



# RE-INVENTING MINING FOR THE ELECTRIFICATION OF EVERYTHING

PDAC March 3 - 6, 2024



# Ivanhoe Electric – US Electric Metals Exploration Company with Significant Technology Platform

- ⚡ Advancing the high-grade underground Santa Cruz Copper Project in Arizona
- ⚡ Proprietary exploration and energy storage technologies
- ⚡ Experienced exploration team focused on portfolio of US electric metals projects
- ⚡ Operator of 50-50 exploration joint venture with Saudi Arabian Mining Company, Ma'aden, on expansive underexplored lands on the Arabian Shield
- ⚡ Strong balance sheet provides liquidity to advance portfolio of high-quality projects
- ⚡ Founded by Executive Chairman, Robert Friedland
- ⚡ Experienced executive management team
- ⚡ Well-positioned to benefit from clean energy transition and strong copper market fundamentals



# Experienced Executive Management Team



**Robert Friedland**  
Founder, Executive Chairman



**Taylor Melvin**  
President and  
Chief Executive Officer



**Jordan Neeser**  
Chief Financial Officer



**Quentin Markin**  
EVP, Business Development  
and Strategy Execution



**Glen Kuntz**  
SVP, Mine Development



**Graham Boyd**  
SVP, Exploration



**Cassandra Joseph**  
General Counsel and  
Corporate Secretary



## PDAC 2023

- ⚡ Santa Cruz Resource Update
- ⚡ Ma'aden JV Announced

## Major Achievements and Milestones

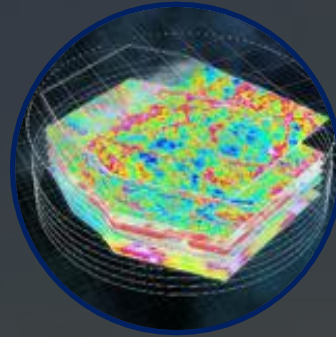
- ⚡ Acquired Santa Cruz Land
- ⚡ Closed and Funded Ma'aden JV
- ⚡ Completed ~84k Meters of Drilling at Santa Cruz Project
- ⚡ Published Santa Cruz Initial Assessment
- ⚡ Raised ~\$200 Million in Follow-on Common Stock Offering, Including Ma'aden Top-up
- ⚡ Successful Drill Results at Santa Cruz – Verde Domain and Texaco Ridge Sulfides
- ⚡ Commenced Typhoon™ Survey in Saudi Arabia, Identifying Initial Drill Targets
- ⚡ Advanced Exploration Drilling at US Projects

## PDAC 2024+

- ⚡ Entered 2024 with Strong Operational Momentum and Financial Strength
- ⚡ Future Surveys and Drilling in Saudi Arabia
- ⚡ Advancing Santa Cruz PFS
- ⚡ Exploration Drilling in US
- ⚡ Advancing VRB US Business Plan



# Proprietary Technology Platforms – Typhoon™, CGI, & VRB



## Typhoon™

- ⚡ Accurate and powerful proprietary geophysical survey technology based on I-Pulse technology
- ⚡ Successfully used to accelerate the exploration process to lower costs
- ⚡ Potential to discover deposits otherwise thought to be undetectable

## Computational Geosciences Inc. (CGI)

- ⚡ Advanced data analytics, geophysical modeling and artificial intelligence for water, oil and minerals discoveries
- ⚡ Only product that can process the full spectrum of geophysical datasets produced by the Typhoon™ system into 3D images

