copper, which is approximately 65% of total United States production.

Santa Cruz was discovered in the 1970s, but was undeveloped due to market conditions as well as fragmented title and ownership. After more than seven years of negotiations, we acquired an option to acquire 100% of the mineral rights constituting Santa Cruz and entered into agreements to acquire further surface rights and mineral titles. In order to acquire the principal mineral titles under option from their owner, we will be required to spend an aggregate of \$27,870,500 in cash or shares of our common stock at the election of the owner by August 16, 2024. As of December 31, 2022, we had made payments totaling \$11,620,500 under the option. See “Business — Material and Key Mineral Projects — Santa Cruz Project, Arizona, USA”.

In 2021, we entered into an agreement with Central Arizona Resources Ltd. (“CAR”), a private company, and acquired the option CAR held over the mineral title described below owned by DRHE, a private company. CAR was also party to a surface use agreement (“SUA”) with Legends Property, LLC (“Legends”), which owns the majority of the surface rights associated with the Santa Cruz Project. We also acquired this surface rights access agreement from CAR.

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 DRHE over the course of three years. As of December 31, 2022, we paid \$11,620,500 to DRHE and \$16,250,000 remains to be paid to DRHE by 2024.

The Santa Cruz Project is located in Pinal County, Arizona, to the west of Casa Grande and approximately a one-hour drive south of Phoenix. The Santa Cruz Project encompasses approximately 47.3 km<sup>2</sup> of land.

### Santa Cruz Project Mineral Resource Estimate

(Santa Cruz Project Mineral Resource Estimates at 0.70% cutoff for Santa Cruz, 0.80% cutoff for Texaco, and 0.90% cutoff for East Ridge), December 31, 2022<sup>(1)</sup>

Classification	Deposit	Mineralized Material (ktonnes)	Total Cu %	Total Soluble Cu % <sup>(2)</sup>	Total Cu (ktonnes)	Total Soluble Cu (ktonnes)
<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>

(1) 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. Underground-constrained Mineral Resources for the Santa Cruz Deposit are reported at a cut-off grade of 0.70% total copper, Texaco Deposit are reported at a cut-off grade of 0.80% total copper and East Ridge Deposit are reported at a cut-off grade of 0.90% total copper. The cut-off grade 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 tonnes/day. 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-\$40.00/processed tonne reflecting various mining method costs (long hole or room and pillar), mining general and administration cost of \$4.00/tonne processed, onsite processing and SX/EW costs between \$13.40-\$14.47/tonne processed, offsite costs between \$3.29 – \$4.67/tonne processed, along with variable royalties between 5.00-6.96% 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. Report 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.

(2) Acid soluble Cu and cyanide soluble Cu are not reported for the Primary Domain.

Based on this resource estimate, we believe that Santa Cruz is currently the second largest undeveloped copper deposit, by tonnes, located in the continental United States with what we believe to be considerable potential to expand the resources. Drilling is ongoing and will continue through 2023. Currently, the Santa Cruz drill program consists of six diamond drill rigs. Drill core samples are being processed at laboratories in Arizona and Vancouver.

The resource at the Santa Cruz Deposit reflects a 0.70% total copper cut-off, while the resources at East Ridge and Texaco reflect a 0.90% and 0.80% total copper cut-off, respectively versus the 0.39% total copper cut-off used in the 2021 resource estimate. At these higher cut-off grades, the overall project-wide contained copper in Indicated Mineral Resources increased by 11% compared to the previous resource estimate. Importantly, project-wide contained copper in Indicated Mineral Resources, excluding primary sulfide mineralization, increased by 86%. This higher grade material tends to be in the soluble categories, potentially allowing for lower operating costs, lower energy usage, and lower water-consuming processing methods. One development option is to integrate this large, high-grade, soluble copper resource with renewable energy power sources, such as solar power, to develop a modern, low footprint, sustainable copper-producing industrial complex. We also intend to evaluate opportunities to utilize VRB-ESS® onsite for potential storage of sustainably generated power.

## Tintic

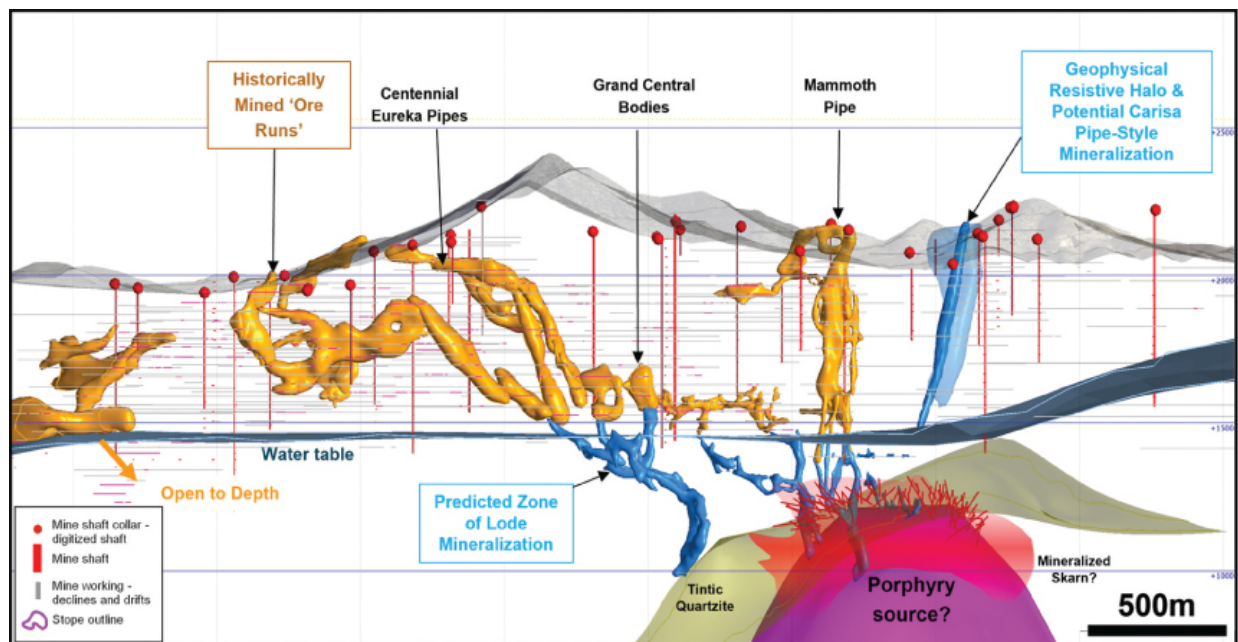
The Tintic exploration area covers approximately 65 km<sup>2</sup> of private patented claims, unpatented claims, state leases, and prospecting permits consolidated into a contiguous land package. The location of the Tintic Project benefits from supportive infrastructure and access to a skilled labor workforce. 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. It is conveniently crossed by many historical mine roads and railroad grades, which provide access to most of the property.

The Tintic Mining District (the “Tintic District”) was the third-largest silver mining district in the United States based on past production, remaining resources, and past production plus remaining resources. The Tintic District produced significant amounts of copper and gold from multiple operating mines from 1871 through to 1983, with mining peaking in the 1920s. Total historical production from the Main and Southwest Tintic District is estimated at 2.18 Moz gold, 209 Moz silver, 116 kt copper, 589 kt lead and 63 kt zinc, from both surface and underground sources.

With significant mining activity in the Tintic District concluding in 1983, companies owned by Mr. Spenst Hansen were able to consolidate a significant package of historic mining claims with supporting production and drill data. Mr. Hansen is the principal vendor of Tintic-related mining claims to Ivanhoe Electric.

We have entered into purchase and sale agreements with five different vendor groups owning mineral titles at the Tintic Project. Under these purchase agreements, payment of the purchase price is deferred and no title will transfer until the purchase price has been paid in full. Until such time, the mineral titles are held with a third party escrow agent. We are required to pay a total of \$30,800,000 to acquire all of these titles with all payments to be made by the end of 2023. As of December 31, 2022, we have paid a total of \$27,275,000 and have a total of \$3,525,000 remaining to pay by the end of 2023. Over a two-year period following the first acquisition of these mining claims, we scanned over 8,700 maps and digitized over 500 maps to construct a comprehensive geological model to enhance our Tintic exploration program.

### Tintic Historic and Target Model



The Tintic District lies 60 km south of Rio Tinto’s Bingham Canyon porphyry copper-gold mine, which has been in operation since 1906 and has produced over 19 million tonnes of copper and 28 million ounces of gold, making it one of the most productive copper-gold mines in the world. The intrusive complex at Tintic is similar in age to the Bingham Canyon porphyry deposit. Mineralization at Tintic is hosted in the same Paleozoic sedimentary host rocks as Bingham, and the east-west trending intrusive belt in which Tintic occurs is parallel to, and coeval with, the Bingham-Uinta intrusive belt. The close similarities in geological setting between Tintic and Bingham Canyon highlight what we believe is the porphyry potential at Tintic.

We believe the 72 km<sup>2</sup> Typhoon™ survey that we conducted at Tintic in 2018 and 2019 is one of the largest 3D Induced Polarization (“IP”) surveys ever completed. The survey identified three potential porphyry copper targets (Rabbits’

Foot, Sunbeam and Deep Mammoth), which appear to us to have similar characteristics to the mineralized porphyry at the Bingham Canyon mine. These targets are permitted for drilling in 2023 through our subsidiary, Tintic Copper & Gold Inc. (“TC&G”) which holds 100% of these permits.

In addition to testing the porphyry targets, we intend to undertake further drilling at Tintic to extend historically mined deposits beyond their known limits. Historical miners ceased mining once they encountered the water table due to a lack of pumping technology available at the time. We believe that mineralization continues to depth below the water table and that significant potential exists to discover additional mineralized material. As a preliminary step, in September 2022, we re-sampled six sections from historic drill holes. The presence of enargite and pyrite in three of these holes immediately below both the Mammoth “pipe” and water table indicates a continuation of the oxidized high sulfidation mineralization mined historically into unoxidized sulfide-rich mineralization. The appearance of chalcocite in one hole shows potential for hypogene copper replacing pyrite at higher temperatures within replacement-style mineralization and may reflect increasing proximity to the source porphyry copper system. Initial drilling commenced in late November 2022 to test porphyry targets and will continue through 2023.

***Focused on discovering, identifying, and developing mineral projects in the United States in order to better secure domestic access to the metals needed for the clean energy transition***

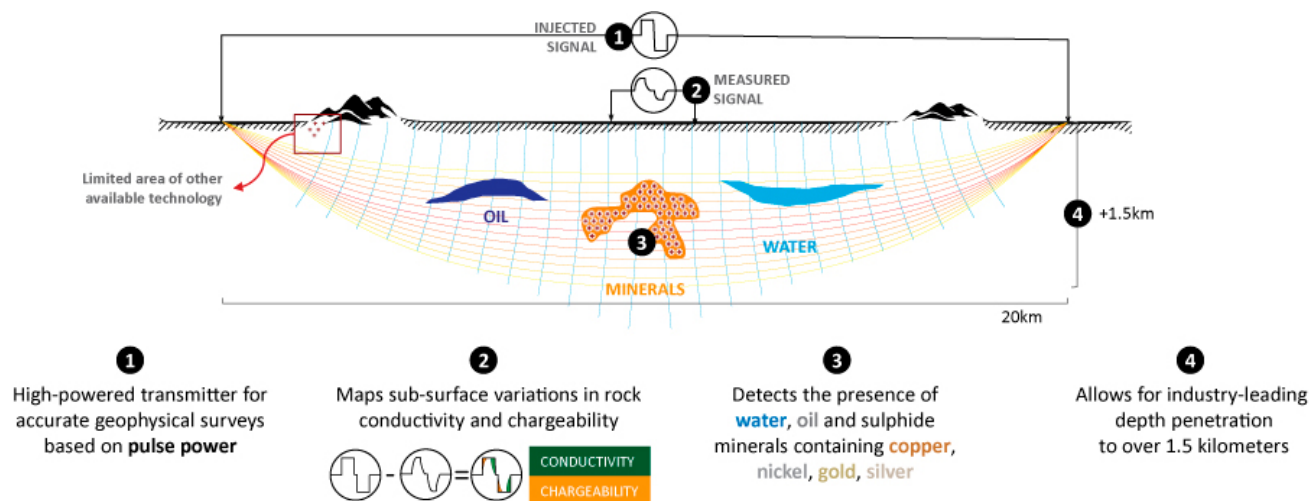
We search globally for potential world-class mineral deposits of critical metals, with a predominant focus on exploration and development of these assets within the United States. We have assembled a portfolio of highly prospective assets, headlined by our two material mineral projects, Santa Cruz in Arizona and Tintic in Utah.

Access to critical metals from domestic sources has become a strategic focus to enhance United States supply chain security. As global demand for critical metals strengthens, we believe securing additional sources of supply for these commodities will grow in importance for the United States.

***Proprietary cutting-edge Typhoon™ hardware and CGI software de-risk mineral project exploration by lowering costs and increasing the depth, breadth and accuracy of surveys***

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, as I-Pulse holds an exclusive Typhoon™ license for those commodities). 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.

**Typhoon™ in Resource Exploration**



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;



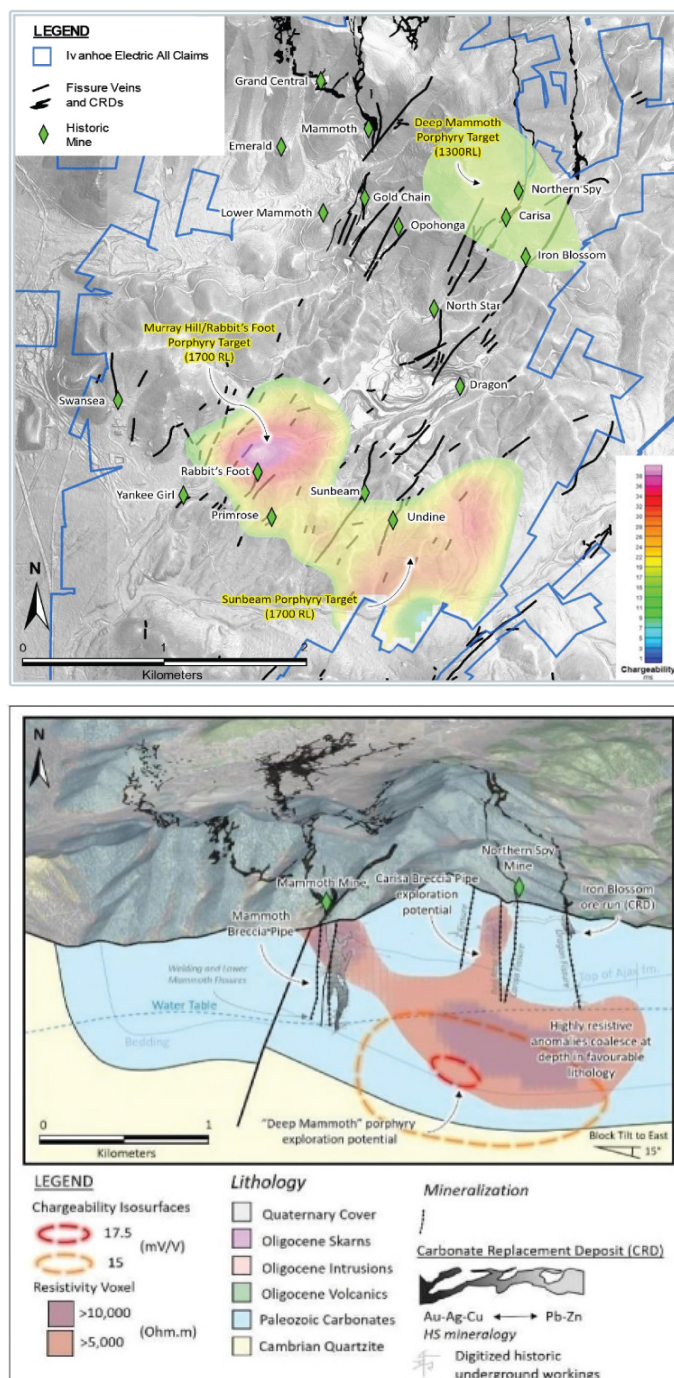
- extremely clean signal, which yields a high signal to noise ratio in recorded data;
- the ability to synchronize with multiple types of data receivers, so that the user can choose the receiver system most appropriate for the exploration environment; and
- three deployment configurations, from a large containerized system to a smaller lightweight system that is helicopter portable.

We currently have three Typhoon™ units, which allow us to evaluate multiple prospects at any given time. Saudi JVCo will also order three new Typhoon™ units following establishment of the Joint Venture and which are expected to be delivered to Saudi JVCo 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.

### **Typhoon™ at Tintic**

Typhoon™ completed a 72 km<sup>2</sup> fully 3D IP survey of Tintic, with effective penetration depths averaging over 1.5 km. Three potential porphyry copper-gold targets have been identified and were permitted for drilling in 2022 and 2023 through our subsidiary, TC&G which holds 100% of these permits as shown in the first image below. The second image below shows an east-west cross section from Mammoth to Northern Spy that shows the Typhoon™ resistivity and chargeability features that define the Mammoth Porphyry target at depth in the heart of the Main Tintic District.



## **Typhoon™ at Santa Cruz**

In July 2022, we completed a 26.5 km<sup>2</sup> (6,500-acre) Typhoon™ 3D induced polarization and resistivity geophysical survey at the Santa Cruz Copper Project. The survey identified multiple large-scale anomalies, which may indicate the potential to expand the currently known copper oxide and sulfide mineralization at Santa Cruz. On November 8, 2022 we announced the discovery of the East Ridge oxide copper zone at the Santa Cruz Copper Project, which was one of the anomalies identified by Typhoon™ and on which we conducted exploration drilling following the survey.

***Management track record of success: Robert Friedland-led management team has a compelling track record for discovery and development with an emphasis of ESG principles***

*Robert Friedland*

We were founded by Robert Friedland, a serial entrepreneurial explorer, technology innovator and company builder. He has successfully developed a series of public and private companies which have been at the forefront of some of the

world's most notable mineral discoveries and mine developments including Fort Knox in Alaska, Voisey's Bay in Canada, Oyu Tolgoi in Mongolia, Platreef in South Africa and Kamoakakula in the DRC.

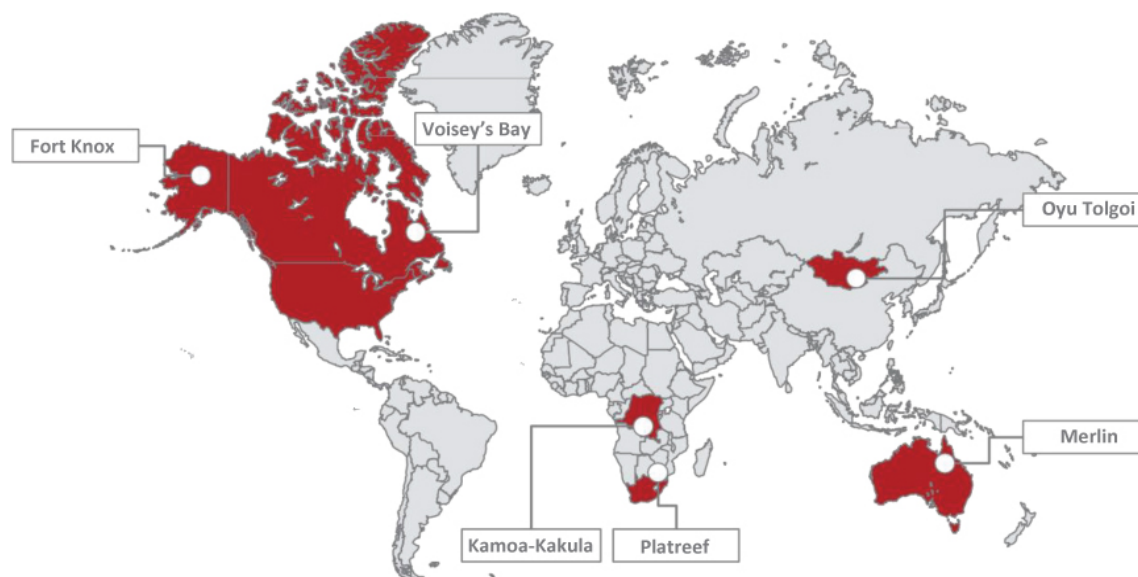
Mr. Friedland is currently the Executive Co-Chairman of Ivanhoe Mines, which operates the ultra-high-grade Kamoakakula copper mine. As of January 30, 2023, Wood Mackenzie projects Kamoakakula to be the world's fourth largest copper mine by 2025 once its Phase 3 expansion is completed.

In 1994, Mr. Friedland founded Indochina Goldfields Ltd., now known as Turquoise Hill Resources Ltd., which operates the Oyu Tolgoi mine in Mongolia. Based on estimates prepared by Turquoise Hill Resources, Oyu Tolgoi has the potential to operate for approximately 100 years from five known deposits.

Mr. Friedland and members of his team have discovered a number of other valuable projects prior to the creation of Ivanhoe Electric.

- *Platreef Project*: This major greenfield discovery of platinum-group metals, nickel, copper and gold is located in South Africa and owned by Ivanhoe Mines. At its final projected production rate of 12 Mtpa, Platreef would be positioned among the largest primary nickel and platinum-group metals mines in the world.
- *Voisey's Bay*: Mr. Friedland was a co-founding principal of Diamond Fields Resources, which discovered Voisey's Bay, a Canadian nickel deposit, in 1993. As Co-Chairman of Diamond Fields Resources, Mr. Friedland was in charge of financing and investor strategy and led the negotiations for the sale of the company to INCO Mining Corp. for C\$4.3 billion in 1996.
- *Fort Knox*: Fort Knox is an Alaskan gold deposit discovered by Mr. Friedland and his team in 1992 and subsequently sold to Amax Gold Inc. for \$152 million. The asset is currently owned by Kinross Gold Corporation and has been in production since 1997.

#### Robert Friedland Led Discoveries



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

The leadership team at Ivanhoe Electric has a proven track record of implementing 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.

The Ivanhoe Electric management team has a similar commitment to ESG principles and expects to adopt much of the same philosophy and approach to ESG as it continues to develop the Company's assets and ultimately begin production.



***Robert Friedland generates project opportunities and a pipeline of projects that underpin our future growth potential***

Over the past four decades, Mr. Friedland has established a highly successful track record of exploration and mine developments as well as a vast network of relationships in the global metals and mining sector. Both are key reasons why Mr. Friedland continues to attract exploration and mine development opportunities. He and his team at the Company are well placed to evaluate and pursue such opportunities.

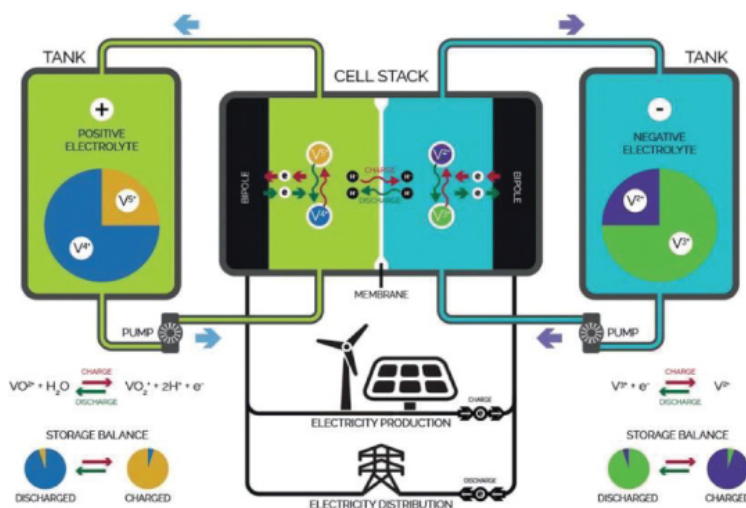
***Vanadium flow battery business rounds out electrification transition portfolio and provides growth opportunities in a rapidly growing end-user market***

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® fundamentally 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. VRB has approximately 1,200 tonnes of feedstock at YX and 44.2 tonnes of semi-finished product with YX which may be processed at the site should production recommence with YX or another processor.

**VRB-ESS® System Overview**



## Mineral Resources

Below is a summary table of estimated mineral resources and reserves, which are presented on a 100% project basis.

Company	Deposit	Effective Date	Category	Tonnes	Total Cu (%)	Ni (%)	Au (g/t)	Ag (g/t)	Contained Cu (tonnes)	Contained Ni (tonnes)	Contained Au (oz)	Contained Ag (oz)	Geographic Area	Resource Category
<i>100% Project Basis</i>														
Ivanhoe Electric	Santa Cruz	12/31/2022	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.	Pinaya	4/26/2016	Measured	8,204,000	0.326	—	0.600	—	26,767	—	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.	Samapleu	5/22/2019	Indicated	33,180,000	0.186	0.238	—	—	61,592	78,968	—	—	Ivory Coast	Nickel Copper
			Inferred	17,780,000	0.144	0.224	—	—	25,552	39,827	—	—		
Cordoba Mineral Corp.	San Matias	8/3/2021	Indicated	19,100,000	0.28	—	0.11	1.15	5,315	—	180,863	667,926	Colombia	Copper Gold Silver
			Inferred	5,100,000	0.21	—	0.21	0.94	9,823	—	32,557	142,538		

Below is a summary table of estimated mineral reserves.

Company	Deposit	Effective Date	Category	Tonnes	Total Cu (%)	Ni (%)	Au (g/t)	Ag (g/t)	Contained Cu (tonnes)	Contained Ni (tonnes)	Contained Au (oz)	Contained Ag (oz)	Geographic Area	Resource Category
Cordoba Mineral Corp.	San Matias	10/21/2021	Probable	102,100,000	0.41	—	0.260	2.30	418,610	—	853,472	7,549,949	Colombia	Copper Gold Silver

S-K 1300 Technical Report Summary for the Santa Cruz, Texaco, and East Ridge Deposits, Arizona, USA, current as of December 31, 2022 - Santa Cruz Deposit 0.70% TCu cut-off, Texaco Deposit 0.80% TCu cut-off, and East Ridge 0.90% TCu cut-off; US\$3.70/lb Cu

Kaizen Discovery Inc. NI 43-101 Technical Report, effective April 26, 2016 - 0.25 g/t and/or 0.3% CuEq cut-off, US\$2.84/lb Cu and US\$1,236/oz Au

Sama Resources Inc. NI 43-101 Technical Report & Preliminary Economic Assessment, effective May 22, 2019 - 0.1% NiEq cut-off, US\$2.10/lb Cu concentrate, US\$13.5/lb nickel powder

Cordoba Minerals Corp. NI 43-101 Technical Report & Preliminary Feasibility Study, effective August 3, 2021 - NSR US\$1.78/t saprolite and NSR US\$8.85/t transition and fresh material cut-off, US\$3.25/lb Cu, US\$1,600/oz Au, and US\$20/oz Ag

Cordoba Minerals Corp. NI 43-101 Technical Report & Preliminary Feasibility Study, Reserve effective October 21, 2021 (NSR US\$1.78/t saprolite, NSR US\$8.85/t transition and fresh material, US\$3.25/lb Cu, US\$1,600/oz Au, and US\$20/oz Ag

Below is a summary table of estimated mineral resources and reserves, which are presented on an attributable basis.

Company	Deposit	Effective Date	% Ownership	Category	Attributable 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
Ivanhoe Electric	Santa Cruz	12/31/2022	100.0 %	Indicated	226,715,000	1.24	—	—	—	2,807,000	—	—	—	Arizona, U.S.	Copper
				Inferred	148,998,000	1.24	—	—	—	1,847,000	—	—	—		
				Measured	6,783,067	0.326	—	0.600	—	22,131	—	130,634	—		
Kaizen Discovery Inc.	Pinaya	4/26/2016	82.7 %	Indicated	27,687,052	0.324	—	0.462	—	89,590	—	410,920	—	Peru	Copper Gold
				Inferred	33,250,589	0.360	—	0.300	—	119,650	—	320,798	—		
Sama Resources Inc.	Samapleu	5/22/2019	46.0 %	Indicated	15,262,800	0.186	0.238	—	—	28,332	36,325	—	—	Ivory Coast	Nickel Copper
				Inferred	8,178,800	0.144	0.224	—	—	11,754	18,320	—	—		
Cordoba Mineral Corp.	San Matias	8/3/2021	63.2 %	Indicated	12,084,570	0.280	—	0.110	1.15	3,363	—	114,432	422,597	Colombia	Copper Gold Silver
				Inferred	3,226,770	0.210	—	0.21	0.94	6,215	—	20,599	90,184		
Company	Deposit	Effective Date	% Ownership	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.	San Matias	10/21/2021	63.2 %	Probable	64,598,670	0.41	—	0.260	2.30	264,855	—	539,992	4,776,853	Colombia	Copper Gold Silver

S-K 1300 Technical Report Summary for the Santa Cruz, Texaco, and East Ridge Deposits, Arizona, USA, current as of December 31, 2022 - Santa Cruz Deposit 0.70% TCu cut-off, Texaco Deposit 0.80% TCu cut-off, and East Ridge 0.90% TCu cut-off; US\$3.70/lb Cu

Kaizen Discovery Inc. NI 43-101 Technical Report, effective April 26, 2016 - 0.25 g/t and/or 0.3% CuEq cut-off, US\$2.84/lb Cu and US\$1,236/oz. Au

Sama Resources Inc. NI 43-101 Technical Report & Preliminary Economic Assessment, effective May 22, 2019 - 0.1% NiEq cut-off, US\$2.10/lb Cu concentrate, US\$13.5/lb nickel powder

Cordoba Minerals Corp. NI 43-101 Technical Report & Preliminary Feasibility Study, effective August 3, 2021 (NSR US\$1.78/t saprolite, NSR US\$8.85/t transition and fresh material, US\$3.25/lb Cu, US\$1,600/oz Au, and US\$20/oz Ag

Cordoba Minerals Corp. NI 43-101 Technical Report & Preliminary Feasibility Study, Reserve effective October 21, 2021 (NSR US\$1.78/t saprolite, NSR US\$8.85/t transition and fresh material, US\$3.25/lb Cu, US\$1,600/oz Au, and US\$20/oz Ag

Sama Resources Inc. NI 43-101 Technical Report & Preliminary Economic Assessment, effective May 22, 2019 - 0.1% NiEq cut-off, US\$2.10/lb Cu concentrate, US\$13.5/lb nickel powder

Cordoba Minerals Corp. NI 43-101 Technical Report & Preliminary Feasibility Study, effective August 3, 2021 (NSR US\$1.78/t saprolite, NSR US\$8.85/t transition and fresh material, US\$3.25/lb Cu, US\$1,600/oz Au, and US\$20/oz Ag

## Material and Key Mineral Projects

Our two material mineral projects are the Santa Cruz Project, located in Arizona, and the Tintic Project, located in Utah. Our other key mineral projects are the Hog Heaven project, located in Montana, and the Ivory Coast project, which is owned directly by a subsidiary of Sama, although we have a direct interest in that subsidiary as well.

The table below provides summary information regarding our material and key mineral projects, as of December 31, 2022.