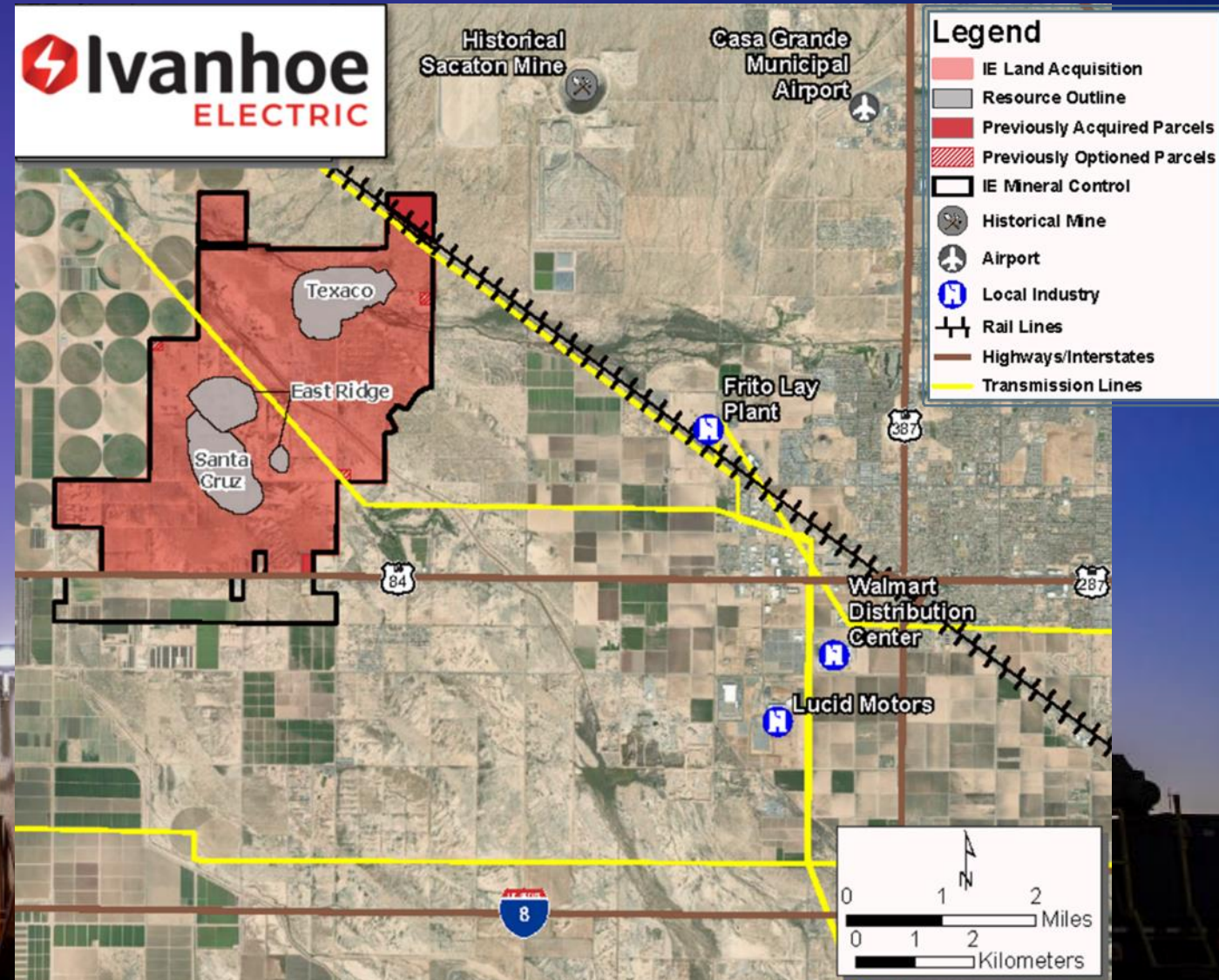
## VRB ENERGY

- ⚡ Proven grid-scale proprietary battery technology
- ⚡ Low-cost ion-exchange membrane, long-life electrolyte formulation and innovative flow cell design
- ⚡ Proven commercial-scale product with over 500 MWh installed or in development



# Santa Cruz Copper Project High-Grade Underground Project on Private Land in Arizona

- ⚡ 5,975 acres of private land encompassing the entire project
- ⚡ Acquired land includes associated water rights
- ⚡ Option to acquire all mineral titles contiguous with surface land
- ⚡ Excellent access to nearby rail, interstate highways and electric transmission lines