### Material and Key Mineral Projects

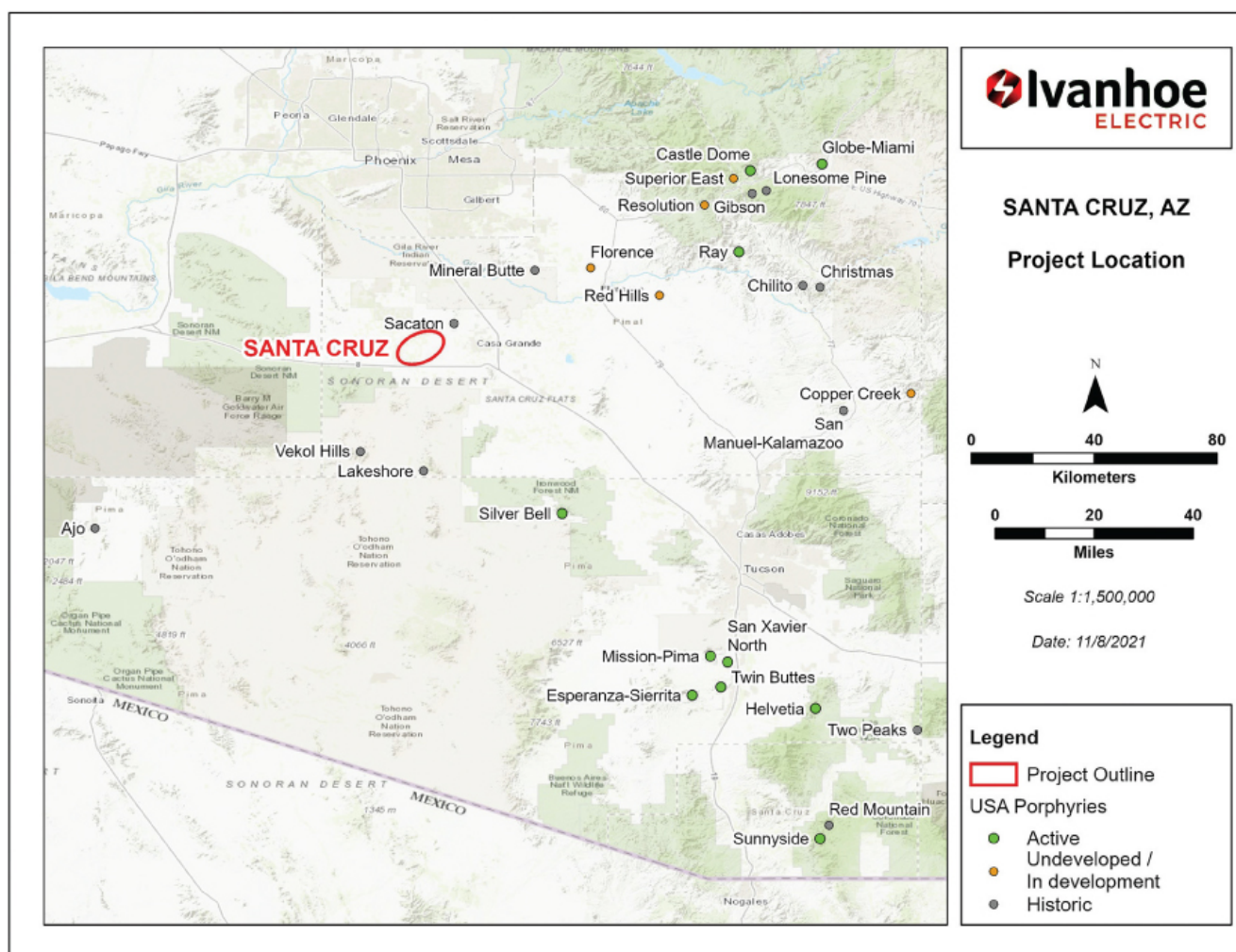
Project Name	Location and Project Size	Stage of Development	IE Interest and Nature of Interest	Title Holders / Operator	Minerals	Nature of Mineral Title	Mineral Resources/Reserves	Production – Last 3 Fiscal Years
<b>Santa Cruz</b>	Arizona, USA 77.59 km <sup>2</sup>	Exploration	0% current ownership interest; Option to acquire 100% of the mineral title	DRH Energy Inc. (mineral title) Legends Property, LLC (surface rights)	Copper	Patented and unpatented claims; Arizona State exploration permits	Mineral resource	Not in production
<b>Tintic</b>	Utah, USA 65 km <sup>2</sup>	Exploration	84.3% current ownership interest by acreage; Options and lease rights cover balance aggregating to 100% of the mineral title by acreage	Tintic Copper & Gold, Inc.	Copper Gold	Patented and unpatented claims; SITLA and BLM claims	n/a	Not in production
<b>Hog Heaven</b>	Montana, USA 24.2 km <sup>2</sup>	Exploration	2.2% 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 (“Brixton JVC”)	Copper Silver Gold	Fee simple mineral rights, owned and leased	n/a	Not in production
<b>Ivory Coast Project</b>	Ivory Coast 1,125 km <sup>2</sup>	Exploration	22.8% equity ownership of Sama and 30% interest in joint venture with option up to 60% of Sama’s interests in the Ivory Coast Project	Société pour le Développement Minier de la Côte d’Ivoire	Nickel Copper Cobalt PGE	Exploration license	Mineral Resource	Not in production

### *Santa Cruz Project, Arizona, USA*

As used herein, references to the “Santa Cruz Technical Report Summary” is to the “Mineral Resource Estimate Update and S-K 1300 Technical Report Summary for the Santa Cruz, Texaco, and East Ridge Deposits, Arizona, U.S.A.”, prepared by Nordmin and Met Engineering, current as of December 31, 2022, which was prepared in accordance with the requirements of S-K 1300. The Technical Report Summary on the Santa Cruz Project, Arizona, U.S.A. is incorporated by reference 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, Project Description, Location, and Access.* Our Santa Cruz Project is located 11 km west of the town of Casa Grande, Arizona, and is an approximately one hour drive south of the State capital of Phoenix. It is less than 10 km southwest of the Sacaton deposit, which was previously mined by American Smelting and Refining Company Inc. (“ASARCO”) and covers a cluster of deposits/targets approximately 11 km long and 1.6 km wide.

Map: Santa Cruz Project Location



The Greater Phoenix area is a major population center (approximately 4.95 million people) with a major international airport, well-developed infrastructure, and services that support the mining industry. The cities of Casa Grande, Maricopa and Phoenix supply sufficient skilled labor for the Santa Cruz Project. The Santa Cruz Project is accessed from the Gila Bend Highway, 11 km from the City of Casa Grande.

**Title.** The Santa Cruz Project lies primarily on private land, which consists predominantly of split estate between surface and subsurface mineral rights. We hold an option on the purchase of the mineral estate while holding an exclusive agreement on surface access.

In 2021, IE 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 Legend Property Group (“Legend”). The Santa Cruz exploration area covers 47.71 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, and 238 unpatented claims, or 19.32 km<sup>2</sup> of U.S. Bureau of Land Management (“BLM”) land.

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 DRHE over the course of four years. As of December 31, 2022, we have paid a total of \$11,620,500 to DRHE and expect to pay the balance by 2025. In order maintain the option we must make the following three additional payments:

- on or before August 16, 2023, we must pay a further \$6,250,000 to DRHE; and
- if we exercise the option, we must pay to DRHE a final payment at closing of the acquisition of the mineral title of \$10,000,000.



We have until August 16, 2024 to exercise the option with DRHE. If we do not exercise the option, payments made to DRHE prior to August 16, 2024 or earlier abandonment of the option, including payments already made, are non-refundable.

The agreement with DRHE also provides us with a right of first refusal (“ROFR”) with respect to certain surface parcels owned by Legends. This ROFR was reserved by DRHE when the property was sold to Legends in 2007, and this right is now part of the option we acquired from DRHE.

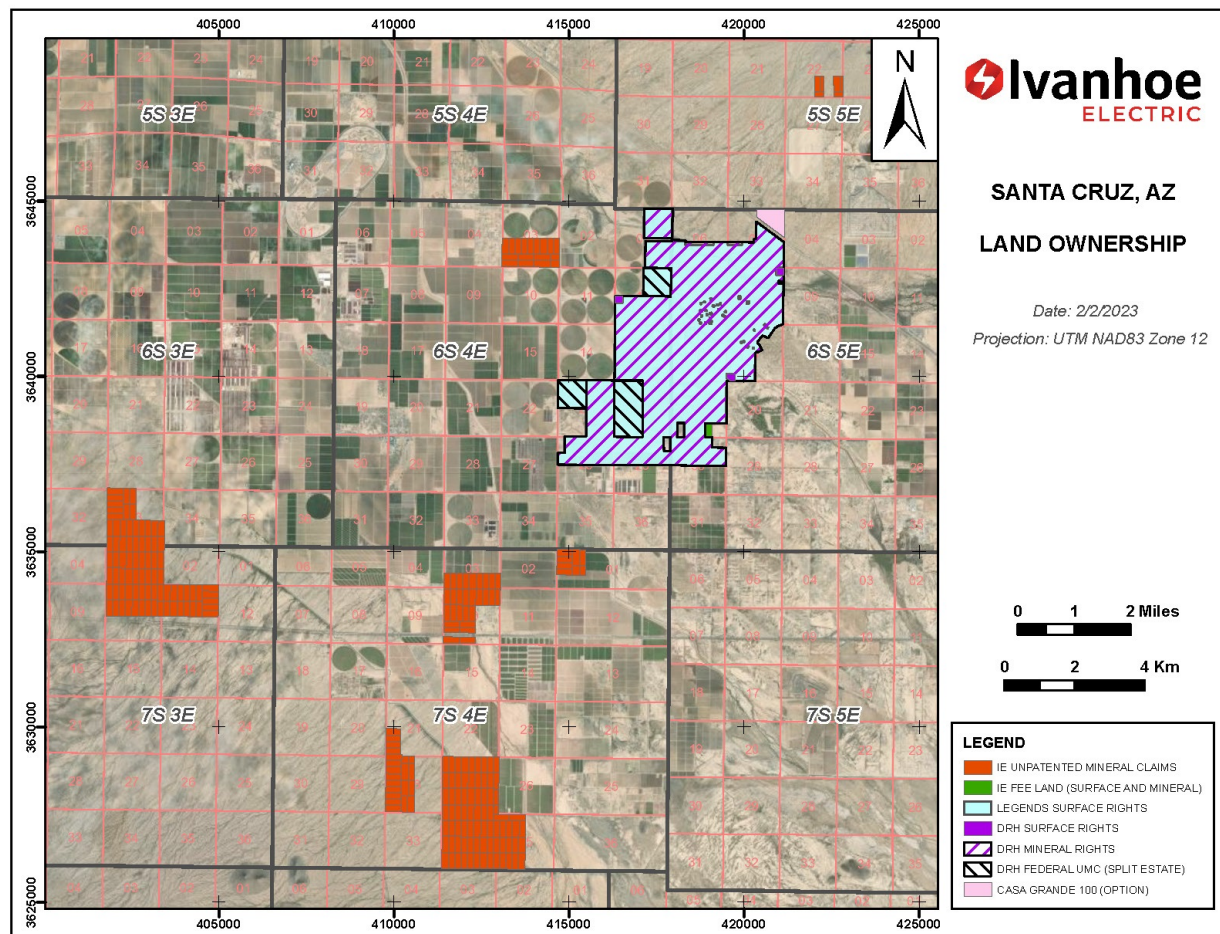
Our surface use agreement with Legends gives us the exclusive use of the property for the purposes of drilling and geophysical testing, as well as granting us a separate right of first offer (“ROFO”) on the sale of the surface rights owned by Legends. In order to maintain our surface rights access from Legends we must make certain payments to Legends. As of December 31, 2022, we made payments totaling \$1,600,000 to Legends. In order to maintain our surface use access we must make an additional payment to Legends on or before September 9, 2023, of \$800,000 to Legends.

The surface use access agreement with Legends ends on August 3, 2025, but we may extend it to August 3, 2026 by making a further payment to Legends of \$920,000.

In addition, we have acquired certain options on private parcels and staking of unpatented federal lode mining claims. The Santa Cruz Project exploration area covers 47.71 km<sup>2</sup>, including 25.79 km<sup>2</sup> of private land, 2.6 km<sup>2</sup> of SRHA lands, and 238 unpatented claims, or 19.32 km<sup>2</sup> of the BLM land.

The following map shows the various mineral and surface rights at the Santa Cruz Project, including unpatented mineral claims we have acquired directly.

*Map: Santa Cruz Project Mineral Title and Surface Rights*



Current exploration is conducted on private land under the SUA with Legends. Permitting has consisted of filing Notices of Intent to Drill and Abandon with Arizona Department of Water Resources (“ADWR”), a dust control permit with Pinal County, and a Construction General *Permit/Stormwater Pollution Prevention Plan with Arizona Department of Environmental Quality*. We intend to identify specific permits to construct and operate mine facilities as the potential design of the Santa Cruz Project advances.

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 2.25%, 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.

*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 under the SUA with Legend. Current permits are listed in the Table below.

Permit Name	Agency	Status	Renewal Date	Requirements	Violations
<i>Dust Control Permit</i> DUSTW-22-0292	Pinal County Air Quality Control District	Approved	03/01/2023	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</i> AZCN96111	Arizona Dept. of Environmental Quality	Approved	06/30/2025	Stormwater Pollution Prevention Plan in place; monthly inspections	No Violations
<i>Temporary Use Permit</i> DSA-22-00200	City of Casa Grande	Approved	11/08/2025	Submit SFHA Permit and Non-SFHA Temporary Use Permit	No Violations
<i>Floodplain Use Permit</i> FUP2206-165	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. This private land position could result in reduced permitting time relative to projects required to undergo the National Environmental Policy Act (“NEPA”) process. 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. If NEPA and other federal permitting are avoided, required permits would be administered by Arizona State, Pinal County, and Casa Grande authorities.

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. Reclamation Plan approval (Arizona State Mine Inspector)
- b. Water permits
- c. Aquifer Protection Permit (ADEQ)
- d. Air Quality Operating Permit (Pinal County)

*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: chalcopryite, 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 IE 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.

*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 Santa Cruz Technical Report Summary 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”) includes a detailed geological and structural re-examination of the Santa Cruz, East Ridge, and Texaco Deposits.

The Santa Cruz Deposit MRE benefits from approximately 116,388 m 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.

The Santa Cruz Project mineral resource estimate is presented in the table below and is current as of December 31, 2022.

Table: Santa Cruz Project Mineral Resource Estimate (Santa Cruz Deposit 2022, 0.70% Total Cu cut-off grade)<sup>(1)</sup>

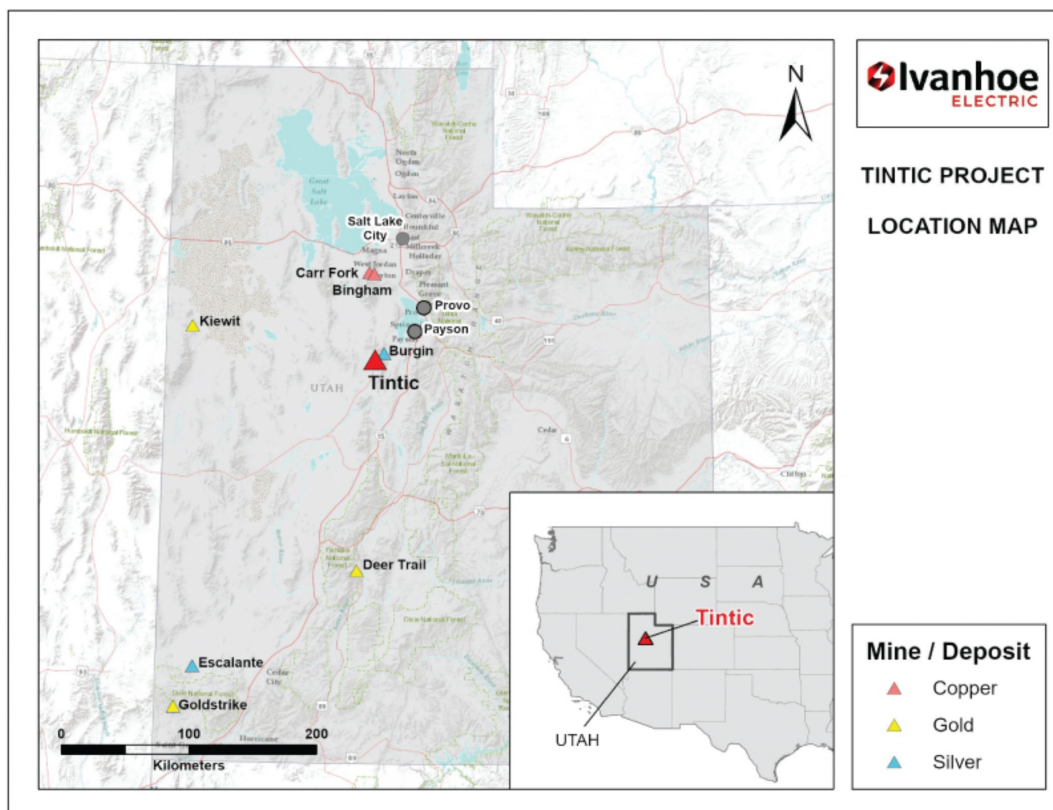
Classification	Deposit	Mineralized Material (ktonne)	Total Cu %	Total Soluble Cu %	Total Cu (ktonne)	Total Soluble Cu (ktonne)
<b>Indicated</b>	Santa Cruz (0.70% COG)	223,155	1.24	0.82	2,759	1,824
	Texaco (0.80% COG)	3,560	1.33	0.97	47	35
	East Ridge (0.90% COG)	—	—	—	—	—
<b>Inferred</b>	Santa Cruz (0.70% 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>

- (1) 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. Underground-constrained Mineral Resources for the Santa Cruz Deposit are reported at a cut-off grade of 0.70% total copper, Texaco Deposit are reported at a cut-off grade of 0.80% total copper and East Ridge Deposit are reported at a cut-off grade of 0.90% total copper. The cut-off grade 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 tonnes/day. 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-\$40.00/processed tonne reflecting various mining method costs (long hole or room and pillar), mining general and administration cost of \$4.00/tonne processed, onsite processing and SX/EW costs between \$13.40-\$14.47/tonne processed, offsite costs between \$3.29 – \$4.67/tonne processed, along with variable royalties between 5.00-6.96% 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. Report 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.

### **Tintic Project, Utah, USA**

As used herein, references to the “Tintic Technical Report” is to the “SEC Technical Report Summary, Exploration Results Report, Tintic Project Utah, U.S.A.” prepared by SRK with an effective date of May 5, 2021, which was prepared in accordance with the requirements of S-K 1300. The Technical Report Summary, Exploration Results Report, Tintic Project Utah, U.S.A. incorporated by reference as Exhibit 96.2 hereto. Scientific and technical information in this section is based upon, or in some cases extracted from these reports with the addition of updated lands information and associated expenditures from IE dating from after May 5, 2021.

*Location, Map, Location, and Access.* Our Tintic Project is located approximately 95 km south of Salt Lake City, Utah and can be accessed by road from U.S. Highway 6 approximately 30 km west of the Interstate 15 junction. The center of our claims and applications lies at approximately at 39° 55' N latitude and 112° 06' W longitude. The city of Eureka lies approximately 2 km north of the northeastern Tintic Project property boundary. The exploration area covers approximately 65 km<sup>2</sup> of patented claims and unpatented claims and an additional 75 km<sup>2</sup> of state leases and prospecting permits that have been consolidated by us into a cohesive grouping of mineral 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 700), 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 litres). 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.

**Title.** The single most limiting factor for the development of mining in recent times relates to the complex land ownership within the district. We have acquired 65 km<sup>2</sup> of mineral tenure in the historic mining district surrounding the Tintic Project through various agreements and permit applications made through our subsidiary TC&G. We are in the process of consolidating all interests in respect of the Tintic Project under TC&G.

We or TC&G have entered into purchase and sale agreements with five different vendor groups owning mineral title at the Tintic Project. Under these purchase agreements, payment of the purchase price is deferred and no title will transfer until the purchase price has been paid in full. Until such time, the mineral titles are held with a third party escrow agent. We are required to pay a total of \$30,800,000 to acquire all of these titles with all payments to be made by the end of 2023. As of December 31, 2022, we have paid a total of \$27,275,000 and have a total of \$3,525,000 remaining to pay by the end of 2023.

As of the date of this Annual Report, we hold various types of claims and applications, which consist of the following claims, lease agreements, and permits:

- Patented claims — 190 claims for 10.6111 km<sup>2</sup>

- Unpatented claims — 464 claims for 12.2119 km<sup>2</sup>

**Purchased, but held in escrow**

- Patented claims — 254 claims for 7.6542 km<sup>2</sup>

**Leased with Option to Purchase**

- Patented claims — 94 claims for 3.8435 km<sup>2</sup>
- Unpatented claims — 6 claims for 0.5016 km<sup>2</sup>

**Leased without Option to Purchase**

- 85 claims for 5.2890 km<sup>2</sup>

**SITLA**

- 12.1 km<sup>2</sup> of Utah School and Institutional Trust Lands Association (“SITLA”) mineral leases in three agreements

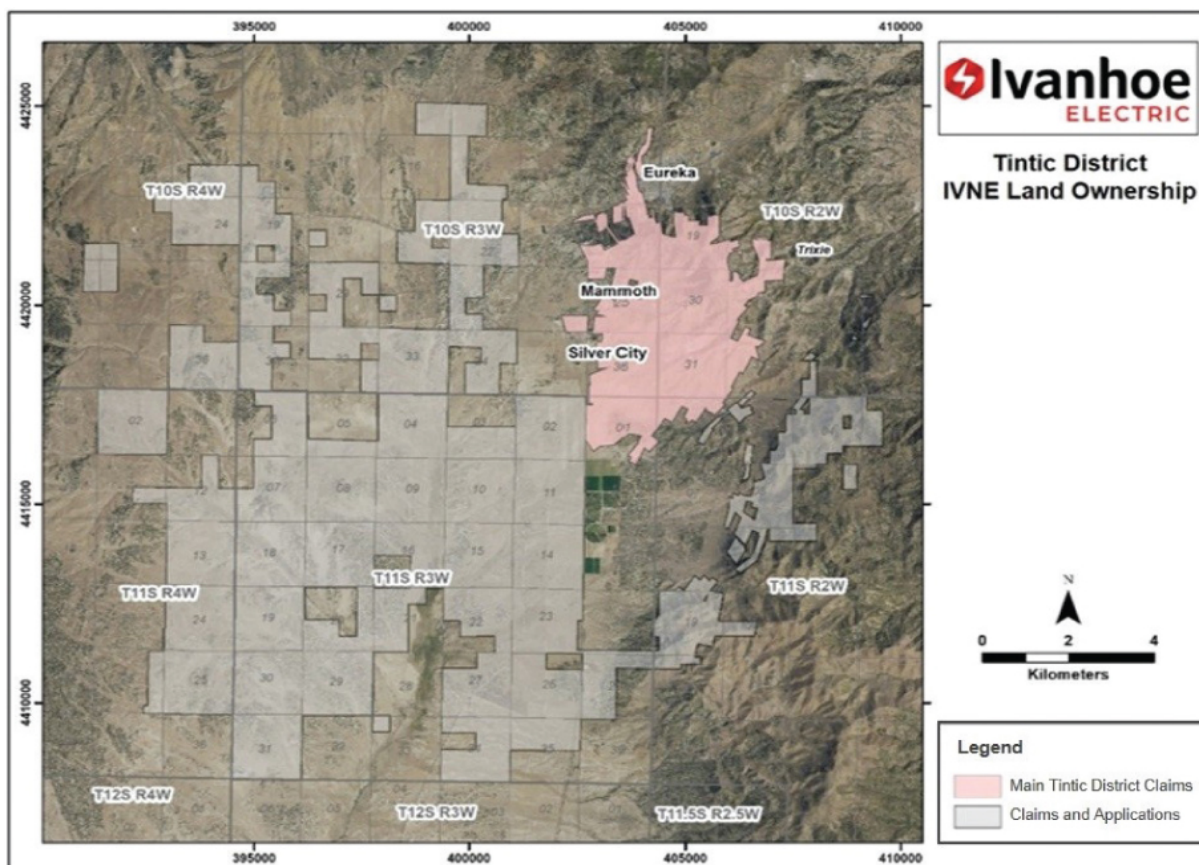
**Prospecting Permits**

- 6 Hardrock Prospecting Permit (“HRPP”) applications on Bankhead-Jones lands in the Tintic Valley, comprising 61 km<sup>2</sup> (through Continental Mineral Claims Inc. (“CMC”) owned by TC&G)

To retain an unpatented claim on United States federal land, a maintenance fee of \$165 per claim is due annually by September 1st. Based on our current landholding this would amount to \$74,580 in annual payments for claim retention. The claim positions of the Tintic Project are intended to provide a cohesive, contiguous land package for the potential future extraction of mineralization in relation to the known geology of the area.

The HRPP applications, on non-core areas of the Tintic project, were filed in 2017. In 2019, the US Government passed the John D. Dingell, Jr. Conservation and Recreation Act, which provided for, in part, a land exchange between the United States and the Utah School and Institutional Trust Lands (the “Dingell Exchange”). The Dingell Exchange lands included a portion of the lands covered by the HRPP Applications. Based on the authorization of the Dingell Exchange, BLM issued rejections of the HRPP Applications in and around July 2022. TC&G appealed the rejections, in part, on the basis that BLM lacked authority to reject the pending HRPP Applications solely on the basis of the Dingell Exchange. TC&G’s appeal is currently pending before the Interior Board of Land Appeals.





Significant portions of the patented claims at the Tintic Project are subject to NSR royalties ranging between 1% and 4%. NSR royalties are only payable upon production and sale of product. There are no advance royalties.

*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. 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 1.9 Moz Au, 136 Moz Ag, 105 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 across the Tintic District with Cu-Au dominance in the Main Tintic District transitioning northwards into Pb-Ag and finally into Pb-Zn in the northern portion of the 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.* In March 2021, TC&G submitted a Notice of Intention to Conduct Exploration to the Division of Oil, Gas and Mining of the Department of Natural Resources of the State of Utah. The approved permit will allow our proposed drilling program to be undertaken. The Tintic Project has no other required permits for current activities.

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 m 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 m 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 underly 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.* Exploration by us on the Tintic Project commenced in late 2017 with an airborne geophysical survey. On-the-ground exploration commenced in early 2018 and 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 into 2019 included the re-logging of deep historic drillholes at the Dragon exploration area and the compilation and 3D digitization of historical mines, underground workings, and mineralized zones termed ‘runs’.

In late 2021 we completed a small exploration drill program consisting of two reverse circulation (“RC”) holes and a fan of four diamond drill holes. We have also compiled a drillhole 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 drillholes were completed historically on the Tintic Project by several prior owners and operators. However not all of the details are available.

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. Diamond drilling commenced in late November 2022 in the Silver City area testing between two Typhoon™ anomalies. Drilling will continue into 2023 with assay results not expected to start until at least the first quarter of 2023.

Our current database contains known collar locations for 442 diamond, RC and rotary air blast drillholes 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 drillholes 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 drillhole 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 drillholes 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 drillhole core from the Big Hill diamond drillhole 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 drillhole 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 drillholes.

*Sampling, Analysis and Data Verification.* All soil and rock grab samples collected by us during exploration programs undertaken to date have been prepared and analyzed by ALS Global-Geochemistry Analytical Lab in Elko, Nevada (“ALS”). 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. ALS has a robust internal QA/QC program to monitor and ensure quality of assay and other analytical results.

The security measures employed by us for both the soil geochemical survey and rock grab sampling programs were as follows. At the completion of each field day, all samples were bagged in large rice sacks with approximately 20 samples (20 kg) per sack. Each rice sack was labeled with the company name, bag number and the sample IDs contained within it. This information was recorded into an inventory spreadsheet. The sacks were sealed using zip ties and marked with colored flagging tape. All samples were secured at our field office in Mammoth prior to dispatch to the lab. The Mammoth facility doubles as a bunkhouse for our geologists who maintained control and security of all samples. Samples were dispatched to the ALS prep-lab by our geologists who maintained chain of custody until the samples were received by ALS. Prior to dispatch, a senior geologist of ours prepared an inventory and shipping slip of the dispatch. All rice bags were checked against the inventory slip which was then approved and signed. A chain of custody form was completed and signed by both our and ALS staff upon delivery to the Elko facility.

The soil samples were prepared using a standard ALS preparation package, which analysis yielded raw spectral files in ASD and ASCII format, and a spreadsheet with mineral assemblage interpretations with the spectral parameters of the soil.



The rock grab samples were prepared using a standard ALS preparation package, which measured 48 elements. Gold was measured by fire assay and ICP-AES analysis.

We have implemented two standard insertion protocols for soil and stream sediment samples (which have 5% duplicate and 4% standard insertion rates) and drill core, rock grab, pit, trench, and chip samples (which have 5% blank, 5% duplicate, and 4% standard insertion rates). Inert crushed white marble is used as blank material. OREAS 151b standards in 60g packets are used for the porphyry-epithermal samples including all 2018 soil and rock grab samples. This is a certified OREAS low-grade Cu standard for porphyry Cu-Au exploration. Lab assay certificates were imported into an access database that merged geochemical and spectral data with the sample field data and location information. We have implemented an internal QA/QC program to monitor all assay results from laboratories by comparing results of our inserted standards, blanks and duplicates against expected values. If any assay certificate fails the QA/QC check, the lab is immediately notified for investigation and possible re-assay. The blank samples generally produced values substantially lower than 5 times the lower detection limit for Au, Ag, Cu, Mo, Pb and Zn which is within industry acceptable standards, however there were no failures. The performance of the certified reference material analyses was also within acceptable limits.

The 2018 soil and rock grab sample collection, security, preparation, and analytical procedures used are appropriate for the type of mineral exploration that is being undertaken and the stage of the Tintic Project. The authors of the Tintic Technical Report consider the QA/QC measures taken to be appropriate and the performance of blanks and standards to be acceptable, and note that the duplicates indicate no significant biases in the data.

Data verification conducted by the authors of the Tintic Technical Report included a site visit to the Tintic Project and a desktop study. SRK personnel completed a site visit to the Tintic Project in November 2020, which included an overview of the history and geological setting of the Tintic Project area, and a field examination of selected historical mine workings and the prospective areas identified for exploration drill testing. This included the underground workings at the Mammoth Mine and the Sioux-Ajax Tunnel which occur in CRD exploration potential areas and the porphyry deposit drilling exploration potential areas as well as the Mammoth Shaft and the Glory Hole Shaft. The authors of the Tintic Technical Report reviewed and accepted the information supplied by us. Historical information was verified from several web and literary sources where possible. The analytical results were checked against the relevant laboratory certificates, and no transcription errors were noted by the QPs. The QPs did not request any check assays as no mineral resources or exploration tonnages and grades have been delineated at the Tintic Project.

The authors of the Tintic Technical Report found the information to be comprehensive and logically archived and the data management and database compilation procedures are consistent with standard industry practices, and also reviewed and accepted the supplied information and considered it to be geologically appropriate and adequate for use in the Company's ongoing exploration efforts at the Tintic Project.

### ***Hog Heaven Project, Montana, USA***

The Hog Heaven Project is located on private land approximately 85 km south-southwest of the town of Kalispell in Flathead County, Montana and is accessed by driving 16 km of gravel road from the highway.

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.

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 3% 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 C\$2.0 million. Newstar acquired shares and warrants of Brixton in a private placement for a purchase price of C\$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, 2022, we had incurred \$3.1 million in exploration expenditures and made \$1,000,000 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.

*Royalties.* 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.

*History.* There are several high sulfidation epithermal mineral deposits and prospects within the bounds of the Hog Heaven Project as well as several now-closed mines, including the Flathead Mine. The past producing Flathead Mine was a silver-rich, high sulfidation epithermal mineral system positioned on the margin of a diatreme breccia body and had one of the highest silver to gold ratios (2,233:1) of any high sulfidation epithermal deposit in the world. We believe that the Flathead Mine is just one small part of a much larger mineralized system that has remained unrecognized by past miners and explorers.

The Flathead Mine was mined by Anaconda Mining Inc. from 1929 to 1946, producing approximately 241,000 tons of direct-ship Ore averaging 26.6 oz/ton Ag. A lessee mined the Flathead Mine from 1963 to 1975 producing 49,700 tons averaging 9.35 oz/ton Ag. Other previously mined high sulfidation epithermal mineral deposits within the bounds of the Hog Heaven Project including the Ole Hill and West Flathead Mines located 1.6 km west of the Flathead Mine; the Margarite Mine, south of Flathead Mine; the Martin Mine just northwest of Margarite Mine with indications of very high-grade Ag, Au, Cu, Pb, and Zn mineralization at lower levels of the mine; the Battle Butte Mines west of Margarite Mine; and the Donald and Francis Mines west of Martin Mine.

*Geological Setting, Mineralization and Deposit Types.* Mineralization in the Hog Heaven Project area comprises silver-gold-copper-lead-zinc high sulfidation epithermal replacement and vein-breccia deposits. The Hog Heaven Project is located in the Little Bitterroot Valley, a north-northwest trending, 6 to 8 km wide valley bounded by mountains with elevations of 1,500 m to 2,500 m and rising 300 m to 800 m above the valley floor. The Hog Heaven Project is underlain by Proterozoic Belt Supergroup strata just east of the axis of the north-northwest-trending Purcell Anticlinorium and is intruded and unconformably overlain by Early Oligocene volcanics. At the Flathead Mine, stratabound and replacement orebodies occur along stratigraphic horizons in the upper bedded diatreme zone adjacent to a mega-clast of latite porphyry (previously referred to as the central latite porphyry dome).

*Exploration.* Prior exploration in the greater Hog Heaven Project area consisted of surface soil geochemical surveys over airborne electromagnetic geophysical targets, confirmation and/or updating of surface mapping, and rock chip sampling. We have completed due diligence studies on recent and historic drilling and on surface geochemical results. This includes relogging approximately 13,700 m of drill core to confirm and/or update the geologic model; surface rock chip sampling at the Flathead Mine to confirm metal distribution and grades; and re-sampling of approximately 2,600 pulp samples from historic drill holes at the Flathead and Ole Hill Mines with results pending. We have also reprocessed Brixton's 2018 airborne electromagnetic survey data, and an inversion model was produced to help guide exploration. Initial drill targets were picked from the inversion results and drill pads were permitted and bonded with the Montana Department of Environmental Quality. A three dimensional IP survey was completed over the Hog Heaven Project area in the summer of 2021 to further assess target potential and to generate new drill targets. A detailed ground gravity survey covering the Hog Heaven project area was completed in September of 2021.

*Drilling.* Drill targeting for both extensions to existing deposits and new target concepts was based on the results of the geophysical and geochemical surveys. A drill program commenced in October 2022 with two holes drilled before weather shut down drilling for the winter. The drill program is expected to continue in 2023.

*Planned Work Programs.* In 2023, we plan to continue geological mapping and sampling activities, in addition to continuing the drilling program to investigate several deep anomalies.

### ***Sama Nickel-Copper-Palladium Project, Ivory Coast***

The Ivory Coast Project is located approximately 650 road km northwest of Abidjan, Ivory Coast. As of December 31, 2022, our interest in the Ivory Coast Project was held through our 22.8% equity interest in Sama and our 30% interest in the Sama Nickel Corporation Inc. (“Sama Nickel”) joint venture described below. As the Ivory Coast Project is the only significant mineral project in which we have an interest outside of the western hemisphere, we are considering longer term strategic alternatives for our interest in the project (as well as our interest in Sama Nickel and our 22.8% equity interest in Sama as of December 31, 2022) in order to maintain our focus on our other projects in the western hemisphere. While we currently intend to complete our earn-in and acquire a 60% interest in the Ivory Coast Project, following such time we may consider a disposition of such interests, a joint venture or other structure to monetize the value of these interests. We are not currently in negotiations or discussions with any party regarding our interest in the Ivory Coast 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 (“SODEMI”), 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 C\$15,000,000 over a maximum of six years. By incurring additional expenditures of C\$10,000,000 within the same time period, including the financing of a bankable Feasibility Study and the acquisition of an exploitation permit on part of the Ivory Coast Project, we will be entitled 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 C\$15,000,000 expenditure threshold and as a result we acquired a 30% shareholding interest in Sama Nickel.

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. Govind Friedland are our director nominees on the board of Sama, both of whom were most recently re-elected at the annual meeting of shareholders of Sama held on June 17, 2021. Other than as shareholders of Sama, we do not have any interest in Sama’s gold projects in Liberia or its nickel-copper project in Québec, Canada.

*Overview.* In 2009, Sama entered into an agreement with SODEMI, a parastatal organization established by the Ivory Coast, under which Sama was to explore the area covered by the former Permit No. 123 (“PR123”), held by SODEMI in the Ivory Coast. The former PR123 encompassed approximately 446 km<sup>2</sup>. As a result, Sama became responsible for financing exploration work programs until the completion of a bankable Feasibility Study. SODEMI was not required to contribute to the exploration work conducted by Sama Nickel.

In June 2019, two new exploration permits, Samapleu East (“PR838”) and Samapleu West (“PR839” together with PR838, the “PRs”), replacing the former PR123, were granted to SODEMI. The PRs together cover 318 km<sup>2</sup>, expire on June 18, 2023, and can be renewed for periods totaling up to 12 years. In accordance with both PRs, Sama Nickel agreed to complete an exploration program budgeted at approximately \$5,200,000 for PR838 and approximately \$1,700,000 for PR839 before the term of the exploration permits expires. In September 2019, Sama Nickel and SODEMI signed an amendment to their agreement under which the parties confirmed Sama Nickel and SODEMI respectively hold a 66.7% interest and a 33.3% interest in the two new exploration permits, notwithstanding any future request for an exploration permit.

PR838 is close to the village of Yorodougou, about 50 km west of Biankouma and 25 km east of the border with Guinea. PR838 has an irregular shape, with a maximum north-south extent of 24 km and 16 km along the east-west direction, for a total area of 258 km<sup>2</sup>.

Upon completion of a bankable Feasibility Study, an advisory committee which consists of two Sama Nickel representatives and two SODEMI representatives would conclude on the feasibility of the Ivory Coast Project. If the

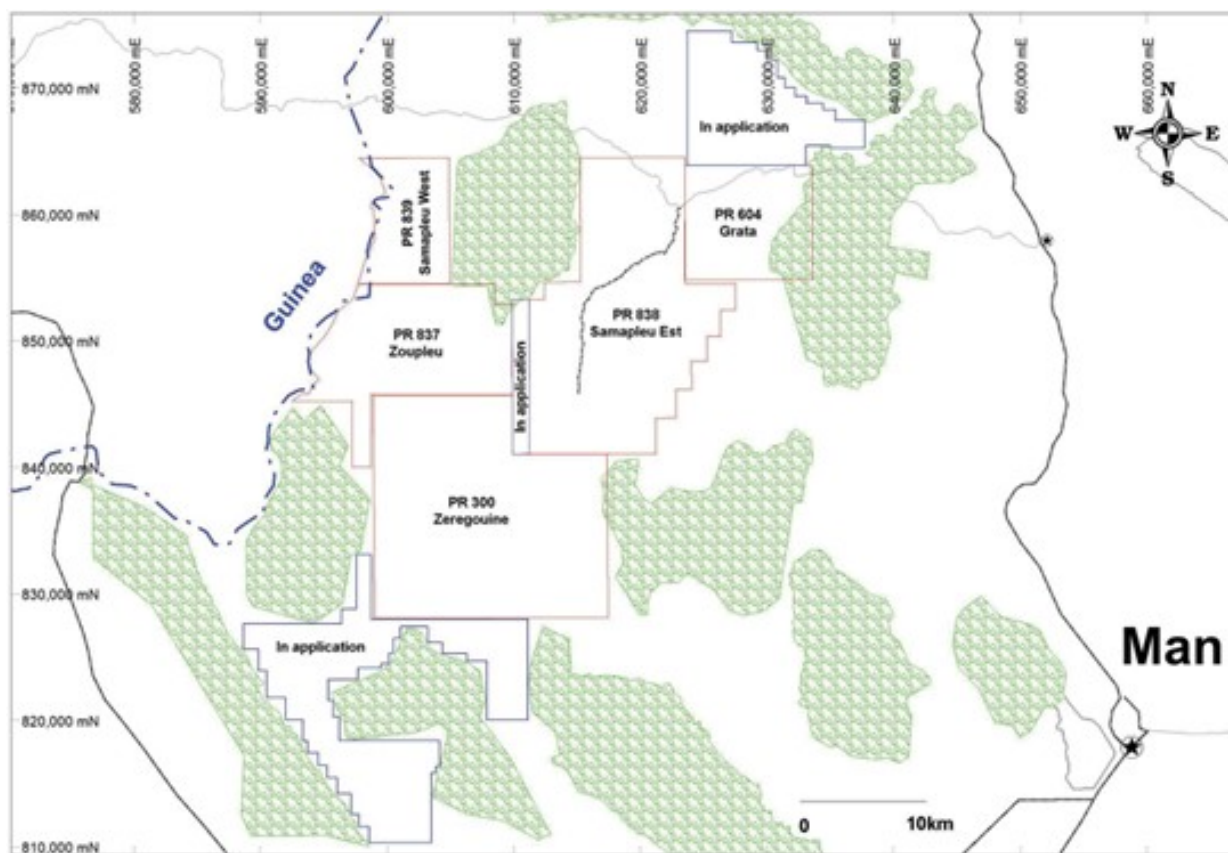
advisory committee were then to decide to proceed with the project, an exploitation (mining) entity would be established whereby future funding would be split between Sama Nickel and SODEMI at 66.7% and 33.3%, respectively.

Sama Nickel, through other subsidiaries, owns exploration rights on three additional exploration permits (PR300, PR604 and PR837) adjacent to PR838 and PR839 for a combined 839 km<sup>2</sup>. These three PRs are 100% owned by Sama Nickel. PR300 expired December 18, 2021, and application to renew was filed before such expiry. The renewal process is ongoing. PR604 expires on December 8, 2022 and a renewal application has been lodged. The remaining permits expire on July 18, 2023.

*Technical Report.* Sama has filed a technical report prepared in accordance with NI-43-101, which is an instrument developed by the Canadian Securities Administrators and administered by the provincial and territorial securities commissions that govern how issuers in Canada disclose scientific and technical information about their mineral projects to the public, for the Ivory Coast Project, titled “NI 43-101 Technical Report — Preliminary Economic Assessment Samapleu Project” and which was prepared jointly by Daniel M. Gagnon, P.Eng., Schadrac Ibrango, P. Geo, Ph.D, MBA, Nalini Singh, P.Eng., Ryan Cunningham, P.Eng., Volodymyr Liskovych, Ph.D, P.Eng., Marie-Claude Dion St-Pierre, P.Eng., dated June 1, 2020 but with an effective date of May 22, 2019 (“Ivory Coast Technical Report”). The report was filed on the System For Electronic Document Analysis and Retrieval (“SEDAR”). Scientific and technical information in this section regarding the Ivory Coast Project is based upon, or in some cases extracted from, the Ivory Coast Technical Report.

*Preliminary Economic Assessment.* The Ivory Coast Project was the subject of a June 2020 Preliminary Economic Assessment (the “Sama PEA”). Highlights of the Sama PEA included estimated average annual production of 3,900 t of carbonyl nickel powder, 8,400 t of carbonyl iron powder and 14,100 t of copper concentrate over a 20-year mine life. Capital costs to develop the project were estimated at \$282,000,000 including contingency of \$37,000,000, with operational costs of \$2,062/t products and \$23.96/t milled. The Sama PEA generated an after-tax NPV (at an 8% discount rate) of \$391,000,000 and after-tax IRR of 27.2%.

*Figure Ivory Coast Project Location*



*Mineral Resource Estimate.* The Ivory Coast Project contains mineral resources.<sup>1</sup>

Category	Resources (Mt)	NiEq (%)	Ni (%)
Measured	—	—	—
Indicated	33.18	0.269	0.238
Measured and Indicated	33.18	0.269	0.238
Inferred	17.78	0.248	0.224

- 
- (1) Mineral Resources are exclusive of Mineral Reserves. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. There is no certainty that all or any part of the Mineral Resources estimated will be converted into Mineral Reserves. The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues. The CIM definitions were followed for the classification of Indicated and Inferred Mineral Resources. The quantity and grade of reported Inferred Resources in this estimation are uncertain in nature and there has been insufficient exploration to define these Inferred Resources as an Indicated or Measured Mineral Resource. It is reasonably expected that a portion of Inferred Mineral Resources could be upgraded with continued exploration. Pit shell defined using 52-degree pit slope, copper concentrate price of \$2.1/lb and nickel powder price of \$13.5/lb, \$3/t mining costs, \$15/t of processing and G&A costs, and a resulting cut-off grade of 0.1% NiEq.

#### *Planned Work Programs.*

In 2023, we will be focusing on technical trade off studies of the Samapleu and Extension deposits and the Grata discovery to support estimates of the value of these deposits, which may lead to an updated Preliminary Economic Assessment (“PEA”) of the Ivory Coast Project.

#### **Other Mineral Projects and Equity Investments**

The table below provides summary information regarding our other mineral projects in which we have a direct or indirect interest.

## Other Mineral Projects

Project Name	Location and Project Size	Stage of Development	IE Interest and Nature of Interest	Title Holders / Operator	Primary Minerals	Nature of Mineral Title	Mineral Resources/Reserves	Aggregate Annual Production – Last 3 Fiscal Years
<b>Bitter Creek</b>	Arizona, USA 35.2 km <sup>2</sup>	Exploration	100% Ownership	Bitter Creek Exploration Inc., a wholly-owned subsidiary	Copper Gold	Lode mining claims	n/a	Not in production
<b>Carolina</b>	North Carolina, USA 1.75 km <sup>2</sup>	Exploration	0% current ownership with right to earn up to 85%	Carolina Mining Corp.	Gold Copper	Fee Simple	n/a	Not in production
<b>Desert Mountain</b>	Utah, USA 13.88 km <sup>2</sup>	Exploration	Little Sahara Exploration (“LSE”), a wholly-owned subsidiary of the Company	LSE	Copper Gold	Unpatented mineral claims	n/a	Not in production
<b>Grasshopper</b>	Montana, USA	Exploration	100% Ownership	IE Montana Holdings Corp.	Copper	Unpatented mineral claims	n/a	Not in production
<b>Lincoln</b>	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 mineral claims, unpatented mineral claims and Utah State leases	n/a	Not in production
<b>White Hill</b>	Nevada, USA 84.95 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	Federal mining claims	n/a	Not in production
<b>Unity</b>	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 mineral claims	n/a	Not in production
<b>Yangayu</b>	Papua New Guinea 1,100 km <sup>2</sup>	Exploration	0% current ownership interest; Option to acquire 100% of the mineral title	Goldsearch International	Copper Gold	Exploration license	n/a	Not in production

*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 1,016 federal mineral claims covering 84.95 km<sup>2</sup> managed by the Bureau of Land Management. The project hosts demonstrated copper-bearing skarn-style mineralization.

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 obligated to fund 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 have not yet commenced exploration activities at the White Hill Project.

*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 348 lode mining claims that are valid through to September 1, 2022. 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 underway to produce drill ready targets. Our exploration activities have not included any drilling activities nor are we aware of any historic drilling on the Bitter Creek property.

*Carolina Mining, North Carolina, USA* (the “Carolina Joint Venture”). 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 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 m to 1300 m. Inversion modelling by CGI showed two of the EM conductors extend from 200 m below surface to depths >700 m 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 will provide targeting detail for drill testing in 2023.

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.

*Desert Mountain Project, Utah, USA* (the “Desert Mountain Project”). Our Desert Mountain Project is located in southwest Utah in Juab County. The closest towns include Delta and Eureka. The Desert Mountain Project is approximately 100 km southwest of Salt Lake City with access via paved roads and 22 km of gravel roads. We operate the Desert Mountain Project through a wholly-owned subsidiary company, LSE. The only previous mineral exploration and development on the property was historic in nature and focused on the now-closed Porter Mine. Historic production is not known. Copper was the primary target of the former mine. The Desert Mountain Project consists of 13.86 km<sup>2</sup> of unpatented Federal mining claims (166 claims) wholly-owned by Little Sahara Exploration Inc. (“LSE”).

Our exploration at Desert Mountain has included rock grab samples (50 samples), whole rock analysis (18 samples), magnetic and gravity geophysics and two RC drill holes. Both holes were completed by early September, 2021 with DMR-002 intercepting low-grade Cu mineralization from surface to 68.6 m of 299 ppm Cu including 6.1m at 938 ppm Cu and DRM-001 awaiting a diamond core tail. Exploration plans for 2023 include completing the suspended drill program, which will include diamond tails of rotary holes.

*Grasshopper, Montana, USA* (the “Grasshopper Project”). Our Grasshopper Project is located in southwestern Montana. The closest towns are Bannack and Argenta. The Grasshopper Project is about 60 km south of Butte. A circular topographic feature centered on a magnetic anomaly was first identified in 1976. Since 1977, 24 shallow rotary holes and 1



diamond drill hole have been completed along with mapping, soil sampling, ground magnetics, and an IP Survey. The Grasshopper Project consists of 7.19 km<sup>2</sup> of unpatented Federal mining claims (86 claims) wholly-owned by IE Montana Holdings Corp.

*Lincoln Project, Utah, USA* (the “Lincoln Project”). Our Lincoln Project is located in southwest Utah in Beaver County. The Lincoln Project is approximately 330 km from Salt Lake City and accessible by gravel roads from the paved road. 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.

Starting in October 2022, using Typhoon™, a program of 3D-style pole-dipole DCIP was carried out over an area approximately 2.5 km wide and 5.5 km long. CGI 3D inversion modeling is complete.

*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 centred 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. As of December 31, 2022, we had paid \$750,000 to the vendors. Option payments of \$2,000,000 on the fifth anniversary of the agreement and \$2,250,000 on the sixth 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, using Typhoon™, a program of 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.

*Yangayu, Papua New Guinea.* Exploration license EL2668 Yangayu (“Yangayu”) is located between the headwaters of the southerly flowing Tauri and Kapau Rivers in the Morobe and Gulf Provinces of Papua New Guinea (“PNG”). Yangayu covers 1,100 km<sup>2</sup> and is currently registered to Goldsearch International Pty Ltd (“GSI”), a private Australian company.

In October, 2021, we and our PNG subsidiary entered into an Exploration Alliance Agreement with GSI (the “Exploration Alliance Agreement”). Under the agreement, GSI has agreed to exclusively help us identify, acquire, explore and develop promising mineral titles in PNG, of which Yangayu is the first. As mineral title transfers are not allowed in PNG within the first two years after title grant, GSI has agreed to transfer 100% of Yangayu to us after the expiration of this two-year transfer restriction in May 2023. Under the Exploration Alliance Agreement, GSI will inform us of other prospective licenses and we will have 60 days to determine whether to acquire them. If we do, they will become “designated projects” under the Exploration Alliance Agreement, similar to Yangayu. We manage all designated projects and will approve and pay for all programs of work (including all third party payments). GSI acts as the operator of all designated projects under our direction. Early stage geochemical sampling commenced at Yangayu in December 2021 and is ongoing.

*Equity Investments.* We currently have equity investments in five publicly listed companies in Canada, all of which are listed on the TSX Venture Exchange (“TSXV”). These are Brixton, Cordoba, Kaizen, Sama, and Fjordland (collectively the “Listed Companies”). The following table summarizes our equity investments as of December 31, 2022.

Company	Location of Incorporation	Equity Ownership % Non-Diluted	Equity Ownership % Partially-Diluted	Principal Mineral Projects
<b>Brixton Minerals Corporation</b>	British Columbia, Canada	2.2%	4.4% on exercise of warrants	Hog Heaven Project, Montana, USA
<b>Cordoba Minerals Corp.</b>	British Columbia, Canada	63.2%	63.8% on exercise of warrants	San Matias Project, Colombia Perseverance Project, Arizona
<b>Kaizen Discovery Inc.</b>	British Columbia, Canada	82.7%	83.0% on exercise of warrants	Pinaya Project, Peru
<b>Sama Resources Inc.</b>	Canada	22.8%	22.8%	Ivory Coast Project, Ivory Coast
<b>Fjordland Exploration Inc.</b>	British Columbia, Canada	16.9%	16.9%	South Voisey’s Bay Project, Canada

Two of our key projects — the Hog Heaven Project in Montana, USA and the Ivory Coast Project in Ivory Coast — are owned at least in part by two of our equity investee companies. Our other equity investees have interests in the following mineral projects, none of which are material to us individually or as a whole.

#### Interests in Projects held by Listed Companies

Project Name	Location	Stage of Development	IE Interest and Nature of Interest	Title Holders / Operator	Minerals	Nature of Mineral Title	Mineral Resources/ Reserves	Aggregate Annual Production – Last 3 Fiscal Years
<b>San Matias</b>	Colombia	Development	Shareholder in Cordoba	Cordoba	Copper Gold Silver	Construction and Assembly; Exploration licenses	Mineral Resource & Mineral Reserve	Not in production
<b>Perseverance</b>	Arizona, USA	Exploration	Shareholder in Cordoba Cordoba owns 51% of Perseverance and has an option to earn an additional 29%	MMDEX LLC a joint venture company between Cordoba and Bell Copper Corporation	Copper	Fee simple, Arizona State leases	No	Not in production
<b>Pinaya</b>	Peru	Exploration	Shareholder in Kaizen	Canper Exploraciones S.A.C.	Copper Gold	Concession	Mineral Resource	Not in production
<b>Coppermine</b>	Nunavut, Canada	Exploration	Shareholder in Kaizen	Kaizen	Copper Silver	Mineral claims	No	Not in production
<b>Aspen Grove</b>	British Columbia, Canada	Exploration	Shareholder in Kaizen	KZD Aspen Grove Holding Ltd	Copper Gold	Mineral claims	No	Not in production
<b>South Voisey’s Bay</b>	Newfoundland and Labrador, Canada	Exploration	Shareholder in Fjordland Exploration and option to acquire a 65% interest	Commander Resources Ltd.	Nickel	Mineral claims	No	Not in production

*San Matias Project, Colombia* (the “San Matias Project”). The San Matias Project, which is 100% owned by Cordoba, is located in the Municipality of Puerto Libertador, Department of Córdoba, Colombia, and is approximately 200 km north of the city of Medellín. The site is road-accessible from the town of Puerto Libertador, approximately 20 km away. Cordoba holds exploration licenses covering around 146 km<sup>2</sup> and has an additional 893 km<sup>2</sup> of exploration licenses under application. The Alacran Deposit is subject to a 2% NSR, with an advanced royalty payment of \$500,000 commencing at the earlier of three years after the receipt of approvals to commence construction at Alacran, or six years after filing for approval to commence construction at Alacran. We hold the right to 62.5% of this 2% NSR.

On July 31, 2017, we 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.

Cordoba has filed a Canadian NI 43-101 technical report for the San Matias Project, titled “NI 43-101 Technical Report and Prefeasibility Study, San Matías Copper-Gold-Silver Project, Colombia” and which was prepared jointly by Glen Kuntz, P. Geo., Joanne Robinson, P.Eng., Steve Pumphrey, P.Eng., Kurt Boyko, P.Eng., Harold Harkonen, P.Eng., Chris Martin, C.Eng., Wilson Muir, P.Eng., Patrick Williamson, P.G., and Peter Cepuritis, MAusIMM, and with an effective date of August 3, 2021 (“San Matias Technical Report”). The San Matias Technical Report was filed on SEDAR. Scientific and technical information in this section regarding the San Matias Project is based upon, or in some cases extracted from, the San Matias Technical Report.

In January 2020, Cordoba began the studies required to secure the necessary Colombian mining approvals at the San Matias Project. Cordoba commenced an Environmental Impact Assessment (the “EIA”) and the Mining Technical Work Plan (the “PTO”), which are required to secure the necessary Colombian mining approvals for the Alacran Deposit. Cordoba submitted the PTO to the appropriate Colombian authorities in November, 2021. Cordoba must submit the EIA in the first half of 2024 in order maintain the validity of the licenses and be eligible for receipt of applicable mining approvals.

The National Mining Agency suspended the Alacran title from May 2020 through to November 2020 as a result of security concerns. Some residents of the local communities in the San Matias Project area have historically been involved in activities that would be disruptive to the orderly development of the Project, including civil insurrection and illegal artisanal mining on the property. Since recommencing work on the San Matias Project in November 2020, there have been incidents in which some members of the Alacran Community have demonstrated opposition to Cordoba’s operations. These incidents have included blockades on transport of equipment and personnel and initiation of legal proceedings contesting Cordoba’s rights to the San Matias Project. Cordoba has been able to continue operations despite these incidents, although such incidents have slowed the progress of work on site.

Cordoba completed a PFS for the Alacran Deposit in January 2022. The PFS, conducted by Nordmin, indicates Probable Mineral Reserves totaling 102.1 Mt grading 0.41% Cu, 0.26 g/t Ag, and 2.30 g/t Au diluted. Setting the life of the mine at 13 years, the PFS also estimated production of 22,000 t per day through conventional open pit mining operation with an average annual production of 68.8 Mlbs Cu, 55 koz Ag, and 386 koz Au. Total recovered production is estimated to be 849 Mlbs Cu, 0.7 Moz Ag, and 4.7 Moz Au, with metallurgical recoveries averaging 92.5% Cu, 78.1% Ag, and 62.9% Au in copper and precious metal concentrates. The Cu concentrate is expected to contain very low contents of deleterious elements, such as arsenic and lead.

The PFS estimates initial capital expenditures to be \$434.9 million, while total capital expenditures for the Life of Mine, including sustaining capital, reclamation and closing costs, are estimated at \$591.0 million. The financial analysis in the PFS anticipates that 60%, or \$292.1 million, of the initial capital expenditure can be financed by debt. The PFS further sets expected payback at the 2.4 year mark at metals prices of \$3.60/lb Cu, \$1,650/oz Ag, and \$21.00/oz Au as of January 2022, with after-tax Net Present Value estimated to be \$415 million. The Alacran Mine is expected to generate \$190.4 million in government royalty revenue, plus \$514.2 million in income tax revenue to support government programs in Colombia. In its analysis, the PFS did not include the satellite deposits at Montiel East, Montiel West and Costa Azul.

*Mineral Reserves and Mineral Resource Estimate.* The San Matias Project contains mineral reserves and mineral resources as set forth in the following table.

Table: San Matias Project Mineral Resources<sup>(1)</sup>

Deposit	Tonnage (Mt)	NSR (\$) Marginal Cut-off	Cu Equiv. Marginal Cut-Off (%)	Cu Equiv. Grade (%)	Cu Grade (%)	Au Grade (g/t)	Ag Grade (g/t)	Contained Cu (tonnes)	Contained Cu (Mlb)	Contained Au (oz)	Contained Ag (oz)
<b>Indicated Resources</b>											
Alacran	2.8	1.78/8.85	0.03/0.17	0.17	0.19	0.11	1.15	5,315	11.7	10,263	105,126
Montiel East	4.3	13.75	0.22	0.70	0.46	0.35	1.53	19,800	43.7	48,800	211,200
Montiel West	4.6	13.75	0.22	0.52	0.24	0.49	1.32	11,200	24.8	72,600	195,800
Costa Azul	7.4	13.75	0.22	0.40	0.24	0.21	0.65	20,300	44.8	49,200	155,800
Total Indicated	19.1	n/a	n/a	n/a	0.28	0.11	1.15	5,315	125.0	180,863	667,926
<b>Inferred Resources</b>											
Alacran	2.2	1.78/8.85	0.03/0.17	0.12	0.20	0.17	0.86	5,228	11.5	14,531	72,308
Montiel East	1.8	13.75	0.22	0.34	0.25	0.15	0.88	4,400	9.6	8,500	50,300
Montiel West	0.6	13.75	0.22	0.39	0.07	0.54	0.96	400	1.0	11,100	19,000
Costa Azul	0.1	13.75	0.22	0.39	0.29	0.16	0.60	400	0.8	600	2,400
Total Inferred	5.1	n/a	n/a	n/a	0.21	0.21	0.94	9,823	21.6	32,557	142,538

(1) The Mineral Resources in this estimate were independently prepared by Nordmin Engineering Ltd., and the Mineral Resources were prepared in accordance with NI 43-101 and the CIM Definition Standards for Mineral Resources and Mineral Reserves (2014) and the CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines (2019). Mineral Resources that are not Mineral Reserves do not demonstrate 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 original records. The Mineral Resources in this estimate for the Alacran deposit used Datamine Studio RMTM Software to create the block models and Geovia's SurpacTM and WhittleTM software to constrain the resources and create a conceptual OP shell for the deposit. Assumptions used to prepare the conceptual pit for the Alacran deposit include:

- Metal prices of \$3.25/lb Cu, \$1,600.00/oz Au, and \$20.00/oz Ag;
- Operating cost inputs include:
  - Mining cost of \$1.73/t for saprolite and \$2.30/t for transition and fresh rock for the overall LOM;
  - Processing costs of \$1.78/t for saprolite and \$8.85/tonne fresh and transition rock. This includes assumptions for milling, G&A, and tailings. These equate to approximately 0.03% copper equivalency for saprolite and 0.17% copper equivalency for fresh and transition rock;
  - 98.0% mining recovery, 2.0% dilution and 41°-48° pit slope in fresh and transitional rock, and 36.5° in weathered saprolite;
  - Freight costs of \$30.00t concentrate from the mine to port and \$82.00t concentrate port to a smelter;
  - Treatment costs of \$85.00/t dry concentrate, payable metal factors of 95.0% for Cu, 96.5% for Au, and 90.0% for Ag;
  - Refining charges of \$0.085/lb Cu, \$5.00/oz Au, and \$0.30/oz Ag;
- An NSR cut-off of \$1.78/t for saprolite and \$8.85/t for transition and fresh rock has been applied to Alacran. The NSR value was calculated using preliminary production and processing parameters and commodity metal prices as follows:
  - $NSR_{Cu} = Cu\_g/t * MiningRec\_ \% * MillCuRec\_ \% * 51.53/\% \text{ Cu (On Site Value)}$ ;
  - $NSR_{Au} = Au\_g/t * MiningRec\_ \% * MillAuRec\_ \% * 46.55 \$/g \text{ (On Site Value)}$ ;
  - $NSR_{Ag} = Ag\_g/t * MiningRec\_ \% * MillAgRec\_ \% * 0.54 \$/g \text{ (On Site Value)}$ ;
  - $NSR = NSR_{Cu} + NSR_{Au} + NSR_{Ag}$ ; • Mill recoveries include a 0% Cu and Ag recovery for saprolite material;
- Copper equivalencies incorporate all the same dilution values, mining recovery values, mill recovery values, and downstream costs as NSR and are calculated directly from the NSR values and the 51.53 copper conversion factor above through the following formula:
  - $Copper \text{ Equivalency} = NSR / 51.53$ ;

The Mineral Reserves documented below are estimated based on CIM guidelines that define Mineral Reserves as “the economically mineable part of a Measured or Indicated Mineral Resource” (CIM, 2014, p. 6)... “demonstrated ... by at least a Pre-Feasibility Study” (CIM, 2014, p. 7). This must include adequate information on mining, processing, metallurgical, economic, and other relevant factors that demonstrate, at the time of reporting, that economic extraction can be justified. A Mineral Reserve “includes diluting materials and allowances for losses which may occur when the material is mined” (CIM, 2014, p. 6).

The Mineral Resources in this estimate for the Satellite deposits used Datamine Studio 3™ software to create the block models and Datamine NPV Scheduler™ to constrain resources and create conceptual OP shells using Indicated and Inferred mineralized material (oxide and sulphide). Assumptions used to prepare the conceptual pits for the Satellite deposits include:

- Metal prices of \$3.10/lb Cu, \$1,400/oz Au, and \$17.75/oz Ag;
- An NSR cut-off of \$13.75/tonne has been applied. This equates to approximately 0.22% Copper equivalency as calculated in the Satellite deposit block models;
- Operating cost inputs include:
  - Mining cost of \$2.43/t mined for the first five years and \$1.69/t thereafter;
  - Processing cost of \$8.63/t milled for the first five years and \$7.50/t thereafter;
  - G&A costs of \$2.56/t milled for the first five years and \$1.32/t thereafter;
- 97.0% mining recovery, 4.0% dilution, and 45° pit slope in fresh and transitional rock and 32.5° in weathered saprolite;
- Variable process recoveries of 50.0% to 90.0% for Cu, 72.0% to 77.5% for Au, and 40.0% to 70.0% for Ag depending on the domain (saprolite, transition, or fresh sulphide) and Cu grade;
- Freight costs of \$100.00/t concentrate, and treatment costs of \$90.00/t dry concentrate, payable metal factors of 95.5% for Cu and 96.5% for Au and 90.0% for Ag. Refining charges of \$0.090/lb Cu, \$5.00/oz Au and \$0.30/oz Ag;
- Cu equivalency has been used for the three Satellite pits and was calculated using:  $\text{Copper equivalency \%} = \text{Cu \%} + (\text{Au Factor} \times \text{Au Grade g/t} + \text{Ag Factor} \times \text{Ag Grade g/t}) \times 100$ .
  - $\text{Au Factor} = (\text{Au Recovery \%} \times \text{Au Price \$/oz} / 31.1035 \text{ g/oz}) / (\text{Cu Recovery \%} \times \text{Cu Price \$/lb} \times 2204.62 \text{ lb/t})$ ;
  - $\text{Ag Factor} = (\text{Ag Recovery \%} \times \text{Ag Price \$/oz} / 31.1035 \text{ g/oz}) / (\text{Cu Recovery \%} \times \text{Cu Price \$/lb} \times 2204.62 \text{ lb/t})$ ;
  - Variable process recoveries of 50.0% to 90.0% for Cu, 72.0% to 77.5% for Au and 40.0% to 70.0% for Ag depending on the domain (saprolite, transition, or fresh sulphide) and Cu grade;

Totals may not sum due to rounding.

*Table: San Matias Project Mineral Reserves<sup>(1)</sup>*

Category		NSR Value Marginal Cut-off Grade	Tonnage (thousands)	Diluted Cu Grade (%)	Diluted Au Grade (g/t)	Diluted Ag Grade (g/t)
Probable Mineral Reserve	Saprolite	1.78 \$/t	10,135	—	0.21	—
Probable Mineral Reserve	Transition	8.85 \$/t	2,011	0.62	0.22	3.11
Probable Mineral Reserve	Fresh	8.85 \$/t	89,954	0.45	0.27	2.54
Probable Mineral Reserve	Fresh + Transition	8.85 \$/t	91,165	0.45	0.27	2.56
Probable Mineral Reserve	Overall Total	—	102,100	0.41	0.26	2.30

(1) The Mineral Reserve Estimate was prepared by Nordmin. The effective date of the Mineral Reserves estimate is October, 31, 2021. The Mineral Reserve Estimate is based metallurgical recovery algorithms, that result in an overall recovery of 92.5% of Cu in the fresh and transition material, 78.1% Au in fresh, transition and saprolite, and 62.9% Ag in the fresh and transition material. Metal prices were set at 3.25 \$/lb Cu, 1,600 \$/oz Au, 20 \$/oz Ag. The Mineral Reserve Estimate incorporates mining dilution and mining loss assumptions through regularization of block size and a mining recovery factor of 98%.

On March 15, 2021, Cordoba announced that it had been informed of an operation carried out by the Colombian National Police in Colombia to shut down illegal gold mining activities and to improve regional security at El Alacrán. The intervention by the Colombian authorities was in response to illegal gold mining activities being undertaken by a group of individuals on Cordoba's title and was a direct result of the National Government's initiative to eliminate illegal mining, through which there have been several similar interventions recently in other parts of the country. The Colombian National Police and Police against Illegal Mining act independently and take actions they consider necessary to maintain public order in the country. No Cordoba personnel were on site during the operation, and Cordoba resumed PFS fieldwork on March 20, 2021. The operation conducted by the Colombian National Police in March 2021 resulted in increased tension with some members of the Alacran Community and for the months following company personnel were accompanied by members of the military and Colombian National Police when conducting fieldwork near the community, in order to maintain security and deter conflict. The relationship with the community has now greatly improved, allowing Cordoba to complete its PFS work.



On December 8, 2022, Cordoba announced a strategic arrangement with JCHX Mining Management Co., Ltd. (“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. At the closing of the transaction, which is expected to occur in the second quarter of 2023, \$40 million will be payable in cash as a first installment. A second installment of \$40 million is payable in cash upon 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, but in no event will such second installment be paid later than the second anniversary of the closing of the transaction. 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.

On December 27, 2022, JCHX advanced a bridge loan of \$10 million in cash to Cordoba. Upon closing of the transaction, the entire balance owing under the bridge loan and accrued interest will be applied towards the first installment payment as a payment in kind.

The closing of the transaction is subject to customary conditions, and (1) Cordoba must receive approval from the TSXV and approval of shareholders (excluding JCHX and Ivanhoe Electric) and (2) JCHX must receive approval from its board of directors, shareholders, China’s State Administration of Foreign Exchange, and Beijing Municipal Bureau of Commerce. Cordoba received the approval of its shareholders (excluding JCHX and Ivanhoe Electric) on February 8, 2023.

A Joint Venture Shareholders’ Agreement (“JV SHA”), which will be entered into at closing, will govern the strategic relationship between Cordoba and JCHX, and will set forth the general responsibility and authority of the CMH board of directors, in addition to the entitlements of each shareholder. The JV SHA will provide that (1) the CMH board will comprise four individuals, of which two directors will be nominated by Cordoba and the other two directors will be nominated by JCHX; and for so long as the shareholdings in CMH remain 50%-50%, a Cordoba representative will serve as the Chairperson of the CMH board, and will possess a casting vote on all matters subject to a list of reserved matters; (2) Cordoba will be appointed as the operator and manager of the Alacran Project pursuant to a management services agreement and will be 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).

*Perseverance Project, Arizona, USA* (the “Perseverance Project”). In August 2018, Cordoba, through a wholly-owned subsidiary Cordoba Minerals USA Corp., entered into a joint venture and earn-in agreement with Bell Copper Corporation (“Bell Copper”) and certain of its wholly-owned subsidiaries, to explore the Perseverance porphyry copper project located in northwestern Arizona, USA.

The Perseverance Project consists of mineral rights covering approximately 76.39 km<sup>2</sup>, comprising approximately 20.28 km<sup>2</sup> held through a sublease of private mineral rights from Maverix Metals Corporation, and approximately 56.10 km<sup>2</sup> held as 23 State of Arizona Mineral Exploration Permits located on State Trust Lands.

Cordoba has the option to earn up to an 80% interest in the Perseverance Project through the acquisition of an equity interest in the joint venture company MMDEX LLC (“MMDEX”), which was a wholly-owned indirect subsidiary of Bell Copper, by completing certain phased project expenditures totaling C\$17,000,000 over a seven and a half year period, following which Cordoba would earn an 80% interest in MMDEX. On March 31, 2019, Cordoba’s Phase 1 project expenditures surpassed C\$1,000,000 and Cordoba acquired 25% of MMDEX in May 2019. On March 17, 2022, Cordoba announced that it had made the Phase 2 expenditures required to earn a 51% interest in MMDEX and had vested a 51% interest.

The Perseverance Project lies along the axis of a north-northwest to south-southeast trending, 600 km long, porphyry Cu belt that has produced more than 10% of the world’s copper. The Project lies directly on this belt between Freeport’s Bagdad mine and the now dormant Mineral Park mine.

*Pinaya Copper-Gold Project, Peru* (the “Pinaya Project”). The Pinaya Project, which is 100% indirectly owned by Kaizen, as of December 31, 2022, covers approximately 101 km<sup>2</sup> of granted title, 28 km<sup>2</sup> under application and includes



more than 10 km of underexplored strike length in southeastern Peru. Our Chief of Global Exploration, Mr. Finlayson, also serves as the interim President and Chief Executive Officer of Kaizen.

Kaizen has 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.Geol., and GeoSim Services Inc., with an effective date of April 26, 2016 (“Pinaya Technical Report”). **The Pinaya Technical Report was filed 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.**

*Mineral Resources.* The Pinaya Project’s Mineral Resources are set forth in the table below.<sup>1</sup>

Class	Tonnage (thousands)	Average Grades		Contained Metal	
		% Cu	g/t Au	lbs Cu ‘000’s	oz Au ‘000’s
Measured	8,204	0.326	0.600	59,011	158
Indicated	33,487	0.324	0.462	238,886	497
Inferred	40,216	0.360	0.300	319,041	388

- (1) Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. Mineral Resources have an effective date April 26, 2016; Ronald G. Simpson, P.Geol. is the Qualified Person responsible for the Mineral Resource estimates. Mineral Resources are reported within a conceptual open pit shell based on metal prices of \$2.84/lb Copper and \$1236/oz gold and average metallurgical recoveries of 80%. The pit shell also considers a mining cost of \$2.00/t for mineralized and waste material and \$1.75/t for overburden; processing cost of \$8.50/t; G&A cost of \$1.50/t; and an ultimate pit slope angle of 45°. Copper-equivalent grade estimate based on \$2.84/lb copper and \$1236/oz gold. Mineral Resources are reported at cut-off grades of 0.25 g/t Au for the GOSZ and 0.3% Cu Equivalent for the WPZ and NWPZ zones. Tonnages are rounded to the nearest thousand tonnes; grades are rounded to three decimal places. Rounding as required by reporting guidelines may result in apparent summation differences between tonnes, grade and contained metal content.

In January 2021, Kaizen received drilling approval from the Ministry of Mines for an additional period of twelve months in order to complete a further exploration drilling program. A 10 hole drilling program commenced in November 2021 and was completed in January 2022. Assays of drill results were released in March 2022.

Past drilling at Pinaya included 160 holes by AM Gold Inc. between 2004 and 2008; and two holes by a previous optionee in 2014. Kaizen drilled three holes in first quarter 2020 before arrival of the COVID-19 pandemic. On March 1, 2021, Kaizen announced the results of a 3,046 m, 10 hole drill campaign which confirmed the presence of shallow gold mineralization associated with base metal veins and skarn. On October 3rd 2022, Kaizen released the results of a 92 km<sup>2</sup> Induced Polarization survey which identified several additional buried targets for drill testing. Permitting for new drill pads to test these targets has started and is expected to take at least a year.

*South Voisey’s Bay Project* (the “SVB Project”). Fjordland Exploration Inc. (“Fjordland”) is a publicly listed mineral exploration company incorporated under the laws of British Columbia, Canada. On September 5, 2017, we entered into an investment agreement with Fjordland under which our subsidiary subscribed for 14,000,000 units of Fjordland. We also acquired the option to incur, on behalf of Fjordland, C\$7,400,000 in exploration expenditures by October 31, 2024 (C\$4,200,000 incurred as of December 31, 2022 including a C\$1,400,000 initial investment into the company) and to make C\$290,000 of property payments (C\$90,000 incurred as of December 31, 2022) required to be made by Fjordland under its obligations with Commander Resources Ltd. (“Commander”). If the funding is completed and Fjordland acquires a 100% interest in the SVB Project from Commander, Fjordland has agreed to assign a 65% interest in the SVB Project to our subsidiary. To date, Fjordland has earned an aggregate 35% interest in the SVB Project.

We also have the right to nominate two directors to the Fjordland board of directors if we own between 10% and 50% of the common shares of Fjordland, and three directors if we own more than 50% of the common shares of Fjordland. Currently, Mr. Mark Gibson, our Chief Operating Officer, is the only director nominee of ours serving on the Fjordland board of directors. We also have an anti-dilution right with respect to future financings by Fjordland.

Fjordland’s main project is the SVB Project in Newfoundland and Labrador. Fjordland, as operator, also has an agreement to acquire 100% of the Renzy nickel-copper project located near Maniwaki, Quebec from Quebec Precious Metals Corp. Fjordland is also currently funding a small program on its West Milligan copper-gold project located within 4 km of the Mount Milligan copper-gold mine in central British Columbia, Canada. The project is a joint venture with Northwest Copper Corp. In September 2021, Fjordland announced that it had entered into a binding Letter of Intent with Vulcan Minerals Inc. to acquire a 100% working interest in 30 mineral claims (7.5 km<sup>2</sup>) located in the South Voisey’s Bay area, Labrador.

Fjordland also owns a 100% interest in the early stage Witch copper-gold porphyry project (also referred to as the South Chuchi project) located in the Quesnel Trough of central British Columbia.

## 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 2023–2032 as at December 31, 2022 (\$ thousands)*

Mineral Project	Commitment	2023	2024	2025	2026	2027 - 2032	2023-2032 Total
Santa Cruz (DRHE)	Discretionary	\$ 6,250	\$ 10,000	\$ —	\$ —	\$ —	\$ 16,250
Santa Cruz (Legends)	Non-discretionary	800	920	—	—	—	1,720
Santa Cruz (Other)	Discretionary	300	300	596	—	—	1,196
<b>Santa Cruz (Total)</b>		7,350	11,220	596	—	—	19,166
Tintic (Utah)	Non-discretionary	3,525	—	—	—	—	3,525
Hog Heaven (Montana)	Discretionary	500	500	500	1,000	36,859	39,359
Ivory Coast	Discretionary	—	—	—	3,102	—	3,102
South Voisey's Bay (Canada)	Discretionary	—	3,464	—	—	—	3,464
Crystal Haven (Australia)	Discretionary	—	6,820	—	34,099	—	40,919
Unity (Oregon)	Discretionary	2,000	2,250	—	—	—	4,250
Cave & Lincoln (Utah)	Discretionary	150	200	250	750	1,500	2,850
Carolina Mining (North Carolina)	Discretionary	—	—	5,000	—	20,000	25,000
<b>Total</b>		13,525	24,454	6,346	38,951	58,359	141,635

## Computational Geosciences

**Overview.** 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. As of December 31, 2022, 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.

**Technology.** CGI's technology consists of sophisticated software codes and artificial intelligence ("AI") that is 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.

**Services.** 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 a 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. Finally, CGI is also able to support mineral resource and grade estimates by geostatistically propagating sample assays to its 3D models with rock property and grade relationships.

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 royalty-free license of the LWD code plus support and maintenance. 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.

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

*Market and Business Strategic.* 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., GoldSpot Discoveries Inc., KoBold Metals, PGS ASA, and SJ Geophysics Ltd.

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**

*Overview.* VRB, and its subsidiaries are primarily engaged in designing, manufacturing, installing and operating energy storage systems. The major product of VRB is VRB-ESS®.

*Our Interest in VRB.* Through a wholly-owned subsidiary, we owned 90.0% of VRB’s outstanding common shares as of December 31, 2022. We acquired these shares in 2016 from Sparton Resources Inc. (“Sparton”), a corporation listed on the TSXV. Sparton holds the remaining 9.98% through one of its subsidiaries.

In June 2021, VRB issued a \$24,000,000 convertible bond to BCPG, a publicly listed Thai renewable energy developer. The convertible bond is convertible into VRB common shares at the next equity financing round VRB completes, capped at a pre-money valuation of \$158,000,000. At the time of the conversion of the BCPG convertible bond, we will also be required to convert our existing inter-company debt into additional VRB common shares. As a result, we expect that our ownership interest will be diluted by between approximately 13.6% and 14.4% (depending on several variables) when the BCPG bond is converted to VRB common shares.

*Business of VRB.* VRB operates primarily through its wholly owned foreign enterprise, VRB Energy Systems (Beijing) and other subsidiaries established in the PRC, Singapore, and the USA. VRB developed a MW-Class VRB-ESS system (“Gen1”) that was launched prior to our acquisition of an interest in VRB in 2016. Ongoing research and development (“R&D”) and project experience have allowed VRB to produce larger, more efficient and more cost-effective systems in each generation. VRB made significant improvements to the Gen1 system in developing the MW-Class Gen2 system that is currently being marketed. VRB has developed its Gen3 system based on a 1MW battery size and is now moving towards a Gen4 system.

VRB’s customers are broadly divided into commercial and industrial users located in China and internationally that are seeking reductions in energy costs and/or increased use of renewable energy and/or on-site power reliability; grid service providers that are developers, owners or aggregators providing flexible services to grid networks and seeking energy storage systems to enhance project economics or to broaden revenue streams; and utilities and wholesale energy market participants that are engaged in wholesale market trading activity or large-scale generation using energy storage for load balancing or revenue from arbitrage and associated activities.

VRB’s primary source of revenue is through the sale or lease of a VRB-ESS to customers and, depending upon customer requirements, VRB may sell only the power module components of a VRB-ESS (that is, excluding vanadium electrolyte) or a complete VRB-ESS system. The more common form of sale by VRB as an original equipment manufacturer is a direct sale of equipment with commitments to a customer ending with the supply and commissioning of

the VRB system. VRB also earns revenue from the provision of operation and maintenance services to its customers as and when required under separate contract.

VRB produced its own  $V_2O_5$  through a tolling agreement in place with an existing producer ammonium metavanadate (“AMV”) until May 2022 and plans to further integrate into both  $V_2O_5$  and electrolyte production. VRB sells surplus  $V_2O_5$  in the form of AMV into the commodity market and plans to continue to do so in the future as its  $V_2O_5$  production expands, whether as  $V_2O_5$  or as AMV.

*Strategy.* VRB’s goal is to deliver the best technology at the lowest cost to large-scale utility energy storage projects around the globe. VRB has completed development of the new Gen3 system which is currently being marketed on a commercial basis. VRB is increasing expenditures on commercial development, especially regarding international certification of its batteries, as well as seeking market penetration in the United States. VRB is also working to increase its vertical integration. Following two years of tolling material to begin production of  $V_2O_5$  (in the form AMV) with Vietnam Youngsun Tungsten Industry Co. Ltd at their current 1,800 tpa  $V_2O_5$  plant in Vietnam, VRB is now finalizing a feasibility study for a wholly-owned 3,000 tpa  $V_2O_5$  state-of-the-art facility with integrated electrolyte production and battery manufacturing in readiness for construction to commence in 2023. VRB is also executing early study work on  $V_2O_5$  sourced from waste from large petrochemical refineries in India, North America, and Saudi Arabia.

*VRB Intellectual Property.* VRB has registered its key intellectual property in the PRC and certain countries internationally, including the United States, for the VRB-ESS system and component designs along with IP specific to the extraction of  $V_2O_5$  from cinder and catalyst material sourced from oil-fired power stations and refineries. VRB and its subsidiaries have been issued 53 patents collectively in Mexico, the U.S., Chile, China, Indonesia, India, Japan and South Korea. A further 24 patent applications have been filed in China and one patent application has been filed in India.

*Location and Employees.* VRB currently operates a 10,000 m<sup>2</sup> facility located outside of Beijing. Operating at full capacity, the facility is fitted to produce batteries with 50 MW per year of storage capacity with a single shift roster and can be expanded to 100 MW with double shifts. The facility also houses R&D, engineering services, project management and administration. To support future growth, VRB has signed a framework agreement for the phased development of a ‘gigafactory’ in Hubei Province, PRC to manufacture the new Gen3 system. The province is planning multiple 100 MW-scale local projects, the first of which is expected to be awarded in 2023. VRB already has successfully contracted a 3 MW 4-hour (12 MWh) battery in Hubei which is considered a validated pilot system that has provided the foundation for the larger installations to follow.

*Competition.* VRB’s products compete mainly with lithium-ion batteries. Lithium-ion batteries, with their history of use in small consumer electronics and electric vehicles (“EVs”), have been able to reduce costs over time, and as a result have been ahead of vanadium flow battery systems, which are only beginning to scale up as the ideal storage technology for utility grids. Vanadium batteries have traditionally been more expensive than lithium-ion batteries because of the high-cost of low-volume “off-the-shelf” components and materials. However, vanadium flow batteries have distinct and inherent advantages for long-duration and long-life applications, which means they are the ideal solution for the expected large-scale integration of solar and wind power onto utility grids around the world.

The risk of catastrophic fires or explosions in lithium battery projects remains a major differentiator to vanadium flow storage, which pose a much lower risk of fire or explosion. For the daily deep-cycling needs of solar and wind power, vanadium flow batteries also have a significant advantage in levelized cost of energy which is an industry metric for total cost of ownership that takes into account the degradation, limited depth of discharge and augmentation, i.e. replacement, costs of lithium-ion batteries, which vanadium flow batteries do not generally experience.

The major competitors to VRB in vanadium flow batteries are Invinity Energy Systems plc, Vionx Energy Corporation, Dalian Rongke Power Co., Ltd. and Sumitomo Corporation.

## **Mining and Mineral Project Exploration Laws**

### *United States (Utah, Arizona)*

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.

#### *Utah — Tintic Project*

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 storm water pollution prevention plan (“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.

#### *Arizona — Santa Cruz Project*

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. 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 UIC permit does not trigger NEPA. This federal permit would apply if the project were to inject fluids underground, as would be the case for in situ leach mining. A conventional underground mine that does not involve underground fluid injection would not require coverage under a UIC permit. 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 application is being submitted 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 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 effects to background 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.* During the exploration phase of the project, unlined water impoundments, such as drill sumps, will be constructed and be subject to an Aquifer Protection Permit (“APP”). General Permit 1.04 allows any discharge from a facility that receives water, drilling fluids, or drill cuttings from a well if the discharge is to the same aquifer in approximately the same location from which the water supply was originally withdrawn. During mine commercial operations, facilities will likely be required that are categorized by Arizona statute as discharging facilities and would require an APP Individual Permit. 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 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 18 months of developing the permit application.

*AZPDES Industrial Stormwater Mining Multi-Sector General Permit (“MSGP”).* A 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, 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 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.

*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 will likely be required to convert them to the proposed mining uses. We are also exploring other potential water rights sources in the area.

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 zoning changes
- 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.

## **Competition**

There is aggressive competition within the mineral resources industry. We compete with other companies to acquire prospective mineral projects or to acquire, or stake, mineral titles. Many of these companies currently have greater resources than we do to be able to identify and evaluate prospective mineral projects or titles, and often have greater financial resources to be able to pursue their acquisition.

In addition, we also encounter competition for the hiring of key personnel whether as employees, consultants or other service providers. The mineral exploration and mining industry is currently facing a shortage of experienced mining professionals. Moreover, the demand for exploration equipment (including drilling rigs), technical consultants and assay labs is very high, and such personnel and services may not be available, or if they are, at costs that are greater than expected resulting in an increase in our costs. This competition affects us by increasing the time and cost to conduct exploration activities.

## **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 Nominating and Compensation Committee having oversight of human capital

matters, including those relating to executive recruitment, retention and development, pay equity, and inclusion and diversity.

As of December 31, 2022, 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**

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 mature 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.

#### *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 606 - 999 Canada Place, Vancouver, BC Canada, and our telephone number is (604) 689-8765. Our website address is *ivanhoeelectric.com*. 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. We are an emerging growth company under the Jumpstart Our Business Startups Act of 2012 ("JOBS Act") and also a smaller reporting company, and we are therefore subject to reduced public company reporting requirements.

## 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 and combined carve-out 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, 2022 and 2021, we had a net loss of \$160.2 million and \$68.5 million respectively, and negative cash flows from operating activities of \$115.7 million and \$47.8 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 the majority of the mineral subsurface and surface rights at the Santa Cruz and the Tintic Projects.***

At our Santa Cruz Project in Arizona and our Tintic Project in Utah, we only own a small portion of the subsurface mineral and surface rights. The majority of such rights 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, and the surface rights are predominantly owned by a different company. At the Tintic Project, five vendors continue to hold title to the majority of 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.

With respect to surface rights at the Santa Cruz Project, most of the surface rights are owned by a company with whom we have a surface rights access agreement that grants us the right to above-ground, noninvasive, geophysical testing as well as drilling activities. Our access agreement with the owner of the surface rights does not permit us to conduct any mining or processing activities at the Santa Cruz Project, and expires on August 3, 2024, although we may extend the agreement for one further year by paying the surface rights owner \$920,000. If the surface rights agreement is not extended and terminates, we will not have any rights to access the surface at the Santa Cruz Project, which would materially and adversely impact our ability to conduct exploration activities and prevent us from developing a mine. Even if the surface rights agreement is extended, it does not provide us with sufficient rights to engage in mine development or mining operations, and without either acquiring the surface rights or obtaining an expansion of the types of activities we can undertake from the surface rights owner, we will not be able to develop a mine at the Santa Cruz Project. We can provide no assurance that we will be able to acquire surface rights at the Santa Cruz Project sufficient to develop a mine. The failure to do so would 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”.

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.

***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.

***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 directly 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.

***We may not be able to substantially increase our manufacturing output in order to fulfill orders from our 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 PRC, and its laws, may materially affect VRB.***

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 is the Negative List (2020 Version), which contains no foreign ownership restrictions over the manufacturing of power batteries. However, the PRC may change its foreign ownership regulations to govern 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 may face resistance to its United States controlling ownership from large Chinese State-owned entities developing energy storage projects in PRC, which 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 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, cyberattacks, 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 cyberattacks 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 ongoing 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 ongoing 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 are expected to 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 certain of our listed company portfolio may be significant, we may not be able to exert control or direction over those companies or their business.***

We have significant equity ownership of a number of listed companies in Canada, including Kaizen and Cordoba, with respect to both 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 each company, the directors elected owe duties to all shareholders, including us. Accordingly, such elected boards of 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 companies 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 our listed company investee companies 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 our investee companies 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 our equity investee companies 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 mineral projects or investments in mineral projects in the United States, Canada, Australia, Colombia, Peru, Ivory Coast, and Papua New Guinea 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, including the United States, Canada, Australia, Colombia, Peru, Ivory Coast, and Papua New Guinea. 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 mineral projects, or investments in mineral projects, in Colombia, Peru, Ivory Coast and Papua New Guinea. 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 Colombia, Peru, Ivory Coast and Papua New Guinea. 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 mineral projects and investments in Colombia, Peru, Ivory Coast and Papua New Guinea, 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 significant amount 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. As of March 14, 2023, we had 92,971,865 shares of common stock outstanding. Most of these shares can be sold at any time unless held by one of our affiliates, in which case the resale of those securities will be subject to volume limitations and other restrictions under Rule 144 of the Securities Act of 1933, as amended (the "Securities Act"). 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 upon issuance and, once vested, subject to volume limitations applicable to our affiliates. 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.

***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, Papua New Guinea 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.

***Robert Friedland, our founder and Executive Chairman, and I-Pulse, one of our principal stockholders for which Mr. Friedland is Chairman of the board of directors, have a substantial degree of influence over the outcome of all matters submitted to stockholders, which may delay or prevent a change of control.***

Robert Friedland, our Executive Chairman and a director, and I-Pulse, one of our principal stockholders that owns more than 5% of our outstanding common stock and for which Mr. Friedland is Chairman of the board of directors, together owns shares equal to approximately 17.8% of our voting stock. As a result, if Mr. Friedland and I-Pulse were to act together, they would have the ability to influence the outcome of matters submitted to our stockholders for approval. For example, if Mr. Friedland and I-Pulse were to act together, they would have the ability to influence the outcome of the election of directors and approval of any merger, consolidation or sale of all or substantially all of our assets. In addition, on March 30, 2022, I-Pulse issued to Mr. Friedland a promissory note evidencing I-Pulse's obligation to repay a principal amount of \$10 million with interest at a rate equal to 2% per annum, maturing on December 31, 2023. Under this promissory note, Mr. Friedland has the right to elect to receive, as payment in kind for the principal and interest then outstanding under such note, shares of common stock of the Company then owned by I-Pulse. To the extent that Mr. Friedland exercises his right to receive shares under this promissory note, his percentage ownership in the Company will increase and I-Pulse's percentage ownership in us will decrease by the same amount.

This concentration of ownership control may delay, defer or prevent a change in control; entrench our management and Board of Directors; or delay or prevent a merger, consolidation, takeover or other business combination involving us that other stockholders may desire, even if such a change of control would be beneficial to our existing stockholders.

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 an “emerging growth company” or a “smaller reporting company”.***

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 an “emerging growth company” or a “smaller reporting company”.

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.

***We are an “emerging growth company” and a “smaller reporting company,” and the reduced disclosure requirements applicable to emerging growth companies and smaller reporting companies may make our common stock less attractive to investors.***

We are an “emerging growth company,” as defined in the JOBS Act. We may remain an emerging growth company until the end of the fiscal year in which the fifth anniversary of our initial public offering occurs, although if the market value of our common stock that is held by non-affiliates exceeds \$700 million as of any June 30 before that time or if we have annual gross revenues of \$1.23 billion or more in any fiscal year, we would cease to be an emerging growth company as of December 31 of the applicable year. We also would cease to be an emerging growth company if we issue more than \$1.0 billion of non-convertible debt over a three-year period. For so long as we remain an emerging growth company, we are permitted and intend to rely on exemptions from certain disclosure requirements that are applicable to other public companies that are not emerging growth companies. These exemptions include:

- being permitted to provide any required unaudited interim financial statements, with correspondingly reduced “Management’s Discussion and Analysis of Financial Condition and Results of Operations” disclosure;
- being exempt from compliance with the auditor attestation requirements in the assessment of our internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act;
- not being required to comply with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor’s report providing additional information about the audit and the financial statements;

- reduced disclosure obligations regarding executive compensation; and
- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved.

Even after we no longer qualify as an emerging growth company, we may continue to qualify as a smaller reporting company, which would allow us to take advantage of many of the same exemptions from disclosure requirements, including reduced disclosure obligations regarding executive compensation. In addition, if we are a smaller reporting company with less than \$100 million in annual revenue, we would not be required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act.

We may choose to take advantage of some, but not all, of the available exemptions. We have taken advantage of reduced reporting obligations in this Annual Report.

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.

The JOBS Act also permits an emerging growth company to take advantage of an extended transition period to comply with new or revised accounting standards applicable to public companies until those standards would otherwise apply to private companies. We have elected not to “opt out” of such extended transition period, which means that when a standard is issued or revised and it has different application dates for public or private companies, we may adopt the new or revised standard at the time private companies adopt the new or revised standard and will do so until such time that we either (i) irrevocably elect to “opt out” of such extended transition period or (ii) no longer qualify as an emerging growth company.

***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. We will be required to furnish a report by management on, among other things, the effectiveness of our internal control over financial reporting pursuant to Section 404 of the Sarbanes-Oxley Act at the time of our second annual report on Form 10-K. However, our independent registered public accounting firm will not be required to attest to the effectiveness of our internal control over financial reporting pursuant to Section 404 of the Sarbanes-Oxley Act until the later of the year following our first annual report required to be filed with the SEC or the date we are no longer an “emerging growth company” as defined in the JOBS Act. Accordingly, you will not be able to depend on any attestation concerning our internal control over financial reporting from our independent registered public accounting firm for the near future.

To achieve compliance with Section 404 within the prescribed period, we have commenced a process to document and evaluate our internal control over financial reporting, which is time consuming, costly, and complicated. In this regard, we will need to continue to dedicate internal resources, including through hiring additional financial and accounting personnel, engaging outside consultants and adopting a detailed work plan to assess and document the adequacy of internal control over financial reporting, continue steps to improve control processes as appropriate, validate through testing that controls are functioning as documented and implement a continuous reporting and improvement process for internal control over financial reporting. We are in the process of implementing new controls in conjunction with becoming a public company, including enacting new entity-level controls in areas such as governance and oversight. We have also adapted controls as a result the recent adoption of United States generally accepted accounting principles, as we and our foreign subsidiaries have previously applied International Financial Reporting Standards. There is a risk that we will not be able to conclude, within the prescribed timeframe or at all, that our internal control over financial reporting is effective as required by Section 404.

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 that our common stock will remain regularly traded in the future. Non-U.S. holders should consult their 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. Our corporate headquarters is currently located in Canada. 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 Canada 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 2. Properties**

See Item 1. Business-Santa Cruz Project, Arizona, USA and Tintic Project, Utah, USA for information about our material properties.

Global Mining Management Corp. provides us with office space for our corporate headquarters in Vancouver, Canada, pursuant to a Cost Sharing Agreement. See Note 20 to our Consolidated and Combined Carve-Out 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 Kaizen is currently involved in litigation in British Columbia, Canada which commenced in 2017. The proceedings relate to a claim by AM Gold Inc. (“AMG”) against Kaizen in respect of its acquisition of the Pinaya Project. On September 2, 2022, the Supreme Court of Canada dismissed the application of AMG seeking leave to appeal the January 21, 2022 decision of the British Columbia Court of Appeal. The British Columbia Court of Appeal decision upheld the March 23, 2021 decision of the trial judge which dismissed all of AMG’s claims against Kaizen. There is no further avenue of appeal or review available to AMG from the Supreme Court of Canada’s judgment. AMG and its principal John Fiorino are required to pay Kaizen’s costs in connection with the trial, the appeal and the Supreme Court of Canada proceeding on a party and party basis under the applicable court tariffs. Kaizen is in the process of pursuing those

recoveries. Kaizen will have to pay AMG's costs with respect to a successful appeal by AMG regarding the trial judge's initial substantial indemnity costs award.

In addition, 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 in September 2021. The decision was challenged by Cordoba and other defendants and confirmed by the Court. Cordoba timely filed its response to the lawsuit and statement of defense as well as its opposition to the injunction requested by the plaintiffs. Cordoba is currently waiting for the Court to issue a decision on the injunction and to schedule a 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 (including our cash position) 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 March 14, 2023, we had approximately 150 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

#### Recent Sales of Unregistered Securities

The following list sets forth information regarding all unregistered securities sold by us from January 1, 2022 through March 14, 2023:

- On June 30, 2022, we issued 5,419,923 shares of our common stock upon the automatic conversion of our outstanding Series 1 convertible notes at a conversion price of \$9.39 per share.
- On June 30, 2022, we issued 8,209,035 shares of our common stock upon the automatic conversion of our outstanding Series 2 convertible notes at a conversion price of \$10.58 per share.
- On June 30, 2022, we issued 945,626 shares of our common stock at a price of \$10.58 per share to Central Arizona Resources Ltd. as partial consideration for the assignment to one of our wholly-owned subsidiaries of certain rights associated with one of the Company's projects.
- On March 3, 2023, we issued 10,182 shares of our common stock at a price of \$14.59 per share to Exiro Minerals USA Corp. as partial consideration for the right to earn in on the White Hill Copper Project.

The issuances of the above securities were exempt either pursuant to Rule 701 under the Securities Act, as transactions pursuant to compensatory benefit plans, or 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, 2022.

#### 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. There has been no material change in our planned use of the net proceeds from our IPO described in the Final Prospectus.

### 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 and combined carve-out 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.”*

### **Separation from HPX**

We were incorporated under the laws of the State of Delaware on July 14, 2020, as a wholly-owned subsidiary of HPX.

On April 30, 2021, HPX completed a reorganization 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 in Guinea; (ii) certain property, plant and equipment; and (iii) certain financial assets in exchange for shares of our common stock. HPX then distributed the shares of our 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.

The Company has historically operated as part of the HPX business and not as a standalone company. Financial information for historical periods presented prior to April 30, 2021, the spinoff date, were derived from the consolidated financial statements and accounting records of HPX prepared on a carve-out and combined basis. The combined carve-out financial information may not be indicative of our future performance and does not necessarily reflect what the financial position, results of operations, and cash flows would have been had we operated as an independent company during such periods, particularly because of changes arising subsequently as a result of the separation, including changes in the financing, cash management, operations, cost structure, and personnel needs of our business.

The combined carve-out financial information for periods prior to April 30, 2021 included certain assets and liabilities that were historically held at the HPX corporate level, but are specifically identifiable to or otherwise attributable to us.

Prior to completing the spinoff, HPX incurred corporate and technical costs attributable to the Company and the Nimba Iron Ore Project. Accordingly, the combined carve-out financial information includes cost allocations from HPX, including executive oversight, occupancy, office overhead, accounting, tax, treasury, legal, information technology, human resources and mineral exploration. These allocations were made on the basis of direct usage. All such amounts were deemed incurred and settled by the Company in the period in which the costs were recorded and are included in net parent investment in the consolidated financial statements up to the date of the spinoff.

Allocated costs for the period from January 1, 2021 to April 30, 2021 totaled \$1.3 million and were primarily included in general and administrative expenses and exploration expenses in the consolidated statements of loss.

### **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 TSX under the ticker symbol “IE”.

### **Business Overview**

We are a United States domiciled minerals exploration and development company with a focus on developing mines from mineral deposits principally located in the United States in order to support American supply chain independence and to deliver the critical metals necessary for electrification of the economy. We believe the United States is significantly underexplored and will yield major new discoveries of these metals. Our mineral projects focus on copper, nickel, vanadium, cobalt, platinum group elements, gold and silver.

“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 projects.

Our two material mineral projects are the Santa Cruz Copper Project (“Santa Cruz” or the “Santa Cruz Project”) in Arizona and the Tintic Copper-Gold Project (“Tintic” or the “Tintic Project”) in Utah. We have the option to acquire 100% of the mineral rights constituting the Santa Cruz and Tintic projects.

Our other key mineral projects are the Hog Heaven Project, located in Montana (the “Hog Heaven Project”), and the Ivory Coast Project located in West Africa, which is held through our 22.8% equity interest in Sama Resources Inc. (“Sama”) and our 30% direct interest in the Sama Nickel Corporation Inc. joint venture.

We also have investments in publicly traded companies in Canada, and through our ownership of equity in those companies, we have an indirect interest in mineral projects in the United States, Canada, Colombia, Ivory Coast and Peru.

In addition to our mineral projects, we also own controlling interests in two technology companies: VRB and CGI. As of December 31, 2022, we owned 90.0% of the outstanding shares of VRB. VRB and its subsidiary companies are primarily engaged in the design, manufacture, installation, and operation of energy storage systems. As of December 31, 2022, we owned 94.3% of CGI’s outstanding shares. CGI has developed technology that consists of sophisticated codes to process geophysical data and build 3D subsurface images that could indicate the presence of various natural resources, including metallic minerals and water. CGI offers mineral prospectivity and drill target identification services, data analytic tools and optimization of operational processes. CGI provides fee-for-service and licensing agreements for one-off technology applications to customers in the area of critical minerals, energy and water exploration.

### Impact of the COVID-19 Pandemic

The COVID-19 global pandemic has caused governments worldwide to implement measures to slow the spread of the outbreak through quarantines, travel restrictions, business shutdowns, and other measures. The 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 are expected to continue to affect our future exploration activities and business. To the extent the COVID-19 pandemic adversely affects our business prospects, financial condition, and results of operation, it may also have the effect of exacerbating many of the other risks described in the Item 1A. Risk Factors section. See Item 1A. Risk Factors for a further discussion of the potential adverse impact of COVID-19 on our business, results of operations, and financial condition.

### 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 and combined carve-out financial statements for the years ended December 31, 2022 and 2021. We did not declare or pay any dividends or distributions in any financial reporting period.

(In thousands, except per share amounts)	Year Ended	
	December 31, 2022	December 31, 2021
Revenue	\$ 8,440	\$ 4,652
Cost of sales	(3,135)	(1,520)
Gross profit	5,305	3,132
Expenses:		
Exploration expenses	105,286	39,505
General and administrative expenses	26,971	20,402
Research and development expenses	5,040	3,825
Net loss attributable to:		
Common stockholders or parent	149,813	59,320
Comprehensive loss attributable to:		
Common stockholders or parent	149,501	59,284
Basic and diluted loss per share attributable to common stockholders or parent	\$ 1.91	\$ 0.96
Total assets	260,486	153,531
Total non-current liabilities	40,606	85,134



## 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 generate revenue from our technology businesses CGI and VRB, which are included in the data processing and energy storage systems business segments, respectively. 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.

For the years ended December 31, 2022 and 2021, the majority of our revenue came from CGI's sale of data processing services to the mining and oil and gas industries, which included amounts from a customer under a three-year contract that covered the period from August 2018 to August 2021. Revenue from this customer represented 82%, and 74% of sales for the years ended December 31, 2022 and 2021. During the fourth quarter of 2021, CGI entered into a new agreement with this customer whereby it agreed to license certain software for a one-time fee of \$6.5 million, which was received and recognized in the first quarter of 2022. The agreement also provided for \$0.5 million of service fees payable in two installments, one in the first quarter of 2022 and one in the first quarter of 2023. This agreement resulted in \$6.9 million of revenue from this customer being recognized in the year ended December 31, 2022. We cannot provide any assurance that we will enter into any additional contracts with this customer in the future.

We also generate revenue from VRB, which develops, manufactures and sells energy storage systems.

(In thousands)	Year Ended December 31, 2022	Year Ended December 31, 2021
Revenues:		
CGI: Software licensing and data processing services	\$ 7,729	\$ 4,512
VRB: Energy storage systems	711	140
<b>Total</b>	<b>\$ 8,440</b>	<b>\$ 4,652</b>
Cost of sales:		
CGI: Software licensing and data processing services	\$ 577	\$ 1,427
VRB: Energy storage systems	2,558	93
<b>Total</b>	<b>\$ 3,135</b>	<b>\$ 1,520</b>
Gross profit:		
CGI: Software licensing and data processing services	\$ 7,152	\$ 3,085
VRB: Energy storage systems	(1,847)	47
<b>Total</b>	<b>\$ 5,305</b>	<b>\$ 3,132</b>

### *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 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.

During 2021, Cordoba's San Matias project accounted for a significant portion of our exploration expenses. In 2022, expenditures at our Santa Cruz Project accounted for the majority of exploration expenses which are expected to continue to be significant as we advance the project with proceeds from our initial public offering.

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".

(In thousands)	Year Ended December 31, 2022	Year Ended December 31, 2021
Exploration Expenses:		
Santa Cruz, USA	\$ 61,172	\$ 9,966
San Matias, Colombia	18,454	13,789
Pinaya, Peru	2,616	1,774
Tintic, USA	2,282	2,474
Hog Heaven, USA	2,216	2,029
Yangayu, Papua New Guinea	2,128	497
Perseverance, USA	1,785	742
Carolina, USA	1,307	—
Lincoln, USA	1,312	235
Bitter Creek, USA	644	340
Ivory Coast Project, Ivory Coast	70	1,931
Project generation and other	11,300	5,728
<b>Total</b>	<b>\$ 105,286</b>	<b>\$ 39,505</b>

### *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. We expect higher costs related to salaries, benefits, stock-based compensation, legal fees, compliance and corporate governance, accounting and audit expenses, stock exchange listing fees, transfer agent and other shareholder-related fees, directors' and officers' and other insurance costs and other administrative costs.

### *Research and Development Expenses*

Expenditures on research and development activities are recognized as an expense in the period in which they are incurred. Since 2018, the majority of our research and development expenses came from CGI's data processing business, which includes amortization expenses related to its artificial intelligence intellectual property acquired in 2018. VRB also conducts research and development activities to continue to advance its energy storage system technology. We expect research and development expenses to increase as our technology-based businesses continue to grow.

(In thousands)	Year Ended December 31, 2022	Year Ended December 31, 2021
Research and development expenses:		
CGI: Software licensing and data processing services	\$ 3,342	\$ 2,606
VRB: Energy storage systems	1,453	1,031
Other	245	188
<b>Total</b>	<b>\$ 5,040</b>	<b>\$ 3,825</b>

### **Year Ended December 31, 2022 Compared to Year Ended December 31, 2021**

For the year ended December 31, 2022 we recorded a net loss attributable to common stockholders of \$149.8 million (\$1.91 per share), compared to \$59.3 million (\$0.96 per share) for the year ended December 31, 2021, which was an increase of \$90.5 million. Significant contributors to this increase in the year ended December 31, 2022 included an increase of \$65.8 million in exploration expenditures, an increase of \$14.4 million in non-cash loss on revaluation of

convertible debt and an increase of \$6.6 million in general and administrative expenses, offset by an increase of \$3.8 million in revenue compared to the year ended December 31, 2021.

Exploration expenses were \$105.3 million for the year ended December 31, 2022 an increase of \$65.8 million from \$39.5 million for the year ended December 31, 2021. During the year ended December 31, 2022, expenditures largely focused on exploration activities at:

- the Santa Cruz Project where \$61.2 million of exploration expenditure was incurred in the year ended December 31, 2022 compared to \$10.0 million incurred in the year ended December 31, 2021. Activities during the year ended December 31, 2022 at Santa Cruz were focused on a program of exploration and infill resource, geotechnical, hydrological and metallurgical drilling, advancing technical studies along with completing an Updated Mineral Resource estimate for the Santa Cruz Copper Project. In addition, a 26.5 km<sup>2</sup> (6,500 acre) Typhoon™ 3D IP survey that was completed in July 2022. Included in the \$61.2 million of exploration expenditure was a \$5.7 million expense related to amounts that had been previously capitalized as part of an agreement to purchase certain land adjacent to the Santa Cruz Project. In September 2022, this agreement was terminated by the Company.
- the San Matias Project where \$18.5 million of exploration expenditure was incurred by Cordoba Minerals in the year ended December 31, 2022 focused on the commencement of a Feasibility Study on the Alacran deposit in May 2022. A total 40,000-metre infill diamond drilling campaign is planned. The 25,000-metre initial phase drill program focused on the central area of the Alacran Deposit was completed during the fourth quarter of 2022.
- the Pinaya Project where \$2.6 million of exploration expenditure was incurred by Kaizen Discovery in the year ended December 31, 2022. Activities included a 3,046-meter drill program that began in November 2021 which was completed in January 2022 as well as expenditures related to the IP-resistivity survey, which began in March 2022 and that was completed in June 2022.

General and administrative expenses were \$27.0 million for the year ended December 31, 2022, an increase of \$6.6 million from \$20.4 million in the year ended December 31, 2021. Several items contributed to the increase, including:

- a \$3.4 million increase in directors and officers insurance expenses during the year ended December 31, 2022 in relation to the new director and officers insurance policy we entered into when we became a public company in June 2022. There was no similar expense in the prior year;
- a \$1.1 million increase in stock-based compensation expense due to Ivanhoe Electric stock option and RSU grants in November 2022;
- a \$1.1 million increase in administration expenses at VRB primarily due to an increase in professional fees in relation to certain technical studies that it was conducting; and
- a \$0.9 million increase in administration expenses at Cordoba Minerals due to increased professional fees related to costs incurred related to entering into the strategic arrangement for the Alacran Project with JCHX.

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.

Revenue for the year ended December 31, 2022 was \$8.4 million, an increase of \$3.8 million from \$4.7 million for the year ended December 31, 2021.

	Year Ended December 31, 2022	Year Ended December 31, 2021	Percentage change year-over-year
<i>(In thousands)</i>			
Software licensing and data processing services:			
Revenue	\$ 7,729	\$ 4,512	71 %
Cost of sales	(577)	(1,427)	(60)%
Gross profit	7,152	3,085	132 %
Energy storage systems:			
Revenue	\$ 711	\$ 140	409 %
Cost of sales	\$ (2,558)	\$ (93)	2664 %
Gross (loss) profit	(1,847)	47	-4028 %
Total			
Revenue	8,440	4,652	81 %
Cost of sales	(3,135)	(1,520)	106 %
Gross profit	5,305	3,132	69 %

CGI's software licensing and data processing services to the mining and oil and gas industries represented 91.6% of our revenue for the year ended December 31, 2022 (\$7.7 million) and 97.0% for the year ended December 31, 2021 (\$4.5 million). The increase in CGI's revenue was a result of a new contract that CGI entered into with one of its customers upon the expiration in 2021 of a previous three-year contract. Under the new agreement with this customer, CGI agreed to license certain software for a one-time fee of \$6.5 million, which was received and recognized in the first quarter of 2022. The agreement also provided for \$0.5 million of service fees payable in two installments, one in the first quarter of 2022 and one in the first quarter of 2023. This agreement resulted in \$6.9 million of revenue from this customer being recognized in the year ended December 31, 2022. We cannot provide any assurance that we will enter into any additional contracts with this customer in the future.

CGI's gross profit for the year ended December 31, 2022 was \$7.2 million, a \$4.1 million or 132% increase from \$3.1 million for the year ended December 31, 2021. The 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.

VRB's energy storage system revenue represented 8.4% of our revenue for the year ended December 31, 2022 (\$0.7 million) and 3.0% for the year ended December 31, 2021 (\$0.1 million). During the year ended December 31, 2022, VRB delivered, installed and commissioned a 125kW/500kWh energy storage system to a customer which resulted in \$0.3 million of revenue being recognized. In addition, VRB also recognized \$0.3 million in revenue from the sale of electrolyte.

VRB had a gross loss for the year ended December 31, 2022 of \$1.8 million 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, 2022 were \$5.0 million, an increase of \$1.2 million from the same period in 2021 attributable to a \$0.7 million an increase in research and development activity at CGI and a \$0.4 million an increase at VRB. Research and development activities increased in 2022 at CGI as CGI has been focused on developing its services to generate new business after completing the \$6.5 million software licensing agreement.

### Stock-Based Compensation

In November 2022, we granted 2,760,509 stock options at an exercise price of \$11.75 per share to certain directors, officers and employees. The fair value of the option grant was determined using the Black-Scholes option-pricing model as \$5.08 per share. Also in November 2022, we granted 750,000 RSU's to our incoming CEO which had a fair value on the grant date of \$9.98 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.

We raised funds between August 3, 2021 and November 17, 2021 by selling shares and unsecured convertible promissory notes (the “Series 1 Convertible Notes”) for gross proceeds of \$60.0 million. In addition, on April 5, 2022, we raised funds by selling \$86.2 million aggregate principal amount of unsecured convertible promissory notes (the “Series 2 Convertible Notes”) for gross proceeds of \$86.2 million.

On June 30, 2022, we closed our initial public offering of 14,388,000 shares of our common stock at a price of \$11.75 per share. The gross proceeds from the offering were approximately \$169.1 million, before deducting underwriting discounts and commissions and estimated offering expenses payable by us.

At December 31, 2022, and 2021, we had cash and cash equivalents of \$139.7 million and \$49.9 million, respectively, and a working capital of \$133.6 million and \$17.7 million, respectively. Of the total cash and cash equivalents at December 31, 2022, and December 31, 2021, \$20.7 million and \$28.5 million, respectively, was not available for the general corporate purposes of the Company as these amounts were held by non-wholly-owned subsidiaries.

We believe that we will have sufficient cash resources to carry out our business plans, including our currently planned exploration activities at our mineral projects, for at least the next 12 months. 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 exploration 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.

### Cash Balances as of December 31, 2022

The table below discloses the amounts of cash disaggregated by currency denomination as of December 31, 2022 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	\$ 117,827	\$ 536	\$ —	\$ —	\$ —	\$ 118,363
Colombia	—	—	—	7,524	—	7,524
Cayman Islands	7,606	4	—	—	—	7,609
Canada	3,425	2,033	—	—	—	5,458
China	—	—	231	—	—	231
British Virgin Islands	422	1	—	—	—	424
Other	16	1	—	—	33	51
<b>Total</b>	<b>\$ 129,297</b>	<b>\$ 2,575</b>	<b>\$ 231</b>	<b>\$ 7,524</b>	<b>\$ 33</b>	<b>\$ 139,660</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, 2022 and 2021.

Refer to Note 18 of our consolidated and combined carve-out financial statements which outlines other restrictions on transfers of net assets from our consolidated subsidiaries to the Company.

#### *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 Minerals.*

In December 2022, JCHX advanced a bridge loan of \$10 million to Cordoba Minerals in connection with the strategic arrangement for the joint development of Cordoba Mineral's Alacran Project. The bridge loan is for an 18-month term and bears interest at 12% per annum during the first 12 months of the term and 14% per annum during the remaining six months, calculated on the basis of a 365-day year. Upon closing the strategic arrangement, all of the principal and interest outstanding on the bridge loan will be applied towards the first installment as a payment in kind. The transaction agreements do not become effective until JCHX obtains shareholder approval, which is expected to be completed in the second quarter of 2023.

### **Cash Flows**

The following table presents our sources and uses of cash for the periods indicated:

(In thousands)	Year Ended December 31, 2022	Year Ended December 31, 2021
<b>Net cash (used in) provided by:</b>		
Operating activities	(115,734)	\$ (47,832)
Investing activities	(48,384)	(22,632)
Financing activities	254,410	110,976
Effect of foreign exchange on cash	(482)	(3)
<b>Total change in cash</b>	<b>\$ 89,810</b>	<b>\$ 40,509</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, 2022 was \$115.7 million, a decrease of \$67.9 million from the \$47.8 million of net cash used for the year ended December 31, 2021.

#### *Investing activities.*

Our investing activities generally relate to acquisitions of mineral property interests, purchases of public company 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, 2022 of \$48.4 million was mainly attributable to \$35.9 million for payments for mineral interests and \$8.5 million for payments for property, plant and equipment. The \$35.9 million of cash used for purchases of mineral interests related to \$28.0 million for the Santa Cruz Project and \$7.6 million of payments for the Tintic Project. The \$8.5 million for payments for property, plant and equipment largely relates to a \$7.1 million deposit made to I-Pulse for the purchase of six Typhoon™ transmitters to be delivered in stages over approximately the next three years.

Net cash used in investing activities for the year ended December 31, 2021 of \$22.6 million was largely attributable to \$14.4 million for payments for mineral interests, \$3.1 million of payments for intangible assets and \$1.6 million for shares

of Brixton Metals. The \$14.4 million of cash used for purchases of mineral interests related to \$8.5 million of payments related to the Santa Cruz Project and \$5.7 million of payments for the Tintic Project.

#### *Financing activities.*

During the year ended December 31, 2022, there was \$254.4 million of net cash provided by financing activities representing the \$159.3 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 Minerals, received a \$10.0 million bridge loan from JCHX in connection with the strategic arrangement for the joint development of the Alacran Project.

During the year ended December 31, 2021, cash provided by financing activities was \$111.0 million. The sources of cash included \$60.0 million that the Company raised from the sale of shares of common stock and Series 1 Convertible Notes. Our subsidiaries also raised funds during the period. VRB raised \$24 million through the issuance of a convertible bond and Cordoba and Kaizen completed equity financings and raised external funds totaling \$5.3 million. From January to April 2021, the Company's activities were funded by HPX as they were prior to the April 2021 reorganization.

### **Contractual Obligations**

As of December 31, 2022, we had the following material contractual obligations in addition to our discretionary mineral project obligations described above:

	Payments due by period (in thousands)				
	Total	Less than 1 year	1-3 years	4-5 years	More than 5 years
Long-term debt obligations <sup>(1)</sup>	\$ 34,010	\$ —	\$ 10,010	\$ 24,000	
Leases	1,223	783	440	—	—
Mineral property obligations (non-discretionary)	5,245	4,325	920	—	—
Typhoon purchase obligations	6,731	691	6,040	—	—
Other long-term contractual liabilities <sup>(2)</sup>	363	—	363	—	—
Total contractual obligations	<u>\$ 47,572</u>	<u>\$ 5,799</u>	<u>\$ 17,773</u>	<u>\$ 24,000</u>	<u>\$ —</u>

(1) Long-term obligations include the \$10.0 million bridge loan provided by JCHX to Cordoba Minerals and 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, 2022, the value of the convertible bond including accrued interest was \$25.9 million.

(2) Includes all other long-term financial liabilities reflected on our balance sheet that are contractually fixed as to timing and amount.

### **Off Balance Sheet Arrangements**

As of December 31, 2022, 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 20 of our consolidated and combined carve-out financial statements for the years ended December 31, 2022 and 2021.

### **Critical Accounting Estimates**

Our management's discussion and analysis of our financial condition and results of operations is based on our consolidated and combined carve-out 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 is detailed in Note 3 to our consolidated and combined carve-out 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.

In November 2022, we granted 2,760,509 stock options at an exercise price of \$11.75 per share to certain officers and employees. The fair value of the option grant was determined using the Black-Scholes option-pricing model as \$5.08 per share.

The following assumptions were used to compute the fair value of the options granted:

	Grant Date
Risk-free interest rate	4.2%
Dividend yield	nil
Estimated volatility	69.5%
Expected option life	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, 2022.

### **Emerging Growth Company Status**

We are an “emerging growth company”, as defined in the JOBS Act. The JOBS Act exempts emerging growth companies from being required to comply with new or revised accounting standards issued subsequent to the enactment of the JOBS Act until such time as those standards apply to private companies. The JOBS Act provides that a company can elect to opt out of the extended transition period and comply with the requirements that apply to non-emerging growth companies but any such election to opt out is irrevocable. We have elected not to opt out of this extended transition period for complying with new or revised accounting standards that have different effective dates for public and private companies until the earlier of the date that we (i) are no longer an emerging growth company or (ii) affirmatively and irrevocably opt out of the extended transition period provided in the JOBS Act. As a result, our consolidated and combined carve-out financial statements may not be comparable to companies that comply with the new or revised accounting pronouncements as of public company effective dates.

The accounting policies applied in our consolidated and combined carve-out financial statements included elsewhere in this Annual Report reflect the early adoption of certain accounting standards as the JOBS Act does not preclude an emerging growth company from early adopting a new or revised accounting standard to the extent early adoption is allowed by the accounting standard.

### **Item 7A. Quantitative and Qualitative Disclosures About Market Risk**

Not applicable.

## **Item 8. Financial Statements and Supplementary Data**

### **Report of Independent Registered Public Accounting Firm**

To the shareholders and the Board of Directors of Ivanhoe Electric Inc.

#### **Opinion on the Financial Statements**

We have audited the accompanying consolidated balance sheets of Ivanhoe Electric Inc. and subsidiaries (the "Company") as of December 31, 2022 and 2021, the related consolidated and combined carve-out statements of loss and comprehensive loss, changes in equity, and cash flows for each of the two years in the period ended December 31, 2022, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2022 and 2021, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2022, in conformity with accounting principles generally accepted in the United States of America.

#### **Basis for Opinion**

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

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

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

/s/ Deloitte LLP

Chartered Professional Accountants

Vancouver, Canada

March 14, 2023

We have served as the Company's auditor since 2021.



**IVANHOE ELECTRIC INC.**  
**CONSOLIDATED BALANCE SHEETS**  
(Expressed in thousands of U.S. dollars)  
**At December 31, 2022 and 2021**

	2022	2021
<b>Assets</b>		
Current assets:		
Cash and cash equivalents	\$ 139,660	\$ 49,850
Accounts receivable	1,497	1,385
Inventory	5,648	5,878
Prepaid expenses and deposits	4,226	1,152
	<u>151,031</u>	<u>58,265</u>
Non-current assets:		
Investments subject to significant influence	5,998	7,701
Other investments	2,220	1,802
Exploration mineral interests	86,758	73,039
Property, plant and equipment	3,934	2,523
Intangible assets	1,249	4,340
Other non-current assets	9,296	5,861
Total assets	<u>\$ 260,486</u>	<u>\$ 153,531</u>
<b>Liabilities and Equity</b>		
Current liabilities:		
Accounts payable and accrued liabilities	\$ 13,943	\$ 10,195
Deferred consideration payable	—	26,562
Lease liabilities	706	342
Contract liability	2,783	3,484
	<u>17,432</u>	<u>40,583</u>
Non-current liabilities:		
Deferred income taxes	3,888	5,382
Convertible debt	25,918	78,832
Due to related party	10,010	—
Lease liabilities, net of current portion	403	55
Other non-current liabilities	388	865
Total liabilities	<u>58,039</u>	<u>125,717</u>
Commitments and contingencies (Note 26)		
Equity:		
Common stock, par value \$0.0001; 750,000,000 shares authorized; 93.0 million shares issued and outstanding as of December 31, 2022 (December 31, 2021 - 750,000,000 authorized; 63.9 million issued and outstanding)	9	6
Additional paid-in capital	409,683	75,743
Accumulated deficit	(202,128)	(52,314)
Accumulated other comprehensive income	(1,189)	(1,502)
Equity attributable to the Company	206,375	21,933
Non-controlling interests	(3,928)	5,881
Total equity	<u>202,447</u>	<u>27,814</u>
Total liabilities and equity	<u>\$ 260,486</u>	<u>\$ 153,531</u>

**IVANHOE ELECTRIC INC.**  
**CONSOLIDATED AND COMBINED CARVE-OUT**  
**STATEMENTS OF LOSS AND COMPREHENSIVE LOSS**  
**(Expressed in thousands of U.S. dollars, except for share and per share amounts)**  
**Years ended December 31, 2022 and 2021**

	2022	2021
Revenue	\$ 8,440	\$ 4,652
Cost of sales	(3,135)	(1,520)
Gross profit	5,305	3,132
Operating expenses:		
Exploration expenses	105,286	39,505
General and administrative expenses	26,971	20,402
Research and development expenses	5,040	3,825
Selling and marketing expenses	173	149
Loss from operations	132,165	60,749
Other expenses (income):		
Interest expense, net	972	1,534
Foreign exchange loss (gain)	1,327	(254)
Share of loss of equity method investees	3,711	213
Loss on revaluation of investments	1,450	634
Loss on revaluation of convertible debt	18,965	4,571
Other expenses, net	1,013	580
Loss before income taxes	159,603	68,027
Income taxes	618	484
Net loss	160,221	68,511
Less loss attributable to non-controlling interests	(10,408)	(9,191)
Net loss attributable to common stockholders or parent	149,813	59,320
Net loss	160,221	68,511
Other comprehensive income, net of tax:		
Foreign currency translation adjustments	(560)	(89)
Other comprehensive income	(560)	(89)
Comprehensive loss	\$ 159,661	\$ 68,422
Comprehensive loss attributable to:		
Common stockholders or parent	149,501	59,284
Non-controlling interests	10,160	9,138
	\$ 159,661	\$ 68,422
Net loss per share attributable to common stockholders or parent		
Basic and diluted	\$ 1.91	\$ 0.96
Weighted-average common shares outstanding		
Basic and diluted	78,527,539	61,502,094

**IVANHOE ELECTRIC INC.**
**CONSOLIDATED AND COMBINED CARVE-OUT STATEMENTS OF CHANGES IN EQUITY**
**(Expressed in thousands of U.S. dollars, except for share amounts)**
**Years ended December 31, 2022 and 2021**

	<b>Common Stock</b>		<b>Additional paid-in capital</b>	<b>Net parent investment</b>	<b>Accumulated deficit</b>	<b>Accumulated other comprehensive income (loss)</b>	<b>Non- controlling interest</b>	<b>Total</b>
	<b>Shares</b>	<b>Amount</b>						
Balance at January 1, 2021	—	—	—	43,520	—	(1,538)	6,710	48,692
Net loss	—	—	—	(7,006)	(52,314)	—	(9,191)	(68,511)
Other comprehensive loss	—	—	—	—	—	36	53	89
Net transfer from parent	—	—	—	29,140	—	—	—	29,140
Restructuring upon spin off (Note 1)	59,909,344	6	65,648	(65,654)	—	—	—	—
Issuance of common stock, net of issuance costs	4,015,990	—	9,678	—	—	—	—	9,678
Stock-based compensation	—	—	2,800	—	—	—	406	3,206
Other changes in non- controlling interests	—	—	(2,383)	—	—	—	7,903	5,520
Balance at December 31, 2021	63,925,334	6	75,743	—	(52,314)	(1,502)	5,881	27,814
Net loss	—	—	—	—	(149,814)	—	(10,407)	(160,221)
Other comprehensive loss	—	—	—	—	—	313	247	560
Issuance of common stock, net of issuance costs	14,388,000	2	158,048	—	—	—	—	158,050
Issuance of common stock upon conversion of debt	13,628,958	1	160,139	—	—	—	—	160,140
Issuance of common stock upon settlement of liability	945,626	—	11,111	—	—	—	—	11,111
Stock options exercised	72,666	—	181	—	—	—	—	181
Stock-based compensation	—	—	4,548	—	—	—	285	4,833
Other changes in non- controlling interests	—	—	(87)	—	—	—	66	(21)
Balance at December 31, 2022	92,960,584	\$ 9	\$ 409,683	\$ —	\$ (202,128)	\$ (1,189)	\$ (3,928)	\$ 202,447

**IVANHOE ELECTRIC INC.**  
**CONSOLIDATED AND COMBINED CARVE-OUT STATEMENTS OF CASH FLOWS**  
**(Expressed in thousands of U.S. dollars)**  
**Years ended December 31, 2022 and 2021**

	2022	2021
<b>Operating activities</b>		
Net loss	\$ (160,221)	\$ (68,511)
Adjustments to reconcile net loss to cash provided by (used in) operating activities:		
Depreciation and amortization	4,211	4,250
Stock-based compensation	4,833	3,667
Non-cash exploration expense	1,273	—
Loss on de-recognition of mineral interest	5,700	—
Unrealized foreign exchange (gain) loss	1,332	(376)
Finance expense	2,071	1,405
Share of loss of equity method investees	3,711	213
Income taxes	618	495
Loss on revaluation of convertible debt	18,965	4,571
Loss on revaluation of investments	1,450	634
Loss on write-down of inventory	1,932	—
Other	876	210
Changes in other operating assets and liabilities:		
Trade accounts receivable	(112)	1,456
Inventory	(2,083)	(2,340)
Operating lease liabilities	(873)	(781)
Accounts payable and accrued liabilities	2,727	6,262
Other	(2,144)	1,013
Net cash used in operating activities	(115,734)	(47,832)
<b>Investing activities</b>		
Purchase of mineral interests	(35,905)	(14,400)
Purchase of property, plant and equipment and intangible assets	(8,506)	(3,992)
Purchase of investments subject to significant influence	(3,973)	(870)
Other	—	(3,370)
Net cash used in investing activities	(48,384)	(22,632)
<b>Financing activities</b>		
Net proceeds from issuance of common stock	158,050	9,677
Proceeds from Ivanhoe Electric convertible notes	86,200	49,999
Proceeds from related party loan	10,000	—
Proceeds from VRB convertible bond, net of issuance costs	—	22,857
Net transfer from parent	—	23,152
Proceeds from subsidiary financings	—	5,291
Proceeds from exercise of stock options	181	—
Other	(21)	—
Net cash provided by financing activities	254,410	110,976
Effect of foreign exchange rate changes on cash and cash equivalents	(482)	(3)
Increase in cash and cash equivalents	89,810	40,509
Cash and cash equivalents, beginning of the year	49,850	9,341
Cash and cash equivalents, end of the year	\$ 139,660	\$ 49,850
<b>Supplemental cash flow information</b>		
Cash paid for income taxes	666	634
<b>Supplemental disclosure of non-cash investing and financing activities</b>		
Issuance of common stock upon conversion of debt	\$ 160,140	—
Issuance of common stock upon settlement of liability	11,111	—
Settlement of loan from parent	—	5,886
Issuance of common stock in exchange for assets (Note 1)	—	65,654

**IVANHOE ELECTRIC INC.****NOTES TO THE CONSOLIDATED AND COMBINED CARVE-OUT FINANCIAL STATEMENTS****(Tabular amounts expressed in thousands of U.S. dollars, unless otherwise indicated)****1. Background and basis of preparation:**

Ivanhoe Electric Inc. (“Ivanhoe Electric” or “the Company”) was incorporated in the State of Delaware, USA, on July 14, 2020, as a wholly-owned subsidiary of High Power Exploration Inc. (“the Parent” or “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 (“Nimba Project”); (ii) certain property, plant and equipment; and (iii) certain financial assets (collectively the “Contributed Assets”) in exchange for common stock of Ivanhoe Electric. HPX then distributed 59,909,344 shares of common stock of Ivanhoe Electric to HPX stockholders by way of an in-kind dividend, with each HPX stockholder receiving one share of common stock of Ivanhoe Electric for each HPX share held by the stockholder.

As HPX continued to hold its interest in Ivanhoe Electric immediately following the transfer of the Contributed Assets, there was no resultant change of control in either Ivanhoe Electric or the Contributed Assets. As such, the acquisition by Ivanhoe Electric of the Contributed Assets has been accounted for at historical cost as a transaction between entities under common control.

On June 30, 2022, Ivanhoe Electric completed an initial public offering (“IPO”) of 14,388,000 shares of the Company’s 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”.

Ivanhoe Electric is a mineral project exploration and development company with a focus on identifying and developing mineral projects, and ultimately mines, associated with the metals necessary for electrification, in particular, copper, nickel, cobalt, vanadium, gold, silver, and the platinum group metals.

The Company’s current mineral projects are located predominantly in the United States. In addition to mineral projects in the United States, the Company also holds direct and indirect ownership interests, and in some cases controlling financial interests, in other non-U.S. mineral projects, and in proprietary mineral exploration and minerals-based technologies.

The Company conducts the following business activities through certain subsidiaries:

- VRB Energy Inc. (“VRB”), develops, manufactures and installs vanadium flow batteries for grid-scale energy storage. Ivanhoe Electric had an ownership interest in VRB of 90.0% as at December 31, 2022 (December 31, 2021 — 90.0%).
- Computational Geosciences Inc. (“CGI”), provides data analytics, geophysical modelling, software licensing and artificial intelligence services for the mineral, oil & gas and water exploration industries. Ivanhoe Electric had an ownership interest in CGI of 94.3% as at December 31, 2022 (December 31, 2021 — 94.3%).
- Cordoba Minerals Corp. (“Cordoba”) holds the San Matias copper-gold-silver project in northern Colombia. Ivanhoe Electric had an ownership interest in Cordoba of 63.2% as at December 31, 2022 (December 31, 2021 — 63.3%).
- Kaizen Discovery Inc. (“Kaizen”) holds the Pinaya copper-gold exploration project in Peru. Ivanhoe Electric had an ownership interest in Kaizen of 82.7% as at December 31, 2022 (December 31, 2021 — 82.7%).

*Basis of preparation:*

These consolidated and combined carve-out financial statements have been prepared under U.S. Generally Accepted Accounting Principles (“U.S. GAAP”).

*Basis of preparation — Prior to the restructuring:*

These consolidated and combined carve-out financial statements include results of the Company for periods prior to the restructuring on April 30, 2021. Up to the date of restructuring, these financial statements have been prepared on a combined basis and the Parent’s net investment in the Company’s operations is shown in lieu of stockholders’ equity.



**IVANHOE ELECTRIC INC.**

**NOTES TO THE CONSOLIDATED AND COMBINED CARVE-OUT FINANCIAL STATEMENTS**

**(Tabular amounts expressed in thousands of U.S. dollars, unless otherwise indicated)**

All intercompany balances and transactions have been eliminated in the consolidated and combined carve-out financial statements.

Prior to the restructuring, the financing of operations was historically managed by the Parent. Net parent investment represents the Parent's historical investment in the Company and includes accumulated net earnings or losses attributable to the Parent, intercompany balances that were capitalized at the time of the restructuring and direct capital contributions and expense allocations from the Parent to the Company. Assets contributed to Ivanhoe Electric at the time of restructuring have been recorded by the Company during the periods the assets were under the control of the Parent. A description of the costs allocated to the Company is included in Note 20.

Management believes the assumptions underlying the consolidated and combined carve-out financial statements, including the assumptions regarding allocation of expenses, are systematic, rational and reasonable. Nevertheless, the consolidated and combined carve-out financial statements may not include all of the actual expenses that would have been incurred by the Company on a stand-alone basis, and may not accurately reflect the Company's historical financial position, results of operations and cash flows that would have been reported if the Company had been a stand-alone entity during the periods prior to the restructuring. The amounts that would have been or will be incurred on a stand-alone basis could differ from the amounts allocated due to economies of scale, management judgment, cash management and financing obtained as a stand-alone company, or other factors.

*Reverse stock split:*

In June 2022, the Company's stockholders approved an amendment to the Company's certificate of incorporation to effect a reverse stock split of the Company's outstanding common stock at a ratio of 3-for-1 (the "Reverse Stock Split") effective as of June 16, 2022. The number of authorized shares and the par values of the common stock were not adjusted as a result of the Reverse Stock Split. For periods before June 16, 2022, all references to common stock, options to purchase common stock, per share data, and related information contained in the financial statements have been retrospectively adjusted to reflect the effect of the Reverse Stock Split.

The consolidated and combined carve-out financial statements have been prepared on a going concern basis, which presumes the realization of assets and satisfaction of liabilities in the normal course of business.

References to "\$" refer to United States dollars and "Cdn\$" to Canadian dollars.

**IVANHOE ELECTRIC INC.**

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**(Tabular amounts expressed in thousands of U.S. dollars, unless otherwise indicated)**

**2. Significant accounting policies:**

**(a) Basis of measurement:**

These consolidated and combined carve-out financial statements have been prepared on the historical cost basis except as disclosed in these accounting policies.

**(b) Basis of combination:**

The consolidated and combined carve-out financial statements include the accounts of the Company and entities controlled by HPX transferred to Ivanhoe Electric at the time of the restructuring. For entities controlled through less than a 100% ownership interest, a non-controlling interest is recorded to reflect the non-controlling interest's share of the net loss and net assets of the entity.

**Principles of consolidation:**

The Company consolidates entities in which it has a controlling financial interest based on either the variable interest entity ("VIE") or the voting interest model.

An entity is considered to be a VIE if any of the following conditions exist: (a) the total equity investment at risk is not sufficient to permit the entity to finance its activities without additional subordinated financial support, (b) the holders of the equity investment at risk, as a group, lack either the direct or indirect ability through voting rights or similar rights to make decisions that have a significant effect on the success of the entity or the obligation to absorb the entity's expected losses or the right to receive the entity's expected residual returns, or (c) the voting rights of some equity investors are disproportionate to their obligation to absorb losses of the entity, their rights to receive returns from an entity, or both, and substantially all of the entity's activities either involve or are conducted on behalf of an investor with disproportionately few voting rights.

The Company consolidates entities that are VIEs when the Company determines it is the primary beneficiary. Generally, the primary beneficiary of a VIE is a reporting entity that has (a) the power to direct the activities that most significantly affect the VIE's economic performance, and (b) the obligation to absorb losses of, or the right to receive benefits from, the VIE that could potentially be significant to the VIE.

The Company's VIE's are discussed in Note 17 (Earn-in Options) and Note 18 (Non-controlling Interests).

**(c) Foreign currency:**

The functional currency and reporting currency of Ivanhoe Electric is the U.S. dollar. Each subsidiary determines its own functional currency based on the primary economic environment in which it operates.

**(i) Foreign currency translation:**

Monetary assets and liabilities denominated in currencies other than the functional currency are translated into the functional currency at the rates of exchange in effect on the balance sheet date. Transactions in currencies other than the functional currency are measured and recorded in the functional currency at the exchange rate prevailing on the transaction date, and exchange differences arising on remeasurement are recognized in net loss.

**(ii) Foreign operations:**

The assets and liabilities of foreign operations whose functional currency is other than the reporting currency are translated into U.S. dollars at the exchange rates in effect on the balance sheet date. Revenues, expenses, gains and losses are translated using the average rates for the year. Translation adjustments are shown as a component of other comprehensive income.

**(d) Cash and cash equivalents:**

Cash and cash equivalents comprise deposits held with banks and other short-term highly liquid investments with original maturities of three months or less that are readily convertible into known amounts of cash and which are subject to insignificant risk of changes in value.

**IVANHOE ELECTRIC INC.**

**NOTES TO THE CONSOLIDATED AND COMBINED CARVE-OUT FINANCIAL STATEMENTS**

**(Tabular amounts expressed in thousands of U.S. dollars, unless otherwise indicated)**

(e) Trade accounts receivable:

Trade accounts receivable are recorded at cost and do not bear interest. Management evaluates all accounts periodically and an allowance is established based on the best facts available. Management considers historical realization data, accounts receivable aging trends, other operational trends and reasonable forecasts to estimate the collectability of receivables. After all reasonable attempts to collect a receivable have been exhausted, the receivable is written off against the allowance for doubtful accounts.

(f) Inventory:

Inventories are stated at the lower of cost and net realizable value. Cost comprises direct materials and where applicable, direct labor costs and overheads that have been incurred in bringing the inventory to its present location and condition. Cost is calculated using the weighted average cost method. Net realizable value represents the estimated selling price less all estimated costs of completion and costs necessary to make the sale. Where cost exceeds net realizable value, the recorded value of inventory is written down to its net realizable value, and such impairment losses are not reversed in future periods.

(g) Investments subject to significant influence:

The Company accounts for its investments over which it has significant influence or joint control, but not a controlling financial interest, using the equity method of accounting unless it has elected to account for an investment subject to significant influence at fair value.

Interests in equity-accounted investees are recognized initially at cost. Subsequently, the Company adjusts the carrying amount of the investments to fair value where the fair value option has been elected or recognizes its share of earnings or losses of the investees where applying the equity method.

Where investee's financial information is not produced in a sufficiently timely manner for the Company to apply the equity method of accounting in its consolidated financial statements, the Company records its share of earnings and losses on a lag, not to exceed three months. When a lag period is applied, the Company discloses all material intervening events.

The Company evaluates its equity method investments for potential impairment whenever events or changes in circumstances indicate that there is an other-than-temporary decline in the value of the investment. Declines in fair value that are deemed to be other-than-temporary are charged to other expenses.

(h) Other investments

Changes in the fair value for equity securities with a readily determinable fair value are reported in the combined carve-out statement of loss. The Company records equity securities without readily determinable fair values (such as investment in common stock, warrants and options of privately held companies) at cost, less impairment, and makes subsequent adjustments to the carrying values for observable price changes for the identical or a similar investment of the same issuer. Equity securities without readily determinable fair values are written down to their fair value if a qualitative assessment indicates that the investment is impaired and the fair value of the investment is less than its carrying amount.

(i) Derivatives

Derivative instruments and embedded derivatives on the balance sheet are carried at fair value with changes in fair value recorded in earnings unless hedge accounting applies. The Company has not applied hedge accounting to any derivatives.

(j) Mineral interests and exploration expense

Direct costs for the acquisition of mineral exploration rights, including option payments, are capitalized and recorded initially at cost as mineral interests. Exploration and evaluation costs are expensed in the period incurred until such time as it has been determined that a mineral property has proven and probable reserves, in which case subsequent evaluation and costs incurred to develop a mineral property are capitalized.

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Mineral interests are not amortized until the underlying property is converted to the production stage, at which point the mineral interests are amortized over the estimated recoverable proven and probable reserves.

Exploration and evaluation costs include topographical, geological, geochemical and geophysical studies, exploratory drilling, trenching, sampling, and activities in relation to evaluating the technical feasibility and commercial viability of extracting a mineral resource, as well as value-added taxes in relation to these direct exploration and evaluation costs incurred in foreign jurisdictions when recoverability of those taxes is uncertain.

Exploration and evaluation costs include funding exploration and evaluation costs pursuant to earn-in arrangements through which the Company has the right to fund exploration and evaluation activities on assets owned by a third party and the opportunity to earn into a partial ownership position directly or indirectly in the underlying assets upon reaching specified funding thresholds. Earn-in arrangements generally provide no commitment by the Company for future funding and the Company is not entitled to any economic returns associated with the underlying mineral interests unless the Company chooses to fund to certain levels.

(k) Property, plant and equipment:

Items of property, plant and equipment are measured at cost less accumulated depreciation and any accumulated impairment losses. Major expenditures for replacements and significant improvements that increase asset values and extend useful lives are capitalized.

The cost of property, plant and equipment, less its estimated residual value, is depreciated over its estimated useful lives using the straight-line method on the following bases:

Asset	Basis
Equipment and vehicles	3 to 10 years
Computer equipment	3 to 5 years
Leasehold improvements	Shorter of useful life and remaining lease term

The useful lives, residual values and depreciation method are reviewed annually, with the effect of any changes in estimate accounted for on a prospective basis.

(l) Leases:

The Company assesses whether a contract is or contains a lease, at the inception of a contract. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. The Company assesses whether the contract involves the use of an identified asset, whether the Company has the right to obtain substantially all of the economic benefits from use of the asset during the term of the arrangement and if the Company has the right to direct the use of the asset.

The Company recognizes a right-of-use asset ("ROU asset") and a corresponding lease liability at the commencement of the lease, except the company has elected not to recognize ROU assets and liabilities for leases where the total lease term is less than or equal to 12 months. The Company has elected to treat the lease and non-lease components of office leases as a single lease component.

Lease liabilities are initially measured at the present value of the unpaid lease payments at the commencement date, discounted by using the rate implicit in the lease. If this rate cannot be readily determined, the Company uses its incremental borrowing rate. Lease liabilities are subsequently measured by increasing the carrying amount to reflect interest on the lease liability and by reducing the carrying amount to reflect the lease payments made.

*Operating Leases*

The ROU asset is initially measured at cost, which comprises the initial amount of the lease liability adjusted for lease payments made at or before the lease commencement date, plus any initial direct costs incurred less any lease incentives received.

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For operating leases, the Company records the amortization of the ROU assets and the accretion of the lease liabilities as a single lease cost on a straight-line basis over the lease term.

*Finance Leases*

For finance leases, the ROU asset is subsequently amortized using the straight-line method from the lease commencement date to the earlier of the end of its useful life or the end of the lease term unless the lease transfers ownership of the underlying asset to the Company or the Company is reasonably certain to exercise an option to purchase the underlying asset. In those cases, the ROU asset is amortized over the useful life of the underlying asset. Amortization of the ROU asset is included in depreciation and interest expense on the lease liability is included in interest expense.

**(m) Intangible assets:**

Intangible assets with finite useful lives are carried at cost less accumulated amortization and accumulated impairment losses. Amortization is recognized on a straight-line basis over the asset estimated useful lives. The estimated useful life and amortization method are reviewed at the end of each reporting period, with the effect of any changes in the estimate being accounted for on a prospective basis.

The estimated useful lives of intangibles are:

<b>Asset</b>	<b>Basis</b>
Patents and licenses	5 to 20 years
Software	1 to 5 years
Artificial Intelligence intellectual property	5 years

**(n) Impairment of long-lived assets:**

Long-lived assets, such as property, plant, and equipment and intangible assets subject to amortization, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. If circumstances require a long-lived asset or asset group be tested for possible impairment, the Company first compares undiscounted cash flows expected to be generated by that asset or asset group to its carrying amount. If the carrying amount of the long-lived asset or asset group is not recoverable on an undiscounted cash flow basis, an impairment is recognized to the extent that the carrying amount exceeds its fair value. Fair value is determined through various valuation techniques, including discounted cash flow models, quoted market values or third-party independent appraisals.

**(o) Revenue recognition:**

The Company recognizes revenue from the following major sources:

- Data processing services;
- Sale of software licenses; and
- Sale of renewable energy storage systems.

**(i) Data processing services:**

The Company sells data processing services to customers in the mineral, oil & gas and water exploration industries. The Company enters into contracts with customers with single and multiple deliverables or performance obligations. General payment terms are net 15 days. A performance obligation is a promise in a contract with a customer to transfer products or services that are distinct. Determining whether products or services are distinct performance obligations that should be accounted for separately, or combined as one unit of accounting and the allocation of the transaction price to each distinct performance obligation may require significant judgment.

For short term contracts with a single deliverable, the Company recognizes revenue at the point in time when it transfers control of a distinct performance obligation to a customer. Control transfers on the agreed upon



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**(Tabular amounts expressed in thousands of U.S. dollars, unless otherwise indicated)**

deliverable being delivered to the customer, the customer accepting the deliverable and the Company has not retained any significant risk of future obligations with respect to the service being provided.

The Company is also entered into arrangements for the provision of long-term data processing services. Such services are recognized as a performance obligation satisfied over time. Revenue is recognized for these services based on the stage of completion of the contract using the most appropriate measure of progress towards complete satisfaction of the performance obligations. Payment for these services is in accordance with an agreed billing schedule and therefore either (i) a contract asset is recognized over the period in which the services are performed, representing the Company's right to consideration for the services performed to date, or (ii) a contract liability is recognized until the corresponding services have been provided.

(ii) Sale of software licenses:

The Company enters into software license agreements where it provides the use of software to the customer. The Company recognizes revenue at the point in time that it satisfies its performance obligation by making the software available for download, meeting customer specific acceptance criteria, where applicable, and having reasonable certainty that the consideration will be received. Revenue is measured based on the consideration specified in a contract with a customer.

(iii) Sale of energy storage systems:

The Company designs, develops, and manufactures energy storage systems as products as well as energy storage solutions and operations & maintenance ("O&M") services. Revenue is measured based on the consideration specified in a contract with a customer. The Company recognizes revenue when it satisfies a performance obligation by transferring a promised good or service to a customer.

Energy storage systems as products are transferred at a point in time when the customer obtains control of the product, which is typically upon shipment, delivery, installation and commissioning, depending on the contract terms.

Revenue is recognized for sales of battery storage solutions over time based on the estimated progress to completion using a cost-based input method. In applying the cost-based input method of revenue recognition, we use the actual costs incurred relative to the total estimated costs to determine progress towards contract completion and to calculate the corresponding amount of revenue and gross profit to recognize. The cost based input method of revenue recognition is considered a faithful depiction of efforts to satisfy energy storage solutions and therefore reflect the transfer of goods or services to a customer under such contracts. Costs incurred towards contract completion may include costs associated with direct materials, labor, subcontractors, and other indirect costs related to contract performance. The cost-based input method of revenue recognition requires the Company to make estimates of net contract revenues and costs to complete projects.

O&M services are transferred over time when customers receive and consume the benefits provided by the Company's performance under the terms of service arrangements.

(p) Contingent liabilities:

(i) Warranties:

The Company provides maintenance on energy storage products during the warranty period, usually 1 to 5 years. Costs of warranty include the cost of labor, material and related overhead necessary to repair a product during the warranty period. The Company accrues for the estimated cost of the warranty on products shipped upon recognition of the sale of the product. The costs are estimated based on actual historical expenses incurred and on estimated future expenses related to current sales, and are updated each reporting period.

(ii) Asset retirement obligations:

The Company recognizes asset retirement obligations arising from regulatory, contractual or other legal requirements to perform certain property and asset reclamation activities at the end of the respective asset life. Asset retirement obligations are recorded when environmental disturbance occurs, accompanied by a legal obligation to remediate. Asset retirement obligations, or increases therein, are initially measured at fair value

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and subsequently adjusted for accretion expense and changes in the amount or timing of the estimated cash flows.

(q) Research and development costs:

Expenditure on research and development activities is recognized as an expense in the period in which it is incurred.

(r) Stock-based compensation:

The Company recognizes employee stock-based compensation as an expense in the consolidated and combined carve-out financial statements. Equity-classified awards are measured at the grant date fair value of the award. The fair value of stock options is determined using the Black-Scholes option valuation model using the grant date stock price, dividend yield, estimated amounts for volatility of the Company's stock, the expected life of the awards and the risk-free interest rate. Compensation expense is recognized over the requisite service period for each separate tranche of the award. Forfeitures are accounted for as they occur.

The fair value of stock-settled restricted stock units ("RSU's") is based on the Company's stock price on the date of grant. Shares of common stock are issued at the vesting date for stock-settled RSU's. The fair value of stock-settled RSU's is amortized over the vesting period and recognized as an expense in the consolidated and combined carve-out financial statements.

(s) Income taxes:

Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss and tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date.

The Company recognizes the effect of uncertain income tax positions if those positions are more likely than not of being sustained. Recognized income tax positions are measured at the largest amount that is greater than 50% likely of being realized. Changes in recognition or measurement are reflected in the period in which the change in judgment occurs. The Company records interest related to unrecognized tax benefits in interest expense and penalties, if any, in general and administrative expenses.

Each reporting period, the Company reviews its deferred tax assets for the possibility they will not be realized. A valuation allowance will be recorded if it is more likely than not that a deferred tax asset will not be realized.

(t) Fair value measurements:

The Company uses valuation approaches that maximize the use of observable inputs and minimize the use of unobservable inputs, to the extent possible. The Company determines fair value based on assumptions that market participants would use in pricing an asset or liability in the principal or most advantageous market. When considering market participant assumptions in fair value measurements, the following fair value hierarchy distinguishes between observable and unobservable inputs, which are categorized in one of the following levels (Note 22):

- Level 1: Unadjusted quoted prices in active markets for identical assets or liabilities accessible at the measurement date.
- Level 2: Quoted prices in markets that are not active, quoted prices for similar assets or liabilities in active markets, quoted prices or inputs that are observable, either directly or indirectly, for substantially the full term of the asset or liability, and model-based valuation techniques (e.g. the Black-Scholes model) for which all significant inputs are observable in the market or can be corroborated by observable market data for substantially the full term of the assets or liabilities.
- Level 3: Prices or valuation techniques that require inputs that are both significant to the fair value measurement and unobservable (supported by little or no market activity).

**IVANHOE ELECTRIC INC.**

**NOTES TO THE CONSOLIDATED AND COMBINED CARVE-OUT FINANCIAL STATEMENTS**

**(Tabular amounts expressed in thousands of U.S. dollars, unless otherwise indicated)**

**(u) Net loss per share:**

Basic and diluted loss per share attributable to common stockholders are computed by dividing the net loss available to common stockholders by the weighted-average number of common shares outstanding for the respective period presented.

The diluted net loss per share attributable to common stockholders is computed by giving effect to all potential dilutive common stock equivalents outstanding for the period, except to the extent they are antidilutive.

**(v) Convertible debt:**

Upon the issuance of convertible debt, the Company evaluates embedded conversion features within convertible debt to determine whether the embedded conversion feature(s) should be bifurcated from the host instrument and accounted for as a derivative at fair value with changes in fair value recorded in the statement of consolidated and combined loss. If the conversion feature does not require derivative treatment, the instrument is evaluated for consideration of any beneficial conversion features or cash conversion features.

The equity component, if any, is treated as a discount on the liability component of the convertible debt, which is amortized over the term of the convertible debt using the effective interest rate method. When it has been determined an instrument does not have an equity component, the Company may elect to account for the instrument at fair value with changes in fair value recorded in the statement of consolidated and combined loss, except with respect to changes in value caused by changes in the Company's own credit risk.

**(w) Debt and equity issuance costs:**

Debt issuance costs directly related to a debt liability, including fees, commissions and legal expenses, are deferred and presented as a direct reduction from the carrying amount of the debt and amortized on an effective interest rate method over the term of the liability. Amortization of debt issuance costs is included in interest expense in the Company's consolidated and combined carve-out statement of loss.

For debt where the Company has elected fair value accounting under ASC 825, debt issuance costs are expensed on recognition in the Company's consolidated and combined carve-out statement of net loss.

Costs directly attributable to the issuance of equity in the Company are netted against the gross proceeds of the equity.

**IVANHOE ELECTRIC INC.****NOTES TO THE CONSOLIDATED AND COMBINED CARVE-OUT FINANCIAL STATEMENTS****(Tabular amounts expressed in thousands of U.S. dollars, unless otherwise indicated)****3. Use of estimates:**

The preparation of consolidated financial statements in conformity with U.S. GAAP requires management of the Company to make estimates and assumptions that affect the reported amounts of assets and liabilities, the related disclosure of contingent assets and liabilities, and the reported amounts of revenues and expenses. Actual results may differ from these estimates. The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimate is revised if the revision affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods.

Significant areas requiring the use of estimates are as follows

(i) Useful lives of property, plant and equipment and finite life intangible assets:

Changes in technology or the Company's intended use of these assets, as well as changes in business prospects or economic and industry factors, may cause the estimated useful lives of these assets to change.

(ii) Recoverability of investments in equity securities:

The recoverability of the carrying value of the Company's investments in private equity securities, including those subject to significant influence, is dependent on the Company's ability to sell the assets privately or the investees' ability to publicly list the shares or generate profitable operations and pay dividends in the future, in each case in amounts that exceed the carrying value. Changes in the investees' plans and value or the Company's expectations related to the manner and timing of realizing the value of its equity investments, may result in changes in the recoverability of recorded amounts.

(iii) Recoverability of deferred income tax assets:

The Company has recognized significant valuation allowances against its deferred tax assets. The necessity for valuation allowances could be affected by changes in the Company's estimates of future taxable income. In addition to the generation of future taxable income through the establishment of economic feasibility, development and operation of mines on the Company's exploration assets, opportunities for future taxable income could arise through disposal of assets, or 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.

(iv) Fair value of convertible notes:

Certain convertible notes are carried in the statements of financial position at fair value, with changes in fair value reflected in the statement of loss and comprehensive loss. Fair values are estimated by reference to valuation techniques that may include inputs that are not based on observable market data (Note 13).

(v) Valuation of stock options:

The fair value of stock options granted by the Company is estimated using the Black-Scholes pricing model. Inputs to the model that require management judgment include the options expected life, volatility and share price for the pre-IPO grant. (Note 14).

**4. Recently adopted accounting standards and recent accounting pronouncements:***Income taxes*

The Company adopted ASU 2019-12 effective January 1, 2022. The new guidance which simplifies the accounting for income taxes, eliminates certain exceptions with ASC 740 and clarifies certain aspects of the current guidance to promote consistency among reporting entities. The adoption of ASU 2019-12 did not have a material impact on the Company's consolidated and combined carve-out financial statements.

*Recent accounting pronouncements not yet adopted*

In August 2020, the FASB issued ASU 2020-06 Debt — Debt with Conversion and Other Options (Topic 470-20) and Derivatives and Hedging — Contracts in Entity's Own Equity (Topic 815-40): Accounting for Convertible Instruments and Contracts in an Entity's Own Equity. The update is to address issues identified as a result of the complexity

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associated with applying generally accepted accounting principles for certain financial instruments with both liability and equity characteristics. The Company is required to adopt ASU 2020-06 for fiscal years beginning after December 15, 2023 and is currently evaluating the expected impact on the consolidated and combined carve-out financial statements, including the possibility of early adoption as of January 1, 2023.

In June 2022, the FASB issued ASU 2022-03 Fair Value Measurement (Topic 820): Fair Value Measurement of Equity Securities Subject to Contractual Sale Restrictions. The update is to clarify the guidance in Topic 820, Fair Value Measurement, when measuring the fair value of an equity security subject to contractual restrictions that prohibit the sale of an equity security. The update clarifies that a contractual restriction on the sale of an equity security is not considered part of the unit of account of the equity security and, therefore, is not considered in measuring fair value. The Company intends to adopt ASU 2022-03 on January 1, 2024 and is currently evaluating the expected impact on the consolidated and combined carve-out financial statements.

**5. Cash and cash equivalents:**

Of the total cash and cash equivalents at December 31, 2022 and 2021, \$20.7 million and \$28.5 million, respectively, was not available for the general corporate purposes of the Company as it was held by non-wholly-owned subsidiaries (Note 18).

At December 31, 2022, the Company has \$2.3 million in cash equivalents in the form of redeemable short-term investments (December 31, 2021 - \$0).

**6. Inventory:**

	December 31, 2022	December 31, 2021
Raw materials	\$ 4,935	\$ 5,129
Work-in-progress	713	749
	<u>\$ 5,648</u>	<u>\$ 5,878</u>

The Company wrote down \$1.9 million of inventory during the year ended December 31, 2022 (December 31, 2021 - \$0).

**7. Investments subject to significant influence:**

The Company's principal investment subject to significant influence is Sama Resources Inc. ("Sama"). Others include its investments in Fjordland Exploration Inc. ("Fjordland") and Sama Nickel Corporation ("SNC").

The Company has elected to carry its investments in common shares of the publicly-traded companies subject to significant influence, Sama and Fjordland, at fair value.



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	Carried at fair value		Equity Method		Total
	Sama (Note a)	Fjordland (Note b)	SNC (Note c)	Other	
Balance at December 31, 2020	5,498	1,209	—	1,020	7,727
Investment	—	—	870	—	870
Change in fair value	221	91	—	—	312
Share of loss	—	—	(213)	—	(213)
Impairment	—	—	—	(954)	(954)
Foreign currency translation	—	25	—	(66)	(41)
Balance at December 31, 2021	5,719	1,325	657	—	7,701
Investment	—	—	3,973	—	3,973
Change in fair value	(920)	(980)	—	—	(1,900)
Share of loss	—	—	(3,711)	—	(3,711)
Foreign currency translation	—	(36)	(29)	—	(65)
Balance at December 31, 2022	<u>\$ 4,799</u>	<u>\$ 309</u>	<u>\$ 890</u>	<u>\$ —</u>	<u>\$ 5,998</u>

(a) Sama:

Sama is a mineral exploration company, listed on the TSX Venture Exchange, focused on exploring nickel — copper projects in Ivory Coast, West Africa. As at December 31, 2022, the Company owned 22.8% (December 31, 2021 — 22.8%) of the issued and outstanding common shares in Sama.

(b) Fjordland:

Fjordland is a mineral exploration company, listed on the TSX Venture Exchange, focused on the exploration and acquisition of nickel, copper and cobalt projects in Canada.

As at December 31, 2022, the Company owned 16.9% (December 31, 2021 — 18.8%) of the issued and outstanding common shares of Fjordland.

The Company has an earn-in agreement with Fjordland on its South Voisey's Bay Project (Note 17).

(c) SNC:

The Company has an earn-in agreement with Sama (Note 17), whereby the Company can earn up to a 60% interest in SNC, a subsidiary of Sama that owns the Ivory Coast Project. On August 27, 2021 the Company funded a \$870,000 cash call to SNC which resulted in surpassing the spending threshold to earn its initial 30% minority equity interest in SNC. The Company accounts for its 30% interest in SNC using the equity method.

**8. Exploration mineral interests:**

	Santa Cruz (Note a)	Tintic (Note b)	Pinaya (Note c)	San Matias (Note d)	Other	Total
Balance at January 1, 2020	—	13,888	2,512	15,315	300	\$ 32,015
Acquisition costs	35,075	5,700	—	—	250	41,025
Foreign currency translation	—	—	(1)	—	—	(1)
Balance at December 31, 2021	35,075	19,588	2,511	15,315	550	73,039
Acquisition costs	11,505	7,550	—	—	350	19,405
De-recognition	(5,700)	—	—	—	—	(5,700)
Foreign currency translation	—	—	14	—	—	14
Balance at December 31, 2022	<u>\$ 40,880</u>	<u>\$ 27,138</u>	<u>\$ 2,525</u>	<u>\$ 15,315</u>	<u>\$ 900</u>	<u>\$ 86,758</u>

(a) The Santa Cruz Project is a copper project near the city of Casa Grande in Arizona, USA.

**IVANHOE ELECTRIC INC.****NOTES TO THE CONSOLIDATED AND COMBINED CARVE-OUT FINANCIAL STATEMENTS****(Tabular amounts expressed in thousands of U.S. dollars, unless otherwise indicated)***(i) Assignment agreement:*

On October 27, 2021, the Company entered into an agreement with Central Arizona Resources Ltd. (“CAR”), a private company, and acquired the option agreement CAR held over the Santa Cruz mineral title owned by DRH Energy Inc. (“DRHE”), and a surface use agreement CAR was party to with another private Arizona based company

The total consideration paid to CAR for the assignment of the option and surface access agreements to the Company was as follows:

- \$2.5 million paid in October 2021;
- \$2.5 million paid in April 2022;
- \$15.0 million and issuance of 945,626 shares of common stock of the Company upon completion of the Company’s IPO on June 30, 2022.

The purchase of the agreements was binding as the Company had no right to avoid the payment of the purchase price. On October 27, 2021, a \$26.6 million exploration mineral interest was capitalized and a corresponding liability (reported as deferred consideration payable in the statement of financial position) was recorded. The liability was settled on June 30, 2022.

*(ii) Option agreement:*

The option agreement provides the Company with the right, but not the obligation, to acquire 100% of the mineral title of the Santa Cruz Project by paying \$27.9 million to DRHE over three years. As at December 31, 2022, \$11.6 million in cash payments have been made, \$11.1 million of which were capitalized as exploration mineral interests. In order to maintain the option, the following payments must be made:

- \$6.25 million due on or before August 16, 2023; and
- \$10.0 million due within five days of exercising the option to acquire the mineral title.

The deadline to exercise the option is August 16, 2024. The payments are payable in cash or common stock of the Company at the discretion of DRHE.

*(iii) Surface access agreement:*

The surface access agreement acquired from CAR is an agreement with another Arizona based private company, which owns certain surface rights. In order to maintain surface access rights, the Company must make certain payments. As at December 31, 2022, \$1.6 million in payments have been made and recorded as exploration expense in the consolidated and combined carve-out statement of loss. A further \$800,000 is due on September 9, 2023. The agreement expires on August 3, 2025 but may be extended by one year at the Company’s discretion by making a payment of \$920,000.

*(iv) Terminated land purchase:*

On November 24, 2021, the Company entered into an agreement to acquire additional land adjacent to the Santa Cruz project and the associated mineral rights. In September 2022, the Company elected not to proceed with the transaction and terminated the purchase and sale agreement. Prior to termination of the agreement the Company had capitalized \$5.7 million in non-refundable payments. These payments have been de-recognized and recorded as exploration expenses in the consolidated and combined carve-out statement of loss (Note 16).

- (b) The Tintic project is a copper-gold-silver project in the Tintic District of Utah, USA representing the Company’s accumulation of rights owned by a variety of different parties. Pursuant to agreements entered into in 2017 and 2018, the Company obtained the right to explore the underlying assets and to acquire or optionally acquire specified mineral rights of the underlying assets by making scheduled payments. Payments under these agreements are capitalized as acquisition costs while costs associated with exploring the properties are expensed as exploration costs.

# IVANHOE ELECTRIC INC.

## NOTES TO THE CONSOLIDATED AND COMBINED CARVE-OUT FINANCIAL STATEMENTS

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The Company must make further option payments in 2023 in the amount of \$3.5 million in order to complete its purchase of 100% of the assets included in the agreements.

- (c) The Pinaya Project is 100% indirectly owned by Kaizen and covers 101 square kilometers of granted title, 28 square kilometers under application and includes 10 kilometers of underexplored strike length in southeastern Peru.
- (d) The San Matias Project is 100%-owned by Cordoba, which includes 100% of the Alacran Deposit and satellite deposits at Montiel East, Montiel West and Costa Azul.

### 9. Property, plant and equipment:

The Company's property, plant and equipment includes equipment and vehicles, computer equipment, leasehold improvements, leased assets and land.

	December 31, 2022			December 31, 2021		
	Gross Carrying Amount	Accumulated depreciation	Net Carrying Amount	Gross Carrying Amount	Accumulated depreciation	Net Carrying Amount
Equipment and vehicles	3,124	(1,959)	1,165	3,076	(2,161)	915
Computer equipment	587	(240)	347	400	(120)	280
Leasehold improvements	773	(377)	396	582	(406)	176
Land and buildings	858	—	858	720	—	720
Right of use assets	5,488	(4,320)	1,168	4,435	(4,003)	432
Total property, plant and equipment	10,830	(6,896)	3,934	9,213	(6,690)	2,523

Depreciation expense for the years ended December 31, 2022 and 2021 was \$1,263,000 and \$1,081,000 respectively.

### 10. Intangible assets:

The Company's intangible assets include patents and licenses, computer software and artificial intelligence intellectual property.

	December 31, 2022			December 31, 2021		
	Gross Carrying Amount	Accumulated amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated amortization	Net Carrying Amount
Patents and licenses	13,829	(13,520)	309	13,835	(13,328)	507
Computer Software	1,187	(1,180)	7	1,201	(1,194)	7
Artificial intelligence intellectual property	13,174	(12,241)	933	14,119	(10,293)	3,826
Total intangible assets	28,190	(26,941)	1,249	29,155	(24,815)	4,340

Amortization expense for the years ended December 31, 2022 and 2021 was \$2.9 million and \$3.2 million respectively.

**IVANHOE ELECTRIC INC.**

**NOTES TO THE CONSOLIDATED AND COMBINED CARVE-OUT FINANCIAL STATEMENTS**

(Tabular amounts expressed in thousands of U.S. dollars, unless otherwise indicated)

**11. Other non-current assets:**

	December 31, 2022	December 31, 2021
Deposit (Note a)	\$ 7,128	\$ —
Value added taxes recoverable	—	1,699
Related party advances (Note 20)	1,987	1,855
Other	181	2,307
	<u>\$ 9,296</u>	<u>\$ 5,861</u>

(a) The Company has a deposit relating to a contract to purchase additional Typhoon™ transmitters (Note 20).

**12. Accounts payable and accrued liabilities:**

	December 31, 2022	December 31, 2021
Trade accounts payable	\$ 4,578	\$ 5,721
Accrued liabilities	6,666	2,888
Other payables	2,699	1,586
	<u>\$ 13,943</u>	<u>\$ 10,195</u>

**13. Convertible debt:**

	Series 1 Convertible Notes (Note a)	Series 2 Convertible Notes (Note a)	VRB Convertible bond (Note b)	Total
Balance at December 31, 2020	\$ —	\$ —	\$ —	\$ —
Debt issuance	49,999	—	22,857	72,856
Finance expense	—	—	1,000	1,000
Change in fair value	4,976	—	—	4,976
Balance at December 31, 2021	54,975	—	23,857	78,832
Debt issuance	—	86,200	—	86,200
Finance expense	—	—	2,061	2,061
Change in fair value	8,709	10,256	—	18,965
Conversion to common stock	(63,684)	(96,456)	—	(160,140)
Balance at December 31, 2022	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 25,918</u>	<u>\$ 25,918</u>

(a) Ivanhoe Electric Convertible Notes:

(i) Series 1 Convertible Notes:

Between August 3, 2021 and November 17, 2021, the Company completed a financing which included the issuance of \$50.0 million aggregate principal amount of unsecured convertible promissory notes (“Series 1 Convertible Notes”). Upon completion of the Company’s IPO on June 30, 2022, the Series 1 Convertible Notes, including accrued interest of \$0.9 million, were automatically converted into 5,419,923 shares of common stock of the Company at a conversion price of \$9.39 per share (Note 14).

(ii) Series 2 Convertible Notes:

On April 5, 2022, the Company completed a financing in which it issued \$86.2 million aggregate principal amount of unsecured convertible promissory notes (“Series 2 Convertible Notes”).

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The Series 2 Convertible Notes were unsecured and bore interest at 3% per annum, in arrears and payable on the maturity date of July 31, 2023.

Upon completion of the Company's IPO on June 30, 2022, the Series 2 Convertible Notes, including accrued interest of \$0.6 million, were automatically converted into 8,209,035 shares of common stock of the Company at a conversion price of \$10.58 per share being a 10% discount to the gross price per share at which common stock was sold in the IPO (Note 14).

The convertible notes along with their embedded features did not contain any equity components, and therefore were recognized as a liability on issuance. The Company elected to measure the convertible notes at fair value, with subsequent changes in fair value recorded in net loss.

(b) VRB Convertible bond:

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 is automatically converted into equity of VRB upon an equity financing or sale event, at a price per share equal to the lower of:

- the transaction price of the equity financing or sale event; and
- 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.

The Company has accounted for the convertible bond, including its embedded features, as a debt instrument accounted at amortized cost, as it was determined the embedded features are not required to be bifurcated.

Directly attributable transaction costs of \$1.1 million were recorded against the carrying value of the debt and are amortized using the effective interest method at a rate of 9.1%.

**14. Equity:**

(a) Common stock transactions:

(i) IPO:

On June 30, 2022, the Company completed an IPO of 14,388,000 shares of common stock which were issued at a price of \$11.75 per share for gross proceeds of \$169.1 million. Directly attributable issuance costs of \$11.0 million incurred in conjunction with the IPO were recorded as a reduction in paid in capital.

(ii) Debt conversions:

On June 30, 2022, \$50.9 million of Series 1 Convertible Notes including accrued interest were automatically converted into 5,419,923 shares of common stock of the Company at a conversion price of \$9.39 per share.

On June 30, 2022, \$86.8 million of Series 2 Convertible Notes including accrued interest were automatically converted to 8,209,035 shares of common stock of the Company at a conversion price of \$10.58 per share.

The stock issuance resulting from the Series 1 and Series 2 note conversions was recorded at fair value based on the IPO price of \$11.75 per share.

(iii) Stock issuance to CAR:

On June 30, 2022, the Company issued 945,626 shares of common stock to CAR (Note 8). The stock issuance was recorded at fair value based on the IPO price of \$11.75 per share.



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**NOTES TO THE CONSOLIDATED AND COMBINED CARVE-OUT FINANCIAL STATEMENTS**

**(Tabular amounts expressed in thousands of U.S. dollars, unless otherwise indicated)**

(iv) 2021 restructuring and financing:

On April 30, 2021, Ivanhoe Electric completed a restructuring that resulted in HPX distributing 59,909,344 shares of common stock of Ivanhoe Electric to the shareholders of HPX (Note 1).

In August, September and November, 2021, Ivanhoe Electric completed a financing that included the issuance of 4,015,990 shares of common stock. The shares were issued at a price of \$2.49 per share, resulting in gross proceeds of \$10.0 million. Directly attributable transaction costs of \$322,000 were netted against the gross proceeds of the equity issuance.

At December 31, 2022, the Company is authorized to issue 750,000,000 shares of common stock, at \$0.0001 par value.

(b) Stock-based compensation:

Ivanhoe Electric, Kaizen, Cordoba, VRB and CGI have equity incentive plans and the stock-based compensation charged to operations was incurred by the Company as follows:

	Year ended December 31,	
	2022	2021
Ivanhoe Electric	\$ 3,407	\$ 2,144
Kaizen	462	211
Cordoba	708	784
VRB	89	61
CGI	167	467
	<u>\$ 4,833</u>	<u>\$ 3,667</u>

Option exercises at the subsidiary level, should they occur, will impact the Company's non-controlling interest in the applicable subsidiary, not the Company's share capital.

Stock-based payment compensation was allocated to operations as follows:

	Year ended December 31,	
	2022	2021
Cost of sales	\$ 161	\$ 333
Exploration expenses	1,643	1,558
General and administrative expenses	3,029	1,776
	<u>\$ 4,833</u>	<u>\$ 3,667</u>

Ivanhoe Electric currently has awards outstanding under various stock-based compensation plans. The Company adopted a Long Term Incentive Plan ("LTIP") on June 30, 2022. The LTIP provides for grants of stock options, stock awards, stock unit awards, and deferred stock unit awards. The Company's employees, including employees who are directors, consultants and non-employee directors are eligible to receive awards under the LTIP. Stock options may not be granted with an exercise price less than the closing price of our common stock on the grant date. As of December 31, 2022, 1,217,304 shares were available for grant under the LTIP and no shares were available under other plans.

(i) Stock options:

On November 21, 2022, Ivanhoe Electric granted 2.76 million stock options to certain officers and employees of the Company at an exercise price of \$11.75 per share. The options have a seven-year term and comprise three equal tranches vesting in one-third annual increments beginning one year from the grant date.

On June 30, 2021, under a prior equity incentive plan, Ivanhoe Electric granted 4.48 million stock options to certain directors, officers and employees of the Company at exercise price of \$2.49 per share.

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A summary of stock options outstanding as of December 31, 2022 and activity during the year then ended is presented below.

	Number of options	Weighted- Average Exercise Price	Weighted- Average Remaining Contractual Term (years)	Aggregate Intrinsic Value
Outstanding at January 1, 2022	4,483,322	\$ 2.49		
Granted	2,760,509	11.75		
Exercised	(72,666)	2.49		
Forfeited/expired	(100,001)	2.49		
Outstanding at December 31, 2022	<u>7,071,164</u>	<u>6.11</u>	<u>4.8</u>	<u>\$ 42,745</u>
Vested and exercisable at December 31, 2022	<u>2,164,812</u>	<u>2.49</u>	<u>3.5</u>	<u>\$ 20,912</u>

The fair value of each stock option is estimated on the date of grant using the Black-Scholes option valuation model. Expected volatility was calculated 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. Management exercised judgment in determining the expected life of the options and considered factors such as the contractual term of the options, the vesting schedule and expected volatility. For the June 30, 2021 grant, the grant date fair value of the shares of common stock was determined by the Company's Board of Directors using input from a valuation performed by an independent third-party valuation specialist. The risk-free interest rate is based on Federal Reserve rates in effect for bonds with maturity dates equal to the expected term of the option.

Information related to stock options granted during the years ended December 31, 2022 and 2021 is presented below.

	Grant date: November 21, 2022	Grant date: June 30, 2021
Weighted average assumptions used to value stock option awards:		
Fair value of common stock	\$9.98	\$2.49
Expected volatility	69.5%	73.7%
Expected life of options (in years)	4.0	2.6
Expected dividend rate	0%	0%
Risk-free interest rate	4.24%	0.23%
Weighted average grant-date fair value (per option)	\$5.08	\$1.09

At December 31, 2022 the Company had \$13.9 million of total unrecognized compensation cost to be recognized in 2023 through 2025 in relation to stock options.

(ii) Stock-settled RSU's:

On November 21, 2022 Ivanhoe Electric granted 750,000 stock-settled RSU's to an executive of the Company. The RSU's comprise three equal tranches vesting in one-third annual increments beginning one year from the grant date. The fair value of the stock-settled RSU's is amortized over the vesting period. The total fair value of the November 21, 2022 RSU grant was \$7.5 million.

A summary of outstanding stock-settled RSU's as of December 31, 2022 and activity during the year then ended is presented below.

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	<b>Number of awards</b>	<b>Weighted- Average Grant Date Fair Value Per Award</b>	<b>Aggregate Intrinsic Value</b>
Outstanding at January 1, 2022	—	\$ —	
Granted	750,000	9.98	
Vested	—	—	
Forfeited	—	—	
Outstanding at December 31, 2022	<u>\$ 750,000</u>	<u>9.98</u>	<u>\$ 9,113</u>

At December 31, 2022 the Company had \$6.8 million of total unrecognized compensation cost to be recognized in 2023 through 2025 in relation to stock-settled RSU's.

**15. Revenue:**

The Company recognized revenue from the following sources:

<b>Revenue type</b>	<b>Year ended December 31,</b>	
	<b>2022</b>	<b>2021</b>
Software licensing (Note a)	\$ 6,882	\$ —
Data processing services	847	4,512
Energy storage systems (Note b)	711	140
Total	<u>\$ 8,440</u>	<u>\$ 4,652</u>

- (a) On October 15, 2021, the Company entered into a software license agreement whereby the Company provided software that can be used by the licensee in perpetuity for a one-time fee of \$6.5 million, which was received in January 2022 and at which time its performance obligation with respect to the license was met. As such, in accordance with the Company's accounting policy for the sale of software licenses, the license fee revenue was recognized in 2022. Software licensing revenue includes associated services included in the software license agreement. This revenue is included in the data processing segment.
- (b) At December 31, 2022, the Company had a contract liability of \$2.8 million (2021 — \$3.5 million) relating to the sale of energy storage systems.

The Company has a significant customer that accounted for 82% and 74% of total sales for the years ended December 31, 2022 and 2021.

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**16. Exploration expense:**

Project	Year ended December 31,	
	2022	2021
Santa Cruz, USA (Note 8(a))	\$ 61,172	\$ 9,966
San Matias, Colombia (Cordoba) (Note 8(d))	18,454	13,789
Pinaya, Peru (Kaizen) (Note 8(c))	2,616	1,774
Tintic, USA (Note 8(b))	2,282	2,474
Hog Heaven, USA (Note 17)	2,216	2,029
Yangayu, Papua New Guinea	2,128	497
Perseverance, USA (Cordoba) (Note 17)	1,785	742
Carolina, USA (Note 17)	1,307	—
Lincoln, USA	1,312	235
Bitter Creek, USA	644	340
Ivory Coast Project, Ivory Coast (Note 17)	70	1,931
Project Generation and other	11,300	5,728
Total	<u>\$ 105,286</u>	<u>\$ 39,505</u>

Exploration expense at the Santa Cruz Project for the year ended December 31, 2022 includes \$5.7 million recorded upon the de-recognition of certain non-refundable payments made under a terminated land purchase agreement at the Santa Cruz Project (Note 8(a)).

**17. Earn-in option agreements:**

The Company has entered into various joint venture earn-in agreements whereby it has an option to obtain ownership interests in project entities through a combination of payments to the owner and funding exploration and evaluation expenditures on the underlying exploration assets according to a specified timeframe, while determining whether it wishes to continue to invest to obtain a minority or majority interest. Under these agreements, the Company may obtain ownership rights to the underlying mineral interests through acquisition of the underlying rights or through obtaining control of the entity holding such rights.

Project entities are generally considered variable interest entities prior to the Company acquiring an equity interest in the project entity (and thereafter in cases where the entity is financed through additional subordinated financial support such as shareholder debt). The Company has exercised judgment in determining that the activities that most significantly affect the project entity's performance during the early exploration stage of the Company including the Company's determination that its decision-making rights, which are practically limited to short-term discretionary exploration activity, are not the activities that most significantly affect the economic results of the project entities. The Company has determined that decisions that most significantly affect the economic results of a non-operating entity holding a single or primary exploration property without reserves include granting or amending exploration concessions and options as well as decisions related to the retention or abandonment of the associated mineral rights, none of which can be undertaken unilaterally by the Company.

The table below shows the net carrying value of the Company's assets in these entities, being the investment in the equity of the ultimate owner of the project ("Project Sponsor") and the investment in the equity of the underlying project entity, respectively, as of December 31, 2022, which together represent the Company's maximum exposure to loss on the underlying project as of December 31, 2022 as a result of the earn-in agreement and associated agreements. The Company has no liabilities on the balance sheet with respect to these entities.

The Company has no minimum commitment to future expenditures in relation to these arrangements and has not issued guarantees on behalf of these entities. The table also presents certain information with respect to the earn-in option (cumulative expenditures to date, expenditures necessary to obtain an initial minority ownership right and expenditures required to achieve the maximum ownership interest available under the agreement). Exploration expenditures made in respect of these earn-in arrangements, which are at the discretion of the Company and therefore

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exceed contractual obligations, are presented in Note 20. The Company funds exploration expenditures in excess of contractual requirements for the purpose of evaluating and investing in option agreements.

Project	Investment in Project Sponsor	Net Carrying Value of Project Entity	Cumulative Earn-In Expenditures as of December 31, 2022	Ownership percentage of project entity at December 31, 2022	Expenditures Required to Achieve Maximum Ownership Interest	Maximum Potential Ownership
Ivory Coast Project	\$ 4,799 <sup>(1)</sup>	—	Cdn \$20.8 million	30%	Cdn \$25 million	60%
South Voisey's Bay	\$ 309 <sup>(1)</sup>	—	Cdn \$4.2 million	0% <sup>(3)</sup>	Cdn \$ 7.7 million	65%
Hog Heaven	\$ 1,885 <sup>(2)</sup>	—	\$4.1 million	0% <sup>(4)</sup>	\$44.5 million	75%
Perseverance	\$ 274 <sup>(2)</sup>	—	Cdn \$5.7 million	25%	Cdn \$17.5 million	80%
Carolina	\$ —	—	\$1.3 million	0% <sup>(5)</sup>	\$26.0 million	85%

(1) Included in investments subject to significant influence (Note 7)

(2) Included in other investments

(3) The Company must incur Cdn \$7.7 million in earn-in expenditures to earn a 65% interest in the South Voisey's Bay project. There is no initial minority interest that can be earned by the Company.

(4) The Company must incur \$19.5 million in earn-in expenditures to earn an initial 51% interest in the Hog Heaven project.

(5) The Company must incur \$6.0 million in earn-in expenditures to earn an initial 51% interest in the Carolina project

**18. Non-controlling interests:**

The Company held a controlling interest in several entities that are not wholly-owned. The associated non-controlling interests and portion of assets and liabilities represented by these subsidiaries are shown below. The assets and liabilities of these entities are not readily accessible by the Company for general corporate purposes as distribution may require the consent of other shareholders.

	Kaizen	VRB	Cordoba	Other	Total
Balance at January 1, 2021	(600)	(244)	7,615	(61)	6,710
Non-controlling interests share of loss	(788)	(879)	(7,481)	(43)	(9,191)
Changes in non-controlling interests arising from changes in ownership interest	2,415	—	5,694	(1)	8,108
Other changes in non-controlling interests	45	—	176	33	254
Balance at December 31, 2021	1,072	(1,123)	6,004	(72)	5,881
Non-controlling interests share of loss	(617)	(1,376)	(8,536)	121	(10,408)
Changes in non-controlling interests arising from changes in ownership interest	—	—	69	—	69
Other changes in non-controlling interests	68	28	437	(3)	530
Balance at December 31, 2022	\$ 523	\$ (2,471)	\$ (2,026)	\$ 46	\$ (3,928)



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Assets and liabilities belonging to the Company's principal non-wholly owned subsidiaries as of December 31, 2022 are as follows:

	<b>Kaizen</b>	<b>VRB</b>	<b>Cordoba</b>	<b>Other</b>	<b>Total</b>
Ownership percentage at December 31, 2022:	82.7 %	90.0 %	63.2 %	94.3 %	
Total assets	3,565	16,643	24,441	5,322	49,971
Total liabilities	539	41,410	33,454	4,504	79,906
Net assets	3,026	(24,766)	(9,012)	818	(29,936)

VRB's liabilities as at December 31, 2022 include a loan payable to Ivanhoe Electric of \$11.2 million.

Each of the non-wholly owned subsidiaries do not have retained earnings as they carry an accumulated deficit. Net assets of non-wholly owned subsidiaries are restricted from being transferred to Ivanhoe Electric without the other shareholders' consent.

The Company and its wholly-owned subsidiaries do not guarantee the obligations of the non-wholly owned subsidiaries and, as such, the creditors of the non-wholly owned subsidiaries do not have recourse against the Company or its wholly owned subsidiaries. In addition, the Company is restricted from paying dividends from non-wholly owned subsidiaries without the other shareholders' consent.

During 2021, VRB raised capital through the issuance of convertible debt (Note 13(b)) resulting in VRB becoming a VIE. Except as disclosed above, the Company has not provided additional subordinated financial support to VRB as at December 31, 2022, although the Company is not precluded from doing so in the future. Ivanhoe Electric does not provide any guarantees or have any commitments to fund VRB. Other creditors of VRB do not have recourse against Ivanhoe Electric. Further information about VRB, including its impact on the Company's loss from operations, is presented as the Energy Storage segment in Note 24.

**19. Income taxes:**

Major components of the Company's income tax provision / (benefit) for the years ended December 31, 2022 and 2021 are as follows:

	<b>Year ended December 31,</b>	
	<b>2022</b>	<b>2021</b>
Current:		
U.S. Operations	\$ —	\$ —
Foreign	1,393	675
Total current income tax provision / (benefit)	1,393	675
Deferred:		
U.S. Operations	—	—
Foreign	(775)	(191)
Total deferred income tax provision / (benefit)	(775)	(191)
Total income tax provision / (benefit)	\$ 618	\$ 484

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Income (loss) from continuing operations before income taxes for the years ended December 31, 2022 and 2021 consists of the following:

	Year ended December 31,	
	2022	2021
U.S. Operations	\$ (108,909)	\$ (31,499)
Foreign	(50,694)	(36,528)
Total	<u>\$ (159,603)</u>	<u>\$ (68,027)</u>

The annual income tax expense (benefit) is different from the amount that would be provided by applying the statutory federal income tax rate to the Company's pretax (loss) income. The reasons for the difference are:

	Year ended December 31,	
	2022	2021
U.S. Federal tax rate	21 %	21 %
Expected income tax expense (benefit) at U.S. Federal tax rate	\$ (33,517)	\$ (14,286)
Reconciling items:		
Difference between statutory and foreign tax rate	(763)	(151)
Permanent differences	10,403	3,695
Change in valuation allowance	24,905	11,823
Difference in current versus future tax rates	—	(351)
Impact of changes in tax rates	—	(608)
Other	(410)	362
Income tax expense	<u>\$ 618</u>	<u>\$ 484</u>

The tax effects of temporary differences that give rise to significant portions of the deferred tax assets and deferred tax liabilities at December 31, 2022 and 2021 are presented below.

	As at December 31,	
	2022	2021
Deferred tax assets:		
Intangible assets	\$ 50	\$ 91
Exploration mineral interest	27,840	19,488
Net operating losses	37,730	22,498
Foreign capital losses	4,012	4,285
Capital loss carry-forward	1,282	—
Share issuance costs	132	202
Convertible debt	—	960
Other	137	97
Total gross deferred tax assets	71,183	47,621
Less: valuation allowance	(71,063)	(45,619)
Net deferred tax assets	120	2,002
Deferred tax liabilities:		
Exploration mineral interest	(3,686)	(6,303)
Property, plant and equipment	(322)	(1,081)
Total gross deferred tax liabilities	(4,008)	(7,384)
Net deferred tax liability	<u>\$ (3,888)</u>	<u>\$ (5,382)</u>

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The Company evaluated the positive and negative evidence available to determine the amount of valuation allowance required on its deferred tax assets. Due to the early stage of exploration, the Company has recognized a valuation allowance against deferred income tax assets in excess of those supported by the reversal of taxable temporary differences. As of December 31, 2022, a \$71.1 million valuation allowance has been provided. The changes in the valuation allowance for the years ended December 31, 2022 and 2021 are as follows:

	As at December 31,	
	2022	2021
Balance, beginning of year	\$ (45,619)	\$ (35,521)
Decrease due to foreign currency translation	(614)	1,614
(Increase) related to non-utilization of deferred tax assets due to uncertainty of recovery and (increase) related to non-utilization of net operating loss carryforwards	(24,905)	(11,823)
Decrease related to utilization and expiration of deferred tax assets, other	75	111
Balance, end of year	<u>\$ (71,063)</u>	<u>\$ (45,619)</u>

As of December 31, 2022, the Company has the following net operating loss carryforwards for income tax purposes:

Country	Losses	Expiry
U.S.A.	\$ 84,673	2036 to 2042
Canada	46,256	2030 to 2042
China	28,519	2026 to 2032
Colombia	1,184	2029 to 2032
Peru	104	Indefinite
Singapore	2,704	Indefinite

The Company's utilization of U.S. net operating loss carryforwards may be subject to annual limitations if there is a change in control as defined under Internal Revenue Code Section 382. As of December 31, 2022, no change in control has occurred in the Ivanhoe Electric group.

The Company file's income tax returns in the U.S. federal jurisdiction, various U.S. state and foreign jurisdictions.

The Company had no unrecognized income tax benefits as of December 31, 2022 or 2021. Due to the net operating loss carryover position coupled with the lack of any unrecognized tax benefits, the Company has not provided for any interest or penalties associated with any uncertain tax positions. If interest and penalties were to be assessed, the Company would charge interest to interest expense, and penalties to general and administrative expense. It is not anticipated that there will be any significant changes to unrecognized tax benefits within the next 12 months.

The Company has not recognized a deferred tax liability related to its investments in foreign subsidiaries that are essentially permanent in duration. It is not practicable to estimate the amount of deferred tax liability related to investments in these foreign subsidiaries.

**20. Related party transactions:**

Related parties include entities with common direct or indirect shareholders and/or directors. Parties are considered to be related if one party has the ability, directly or indirectly, to control the other party or exercise significant influence over the other party in making financial and operating decisions.

**The Parent**

The nature of the Company's related party relationship with the Parent is disclosed in Note 1.

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*Cost allocations*

Prior to completing the restructuring described in Note 1, the Parent incurred corporate and technical costs attributable to the Company and the Nimba Project. Accordingly, the consolidated and combined carve-out financial statements include costs allocations from the Parent, including executive oversight, occupancy, office overhead, accounting, tax, treasury, legal, information technology, human resources and mineral exploration. These allocations were made on the basis of direct usage. All such amounts were deemed incurred and settled by the Company in the period in which the costs were recorded and are included in net parent investment.

Allocated costs for the four months ended April 30, 2021 totaled \$1.3 million and are solely from the period prior to the restructuring. The allocated costs are primarily included in general and administrative expenses and exploration expenses in the consolidated and combined statements of loss.

Other related parties

The following table summarizes transactions between the Company and certain significant related parties.

	Balance outstanding as at December 31,		Transactions for the year ended December 31,	
	2022	2021	2022	2021
<b>Total Expenses</b>				
Global Mining (Note a)	1,383	993	13,372	6,776
Ivanhoe Capital Aviation (Note b)	83	—	1,000	1,417
I-Pulse (Note c)	—	—	213	—
HPX (Note d)	—	—	—	499
Total	<u>1,466</u>	<u>993</u>	<u>14,585</u>	<u>8,692</u>
<b>Advances</b>				
Global Mining (Note a)	1,987	1,855	—	—
<b>Deposit</b>				
I-Pulse (Note c)	7,128	—	—	—
<b>Loan</b>				
JCHX Mining Management Co., Ltd (Note e)	10,010	—	—	—
			Transactions for the year ended December 31,	
			2022	2021
<b>Expense classification</b>				
General and administrative expenses			6,232	5,454
Exploration expenses			8,353	3,238
			<u>14,585</u>	<u>8,692</u>

- (a) Global Mining Management Corp. (“Global Mining”) is a private company based in Vancouver, Canada, that provides administration, accounting, and other office services to the Parent and the Company on a cost-recovery basis. The Company held 7.1% of Global Mining’s outstanding common shares at December 31, 2022.

Transactions incurred with Global Mining include cost allocations from the Parent totaling \$645,000 from the period January 1, 2021 to April 30, 2021.

On April 30, 2021, the Contributed Assets received by Ivanhoe Electric included working capital advances to Global Mining totaling \$791,000 (Note 1). These advances were recognized on the contribution date.

- (b) Ivanhoe Capital Aviation (“ICA”) is an entity beneficially owned by the Company’s Executive Chairman. ICA provides use of its aircraft to the Company.

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- (c) I-Pulse Inc. ("I-Pulse") is a significant shareholder of the Company. On October 24, 2022 the Company entered into an agreement with I-Pulse, to purchase six Typhoon™ transmitters to be delivered in stages over approximately the next three years. The Company uses Typhoon™ to conduct geophysical electrical surveys on exploration targets. The total purchase price for the six Typhoon™ transmitters is \$12.4 million (12.6 million Euros). The agreement also includes annual maintenance costs of \$1.7 million (1.7 million Euros) per year. In October 2022, the Company made deposit payments totaling \$7.1 million (7.1 million Euros). The remaining payments will be made as each Typhoon™ transmitter system is delivered.

The Company has also reimbursed I-Pulse certain consulting expenses paid by I-Pulse on the Company's behalf.

- (d) HPX was the parent of the Company prior to the restructuring on April 30, 2021 (Note 1). Post restructuring, in 2021, there was reimbursement to HPX for certain costs paid by HPX on the Company's behalf.
- (e) JCHX Mining Management Co., Ltd ("JCHX") held 19.9% of Cordoba's issued and outstanding common stock as at December 31, 2022 (December 31, 2021 - 19.9%).

On December 27 2022, JCHX advanced a bridge loan of \$10 million to Cordoba. The bridge loan is for an 18-month term and bears interest at 12% per annum during the first 12 months of the term and 14% per annum during the remaining six months, which shall be calculated on the basis of a 365-day year. Upon closing the project financing transaction described in Note 26, all of the principal and interest outstanding on the bridge loan will be applied towards that transaction's first installment as a payment in kind.

In the event the bridge loan is not repaid, JCHX has the option to receive payment in kind equal to 20% of the total issued shares of CMH Colombia S.A.S. ("CMH"), a Colombian subsidiary of Cordoba.

**21. Net loss per share:**

Basic and diluted net loss per share attributable to common stockholders was calculated as follows:

	Year ended December 31,	
	2022	2021
Net loss attributable to common stockholders or parent	\$ 149,813	\$ 59,320
Weighted-average number of shares outstanding		
Basic and diluted	78,527,539	61,502,094
Basic and diluted net loss per share	\$ 1.91	\$ 0.96

For purposes of this calculation, convertible debt, and options to purchase common stock are considered common stock equivalents but have been excluded from the calculation of diluted net loss per share attributable to common stockholders as their effect is antidilutive. The amount of antidilutive shares excluded from the calculation as at December 31, 2022 was 7.9 million (December 31, 2021 - 25.4 million).

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**22. Fair value measurement:**

The following table provides the valuation hierarchy classification of assets and liabilities that are recorded at fair value and measured on a recurring basis in the combined balance sheets:

	December 31, 2022			December 31, 2021		
	Level 1	Level 2	Level 3	Level 1	Level 2	Level 3
<b>Financial assets:</b>						
Investments subject to significant influence	5,108	—	—	7,044	—	—
Other investments	2,220	—	—	1,802	—	—
Total financial assets	\$ 7,328	\$ —	\$ —	\$ 8,846	\$ —	\$ —
<b>Financial liabilities:</b>						
Ivanhoe Electric convertible notes	—	—	—	—	—	54,975
Deferred consideration payable	—	—	—	—	—	26,562
Total financial liabilities	\$ —	\$ —	\$ —	\$ —	\$ —	\$ 81,537

On June 30, 2022 the Ivanhoe Electric Series 1 and Series 2 Convertible Notes were converted into common stock of the Company (Note 13(a)) and the deferred consideration payable was settled (Note 8).

The following table provides a summary of the changes of the Company's Level 3 assets and liabilities that are not disclosed elsewhere.

	Deferred consideration payable
Balance at December 31, 2020	\$ —
Additions	26,625
Changes in fair value	(63)
Balance at December 31, 2021	26,562
Changes in fair value	2,049
Settlement	(28,611)
Balance at December 31, 2022	\$ —

**23. Financial risk management:**

The Company is exposed in varying degrees to credit, liquidity, and market risk through its use of financial instruments. The types of risk exposure and the way in which such exposures are managed are as follows:

(a) Credit risk:

The Company's principal financial assets are cash and cash equivalents and accounts receivable. The Company's credit risk is primarily attributable to its accounts receivable. The Company's maximum exposure to credit risk is approximately \$1.5 million. The Company regularly reviews its receivables and the economic conditions to determine whether an allowance for expected losses is necessary.

Cash at bank is held with credit worthy financial institutions.

The Company has no significant concentration of credit risk other than its accounts receivable and the Company's credit risk has not changed significantly during the years ended December 31, 2022 and 2021.

**24. Segment reporting:**

The Company's President & Chief Executive Officer and its Executive Chairman combine to form the Chief Operating Decision Maker ("CODM") of the Company. The CODM evaluates how the Company allocates resources, assesses performance and makes strategic and operational decisions. Based upon such evaluation, the Company has determined



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that it has three reportable segments. The Company's reportable segments are critical metals, data processing and energy storage.

Critical metals is focused on mineral project exploration and development with a focus on identifying and developing mineral projects, and ultimately mines, associated with the metals necessary for electrification.

The data processing segment provides data analytics, geophysical modeling and artificial intelligence services for the mineral, oil & gas and water exploration industries. The energy storage segment develops, manufactures and installs vanadium flow batteries for grid-scale energy storage.

Segment information for the periods presented is as follows:

	As at and for the year ended December 31, 2022			
	Critical Metals	Data Processing	Energy Storage	Total
Revenue	\$ —	\$ 7,729	\$ 711	\$ 8,440
Intersegment revenues	—	323	—	323
Loss (income) from operations	124,932	(3,090)	10,323	132,165
Depreciation and amortization	814	2,868	529	4,211
Segment assets	238,521	5,322	16,643	260,486
Expenditures for segment assets	43,721	6	684	44,411
Investments subject to significant influence	5,998	—	—	5,998

	As at and for the year ended December 31, 2021			
	Critical Metals	Data Processing	Energy Storage	Total
Revenue	\$ —	\$ 4,512	\$ 140	\$ 4,652
Intersegment revenues	—	112	—	112
Loss from operations	53,188	633	6,928	60,749
Depreciation and amortization	826	2,865	559	4,250
Segment Assets	119,738	6,152	27,641	153,531
Expenditures for segment assets	14,832	8	341	15,181
Investments subject to significant influence	7,701	—	—	7,701

The following tables illustrate the geographic makeup of the Company's revenues and long-lived assets.

Revenue	Year ended December 31,	
	2022	2021
Canada	\$ 7,729	\$ 4,512
China	711	140
Other	—	—
Total	\$ 8,440	\$ 4,652

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Revenues are attributed to countries based on the location in which the sale originated.

<b>Long-lived assets</b>	<b>As at December 31,</b>	
	<b>2022</b>	<b>2021</b>
U.S.A	\$ 69,655	\$ 55,781
Colombia	15,022	14,604
Peru	2,571	2,558
China	1,545	764
Other	191	147
Total	<u>\$ 88,984</u>	<u>\$ 73,854</u>

Long-lived assets comprise the Company's exploration mineral interests (excluding a mineral royalty) and property, plant and equipment.

Long-lived assets reconcile to segment assets and the balance sheet as follows:

	<b>As at December 31,</b>	
	<b>2022</b>	<b>2021</b>
Total long-lived assets	\$ 88,984	\$ 73,854
Total current assets	151,031	58,265
Mineral royalty	1,708	1,708
Investments subject to significant influence	5,998	7,701
Other investments	2,220	1,802
Intangible assets	1,249	4,340
Other non-current assets	9,296	5,861
Total assets and segment assets	<u>\$ 260,486</u>	<u>\$ 153,531</u>

**25. Commitments and contingencies:**

The Company has entered into a contractual arrangement to purchase six Typhoon™ transmitters from I-Pulse (Note 20).

In the ordinary course of business, the Company may be involved in various legal proceedings and subject to claims that arise. Although the results of litigation and claims are inherently unpredictable and uncertain, the Company is not currently a party to any legal proceedings the outcome of which, if determined adversely to the Company, are believed to, either individually or taken together, have a material adverse effect on the Company's business, financial condition or results of operations.

**26. Subsequent events:**

(a) Strategic arrangement for the joint-development of the Alacran project

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, 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. At the closing of the transaction, which is expected to occur before the end of the second quarter of 2023, \$40 million will be payable in cash as a first installment. A second installment of \$40 million is payable in cash upon 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, but in no event will such second installment be paid later than the second anniversary of the closing of the transaction. 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

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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.

In December 2022, JCHX advanced a bridge loan of \$10 million in cash to Cordoba. The bridge loan is for an 18-month term and bears interest at 12% per annum during the first 12 months of the term and 14% per annum during the remaining six months, which shall be calculated on the basis of a 365-day year. Upon closing of the transaction, the entire balance owing under the bridge loan and accrued interest will be applied towards the first installment payment as a payment in kind.

The closing of the transaction is subject to customary conditions and Cordoba must receive approval from the TSX Venture Exchange and approval of shareholders (excluding JCHX and Ivanhoe Electric). JCHX must receive approval from its board of directors, shareholders, China's State Administration of Foreign Exchange, and Beijing Municipal Bureau of Commerce. Cordoba received the approval of its shareholders (excluding JCHX and Ivanhoe Electric) on February 8, 2023.

**(b) Heads of Terms agreement**

On January 11, 2023, the Company entered into a binding Heads of Terms (the "Agreement") with Saudi Arabian Mining Company Ma'aden ("Ma'aden"). The Agreement provides the binding framework of key terms for a strategic investment by Ma'aden of an aggregate of \$126.4 million in newly issued shares of common stock of the Company and the concurrent establishment of a 50/50 exploration joint venture in the Kingdom of Saudi Arabia.

Pursuant to the terms of the Agreement, the Company will agree to issue and sell to Ma'aden approximately 10.2 million shares of common stock at a purchase price of \$12.38 per share for aggregate gross proceeds of \$126.4 million in a private placement. The Company will contribute \$66.4 million of the proceeds from the issuance and sale of the Shares to fund the Joint Venture and will retain \$60 million of the gross proceeds to advance its United States mineral projects, as well as for working capital and general corporate purposes

After the issuance and sale of the Shares, Ma'aden will hold 9.9% of the Company's common stock. The Company also will grant Ma'aden a 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 the Company in the future.

**(c) White Hill Project**

On February 22, 2023, we entered into an agreement with Exiro Minerals USA Corp. ("Exiro") which gives the Company the right to earn an 80% interest in the White Hill Project located in the Gillis Range, Mineral County, Nevada, by incurring \$10.0 million of expenditures and making payments to Exiro totaling \$5.0 million (\$3.6 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.

## **Item 9. Changes in and Disagreements With Accountants on Accounting and Financial Disclosures**

None

### **Item 9A. Controls and Procedures**

#### **Evaluation of 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 this evaluation, our Chief Executive Officer and our Chief Financial Officer have 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**

This Annual Report does not include a report of management’s assessment regarding internal control over financial reporting due to a transition period established by rules of the SEC for newly public companies.

#### **Attestation Report of the Independent Registered Public Accounting Firm**

This Annual Report does not include an attestation report of our registered public accounting firm regarding internal control over financial reporting due to an exemption established by the JOBS Act for “emerging growth companies” and because we qualify as a “non-accelerated filer” (i.e., we do not qualify as either an “accelerated filer” or a “large accelerated filer” as defined in Rule 12b-2 under the Exchange Act).

#### **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, 2022 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

### **Item 9B. Other Information**

None

### **Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections**

Not applicable.

### Part III

#### Item 10. Directors, Executive Officers and Corporate Governance

The following table sets forth information regarding our executive officers and significant employees as of March 14, 2023.

Name	Age	Position
Robert Friedland	72	Executive Chairman of the Board of Directors
Taylor Melvin	53	Chief Executive Officer, President and Director
Jordan Neeser	40	Chief Financial Officer
Quentin Markin	50	Executive Vice President, Business Development and Strategy Execution
Eric Finlayson	62	Chief of Global Exploration
Catherine Barone	47	Senior Vice President, Finance
Charles Forster	75	Senior Vice President of Exploration
Mark Gibson	54	Chief Operating Officer
Graham Boyd	37	Senior Vice President, U.S. Projects
Glen Kuntz	55	Senior Vice President, Mine Development
Evan Young	38	Vice President, Corporate Development
Cassandra Joseph	51	Vice President, General Counsel and Corporate Secretary
Stephani Terhorst	44	Vice President, Human Resources

#### Biographical Information

**Robert Friedland** has served as our Executive Chairman of our Board of Directors since November 21, 2022. Prior to that time, Mr. Friedland was our Chief Executive Officer since July 16, 2020 and the Chairman of our Board of Directors since April 30, 2021. Mr. Friedland has over 25 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's experience is extensive. Mr. Friedland has been the Director, President and Chief Executive Officer of Ivanhoe Capital Corporation ("Ivanhoe Capital") since July 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. Under Mr. Friedland's tenure, Ivanhoe Capital has invested in a diverse portfolio of businesses. Additionally, Mr. Friedland has been the Chief Executive Officer of HPX since December 2015. HPX is 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 a Director, since December 2016, and Chairman, since June 2018, of VRB. 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 serving as a Co-Chairman and Director of Sunrise Energy Metals Limited (formerly Clean TeQ Holdings Limited) since September 2016, a Director of I-Pulse since April 2008 and a Director of Kietta SAS since November 2009. 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. He continues to serve as a director of SES. 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 21, 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 most recently Vice President, Corporate Development for Freeport (NYSE: FCX), a leading international mining company focused on copper, headquartered in Arizona. 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.

**Jordan Neeser** has served as our Chief Financial Officer since November 21, 2022. Mr. Neeser is a finance executive with 18 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 since March

2021, which 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 C\$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 C\$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.

**Eric Finlayson** has served as our Chief of Global Exploration since November 21, 2022. Prior to that time, Mr. Finlayson was our President since July, 2020. Mr. Finlayson is a geologist with almost 40 years of global multi-commodity experience. Prior to joining the Company, Mr. Finlayson was a Senior Advisor at HPX from 2013 until December 2015 when he was appointed President of HPX. Prior to joining HPX, Mr. Finlayson spent nearly 25 years in various positions with Rio Tinto. In 1989, Mr. Finlayson joined Rio Tinto as project geologist responsible for copper and gold exploration in the Papua New Guinea highlands. In 1993, he became regional exploration manager for Canada and then transferred to London in 2000 as the personal assistant to the Head of Exploration. In January 2002, he moved to Perth to assume the role of Rio Tinto's Director of Exploration for Australasia and in January of 2007 was appointed Global Head of Exploration for Rio Tinto based in London. In July 2011, he was appointed CEO of Rio Tinto Coal Mozambique following Rio Tinto's takeover of Riversdale Mining. Mr. Finlayson is also a director of VRB, Kaizen (TSX-V: KZD), Sama and Sunrise Energy Metals Limited (ASX: SRL), and was a director of Cordoba from 2015 to 2021, as well as serving as its President and CEO from April 2019 to April 2021. Mr. Finlayson holds a degree in Applied Geology from the University of Strathclyde in Glasgow.

**Catherine Barone** has served as our Senior Vice President — Finance since November 21, 2022 and prior to that was our Interim Chief Financial Officer since April, 2021. Ms. Barone was appointed CFO of HPX in 2016 after serving as Vice President, Finance since 2015. From 2002 to 2014, she held a series of senior finance positions at Ivanhoe Mines Ltd. (now Turquoise Hill Resources Ltd.) including Vice President, Finance. Ms. Barone is a member of the board of CGI, as well as the Company's directly-held Canadian subsidiaries. Ms. Barone holds a Bachelor of Commerce from the University of Western Australia. Ms. Barone is a Chartered Accountant (Australia) and a Fellow of the Financial Services Institute of Australasia. Ms. Barone has over 25 years of finance experience focused on the mining industry.

**Charles Forster** has served as our Senior Vice President, Exploration since April, 2021 and Vice President, Exploration for Cordoba since April 1, 2019. Mr. Forster is a Professional Geoscientist (P.Geo.) with more than 45 years of diversified mineral exploration experience in Canada, United States, Sub-Saharan Africa, Portugal, the PRC, and Mongolia. Mr. Forster was Vice President of Exploration for HPX since March 2016, and is a director of all the Company's U.S. subsidiaries. Prior to joining HPX, Mr. Forster worked six years in Southern Africa as Head of Exploration for Eurasian Natural Resource Corporation focused on Congolese copper, cobalt exploration and mine development projects. He was formerly the Senior Vice President of Exploration at Oyu Tolgoi in Mongolia for Ivanhoe Mines (now Turquoise Hill Resources) from early 2001 to June 2008. During this time, he led a team of multi-national and Mongolian geologists in the discovery and delineation of the world-class Oyu Tolgoi copper-gold porphyry deposits. The discovery of the large, high-grade Hugo Dummett underground deposit at Oyu Tolgoi was subsequently recognized by the Prospectors and Developers Association of Canada, which in 2004 named Mr. Forster a co-recipient of the inaugural Thayer Lindsley Medal awarded for the International Discovery of the Year. Mr. Forster holds a Bachelor of Science degree from the University of British Columbia and is a Registered Professional Geoscientist in the Province of British Columbia.

**Mark Gibson** has served as our Chief Operating Officer since April, 2021 and as the Chief Operating Officer of Kaizen since May 2016 and Chief Operating Officer of Cordoba since August 2017. Mr. Gibson has more than 32 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 of Fjordland since January 2021 and CGI 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 P.Geo. license, 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 a Pr.Sci.Nat (Professional Natural Scientist) from the South African Council for Natural Scientific Professions.

**Graham Boyd** has served as our Senior Vice President — U.S. Projects since November 21, 2022 and prior to that was our Vice President, U.S. Projects since June, 2021. Mr. Boyd is a Geologist with over 16 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 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, one of our subsidiaries, effective April 2022. Mr. Kuntz is a Professional Geologist and mining executive with over 30 years of experience in exploration, project development, open pit and underground mining operations and business development 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. Over the past ten years, he has managed over 200 technical studies on various projects and mines around the world. Mr. Kuntz holds a Bachelor of Science in Geology from the University of Manitoba.

**Evan Young** has served as our Vice President, Corporate Development since January 2022. Mr. Young is a mining and finance professional with over 15 years of experience in various aspects of the capital markets. Mr. Young joined the Ivanhoe group in 2017, with an initial focus on building the North American investor relations programs for CleanTeQ Holdings Ltd, Cordoba Minerals Corp. and Kaizen Discovery Inc. Since then, his role within the group has evolved, and he played an important role in the completion of the private rounds of financings for Ivanhoe Electric, I-Pulse and HPX. Prior to joining the Company, Mr. Young served as the Director, Investor Relations for Primero Mining Corp., a NYSE and TSX dual-listed company with gold mining operations in Mexico and Canada. Previously, Mr. Young worked in equity research at the boutique Canadian brokerage Haywood Securities Inc. and as an Investment Banking Analyst at BMO Capital Markets in the Metals and Mining group. Mr. Young has a Master of Science with Distinction and a Diploma of the Imperial College in Metals and Energy Finance from Imperial College London. In this collaborative program between the Business School and the Royal School of Mines, he stood first among all students in the program and achieved academic excellence for his thesis titled: Carbon Trading and its Associations with the Mining Industry. Mr. Young also holds a Bachelor of Science in Mining Engineering from Queen's University.

**Cassandra Joseph** has been the Company's Vice President, 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 in Dallas, Texas. 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. 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 concerning our directors, our Code of Conduct and other corporate governance information is contained under the caption "Proposal 1: Election of Directors" and "Board of Directors and Corporate Governance" in our Proxy Statement for our 2023 Annual Meeting of Stockholders (the "2023 Proxy Statement"), which will be filed with the SEC not later than 120 days after the end of the fiscal year. Such information is incorporated herein by reference.

## Item 11. Executive Compensation

The information required by this item is contained under the caption “Executive and Director Compensation” in the 2023 Proxy Statement, which will be filed with the SEC not later than 120 days after the end of the fiscal year. Such information is incorporated herein by reference.

## Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

Information relating to the ownership of equity securities by certain beneficial owners and management is contained under the caption “Ownership of the Company” in the 2023 Proxy Statement, which will be filed with the SEC not later than 120 days after the end of the fiscal year. Such information is incorporated herein by reference.

### Equity Compensation Plan Information

Information about our equity compensation plans at December 31, 2022 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	3,540,313 <sup>(2)</sup>	\$11.75	1,217,304 <sup>(3)</sup>
Equity compensation plans not approved by stockholders	4,310,655	\$2.49	0
Total	7,850,968	\$6.11	1,217,304

(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 2,760,509 shares of common stock issuable upon the exercise of stock options, 750,000 shares of common stock deliverable upon settlement of RSUs, and 29,804 shares of common stock deliverable upon settlement of DSUs.

(3) Consists of shares issuable under outstanding options under the LTIP as of December 31, 2022. 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.

### **Item 13. Certain Relationships and Related Transactions, and Director Independence**

The information required by this item is contained under the caption “Certain Relationships and Related Party Transactions” in the 2023 Proxy Statement, which will be filed with the SEC not later than 120 days after the end of the fiscal year. Such information is incorporated herein by reference.

### **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 contained in the 2023 Proxy Statement, which will be filed with the SEC no later than 120 days after the end of the fiscal year and is incorporated herein by reference.

## 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="#">4.6</a>	Registration Rights Agreement dated as of November 10, 2021, by and among the Registrant and Central Arizona Resources, LLC	S-1	333-265175	4.8	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>	Transitions Services Agreement dated as of April 30, 2021 between High Power Exploration Inc. and the Registrant	S-1	333-265175	10.2	May 24, 2022	
<a href="#">10.3</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="#">10.4</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="#">10.5</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="#">10.6</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="#">10.7</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="#">10.8</a>	Surface Use Agreement, dated August 3, 2021, by and between Legends Property, LLC and Central Arizona Resources, LLC	S-1	333-265175	10.8	May 24, 2022	

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<a href="#"><u>10.9</u></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="#"><u>10.10#</u></a>	Purchase and Sale Agreement dated as of October 19, 2017	S-1	333-265175	10.1	June 21, 2022
<a href="#"><u>10.11#</u></a>	Purchase and Sale Agreement dated as of October 4, 2018	S-1	333-265175	10.11	June 21, 2022
<a href="#"><u>10.12#</u></a>	Purchase and Sale Agreement dated as of October 4, 2018	S-1	333-265175	10.12	June 21, 2022
<a href="#"><u>10.13#</u></a>	Purchase and Sale Agreement dated as of October 4, 2018	S-1	333-265175	10.13	June 21, 2022
<a href="#"><u>10.14#</u></a>	Purchase and Sale Agreement dated as of June 14, 2019	S-1	333-265175	10.14	June 21, 2022
<a href="#"><u>10.15</u></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="#"><u>10.16=</u></a>	Ivanhoe Electric Inc. Equity Incentive Plan	S-1	333-265175	10.15	May 24, 2022
<a href="#"><u>10.17=</u></a>	Long Term Incentive Plan	S-1	333-265175	10.16	June 21, 2022
<a href="#"><u>10.18=</u></a>	Employment Agreement dated as of June 20, 2018 between Global Mining Management Corp. and Eric Finlayson	S-1	333-265175	10.17	May 24, 2022
<a href="#"><u>10.19=</u></a>	Employment Agreement dated as of November 1, 2013 and amended as of January 1, 2017 between Global Mining Management Corp. and Graham Boyd	S-1	333-265175	10.18	May 24, 2022
<a href="#"><u>10.20</u></a>	Form of Indemnification Agreement	S-1	333-265175	10.19	June 21, 2022
<a href="#"><u>10.21 =</u></a>	Employment Agreement between the Ivanhoe Electric Inc. and Taylor Melvin	10-Q	001-41436	10.1	November 14, 2022
<a href="#"><u>10.22=</u></a>	Employment Agreement between the Ivanhoe Electric Inc. and Quentin Markin	8-K	001-41436	10.1	November 21, 2022
<a href="#"><u>10.23=</u></a>	Employment Agreement between Ivanhoe Electric Inc. and Jordan Neeser	8-K	001-41436	10.2	November 21, 2022
<a href="#"><u>10.24=</u></a>	Form of Stock Option Agreement (Employees) pursuant to the Ivanhoe Electric, Inc. 2022 Long Term Incentive Plan				*
<a href="#"><u>10.25=</u></a>	Form of Stock Option Agreement (CEO) pursuant to the Ivanhoe Electric, Inc. 2022 Long Term Incentive Plan				*
<a href="#"><u>10.26=</u></a>	Form of Stock Option Agreement (Executive, 4-year vesting) pursuant to the Ivanhoe Electric, Inc. 2022 Long Term Incentive Plan				*
<a href="#"><u>10.27=</u></a>	Form of Stock Option Agreement (Executive, 3-year vesting) pursuant to the Ivanhoe Electric, Inc. 2022 Long Term Incentive Plan				*
<a href="#"><u>10.28=</u></a>	Form of Restricted Stock Unit Award Agreement (4-year vesting) pursuant to the Ivanhoe Electric, Inc. 2022 Long Term Incentive Plan				*
<a href="#"><u>10.29=</u></a>	Form of Restricted Stock Unit Award Agreement (3-year vesting) pursuant to the Ivanhoe Electric, Inc. 2022 Long Term Incentive Plan				*
<a href="#"><u>10.30=</u></a>	Form of Non-Employee Director Deferred Stock Unit Award Agreement (3-year grant)				*
<a href="#"><u>10.31=</u></a>	Form of Non-Employee Director Deferred Stock Unit Award Agreement (annual grant)				*
<a href="#"><u>14.1</u></a>	Code of Ethics				*
<a href="#"><u>21.1</u></a>	Subsidiaries of the Registrant				*
<a href="#"><u>23.1</u></a>	Consent of Deloitte LLP				*
<a href="#"><u>23.2</u></a>	Qualified Person Consent Nordmin for report titled "Technical Report Summary on the Santa Cruz Project, Arizona, USA" dated February 14, 2023, effective date December 31, 2022				*
<a href="#"><u>23.3</u></a>	Qualified Person Consent Met Engineering for report titled "Technical Report Summary on the Santa Cruz Project, Arizona, USA" dated February 14, 2023, effective date December 31, 2022				*
<a href="#"><u>23.4</u></a>	Qualified Person Consent SRK for report titled "SEC Technical Report Summary, Exploration Results Report, Tintic Project, Utah, U.S.A." dated November 1, 2021				*
<a href="#"><u>23.5</u></a>	Qualified Person Consent Kuntz NI 43-101 Technical Report titled "NI 43-101 Technical Report and Prefeasibility Study, San Matias Copper-Gold-Silver Project, Colombia" with an effective date of January 11, 2022				*

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<a href="#">23.6</a>	Qualified Person Consent Robinson NI 43-101 Technical Report titled “NI 43-101 Technical Report and Prefeasibility Study, San Matías Copper-Gold-Silver Project, Columbia” with an effective date of January 11, 2022	*
<a href="#">23.7</a>	Qualified Person Consent Boyko NI 43-101 Technical Report titled “NI 43-101 Technical Report and Prefeasibility Study, San Matías Copper-Gold-Silver Project, Columbia” with an effective date of January 11, 2022	*
<a href="#">23.8</a>	Qualified Person Consent Pumphrey NI 43-101 Technical Report titled “NI 43-101 Technical Report and Prefeasibility Study, San Matías Copper-Gold-Silver Project, Columbia” with an effective date of January 11, 2022	*
<a href="#">23.9</a>	Qualified Person Consent Harkonen NI 43-101 Technical Report titled “NI 43-101 Technical Report and Prefeasibility Study, San Matías Copper-Gold-Silver Project, Columbia” with an effective date of January 11, 2022	*
<a href="#">23.10</a>	Qualified Person Consent Willilamson NI 43-101 Technical Report titled “NI 43-101 Technical Report and Prefeasibility Study, San Matías Copper-Gold-Silver Project, Colombia” with an effective date of January 11, 2022	*
<a href="#">23.11</a>	Qualified Person Consent Cepuritis NI 43-101 Technical Report titled “NI 43-101 Technical Report and Prefeasibility Study, San Matías Copper-Gold-Silver Project, Colombia” with an effective date of January 11, 2022	*
<a href="#">23.12</a>	Qualified Person Consent Muir NI 43-101 Technical Report titled “NI 43-101 TECHNICAL REPORT AND PREFEASIBILITY STUDY, SAN MATÍAS COPPER-GOLD-SILVER PROJECT, COLOMBIA” with an effective date of January 11, 2022	*
<a href="#">23.13</a>	Qualified Person Consent Martin NI 43-101 Technical Report titled “NI 43-101 Technical Report and Prefeasibility Study, San Matias Copper-Gold-Silver Project, Colombia” with an effective date of January 11, 2022	*
<a href="#">23.14</a>	Qualified Person Consent Liskovych NI 43-101 Technical Report titled “NI 43-101 Technical Report – Preliminary Economic Assessment Samapleu Project” May 22, 2019	*
<a href="#">23.15</a>	Qualified Person Consent Ibrango NI 43-101 Technical Report titled “ Preliminary Economic Assessment – Samapleu Project” with an effective date of May 22 2019	*
<a href="#">23.16</a>	Qualified Person Consent Singh NI 43-101 Technical Report titled “ Preliminary Economic Assessment – Samapleu Project” with an effective date of May 22 2019	*
<a href="#">23.17</a>	Qualified Person Consent Gagnon NI 43-101 Technical Report titled “ Preliminary Economic Assessment – Samapleu Project” with an effective date of May 22 2019	*
<a href="#">23.18</a>	Qualified Person Consent Cunningham NI 43-101 Technical Report titled “Preliminary Economic Assessment – Samapleu Project” with an effective date of May 22, 2019	*
<a href="#">23.19</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="#">23.20</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="#">31.1</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="#">31.2</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.	*
32.1+	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	*
32.2+	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.	*



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<a href="#">96.1</a>	Technical Report Summary on the Santa Cruz Project, Arizona, U.S.A., prepared by Nordmin Engineering Ltd and Met Engineering, with an effective date of December 31, 2022	8-K	333-265175	96.1	February 14, 2023	
<a href="#">96.2</a>	SEC Technical Report Summary, Exploration Results Report, Tintic Project Utah, U.S.A., prepared by SRK Consulting (U.S.) Inc., with an effective date of May 5, 2021	S-1	333-265175	96.2	May 24, 2022	
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.

= 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: March 14, 2023

**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.

<b>Signature</b>	<b>Title</b>	<b>Date</b>
<u>/s/ Robert Friedland</u> Robert Friedland	Executive Chairman of the Board of Directors	March 14, 2023
<u>/s/ Taylor Melvin</u> Taylor Melvin	Chief Executive Officer, President and Director ( <i>Principal Executive Officer</i> )	March 14, 2023
<u>/s/ Jordan Neeser</u> Jordan Neeser	Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	March 14, 2023
<u>/s/ Francis Fannon</u> Francis Fannon	Director	March 14, 2023
<u>/s/ Russell Ball</u> Russell Ball	Director	March 14, 2023
<u>/s/ Hirofumi Katase</u> Hirofumi Katase	Director	March 14, 2023
<u>/s/ Victoire de Margerie</u> Victoire de Margerie	Director	March 14, 2023
<u>/s/ Oskar Lewnowski</u> Oskar Lewnowski	Director	March 14, 2023
<u>/s/ Priya Patil</u> Priya Patil	Director	March 14, 2023