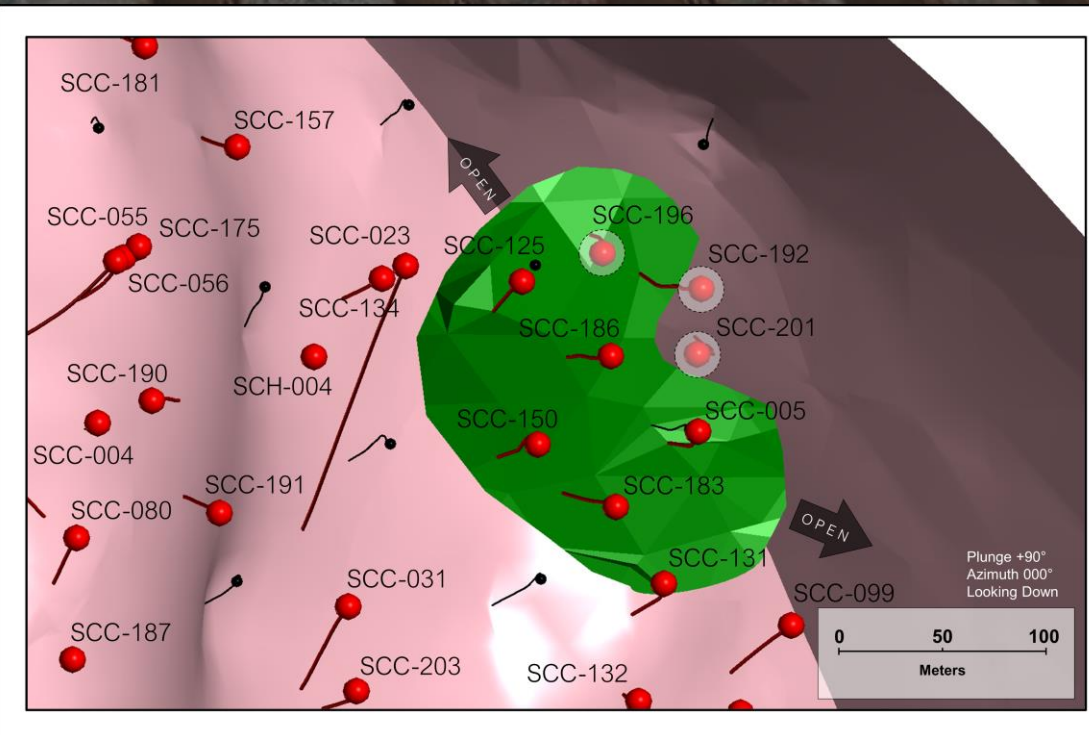


- ⚡ IA focuses on 5.9 Mt / year underground copper mine with small surface footprint
  - IA only incorporates high-grade exotic, oxide and enriched domains contained in Santa Cruz and East Ridge Deposits
- ⚡ Estimated copper production of 1.6 Mt over 20-year mine life (“LOM”)
  - ~1.0 Mt pure copper cathode via onsite SX/EW
  - ~0.6 Mt copper in concentrate that is 48% copper by weight
- ⚡ Initial project capital estimated at \$1.15 BN, \$980 MM in LOM sustaining capital
- ⚡ Low estimated capital intensity of ~\$14k / tonne annual copper production
- ⚡ Estimated LOM C1 cash costs of \$1.36/lb Cu
- ⚡ After-tax NPV<sub>8%</sub> of \$1.32 BN and IRR of 23.0% at \$3.80/lb Cu
- ⚡ IA contemplates 70% renewable energy, resulting in low estimated Scope 1 and 2 emissions of 0.49 t CO<sub>2</sub>e/t Cu produced



# Santa Cruz Verde Domain – High-Grade Oxide Copper

- ⚡ The Verde Domain has higher copper grades and lower water flow rates compared to previous modeling within the Initial Assessment
- ⚡ Provides upside potential to the project economics presented in the IA

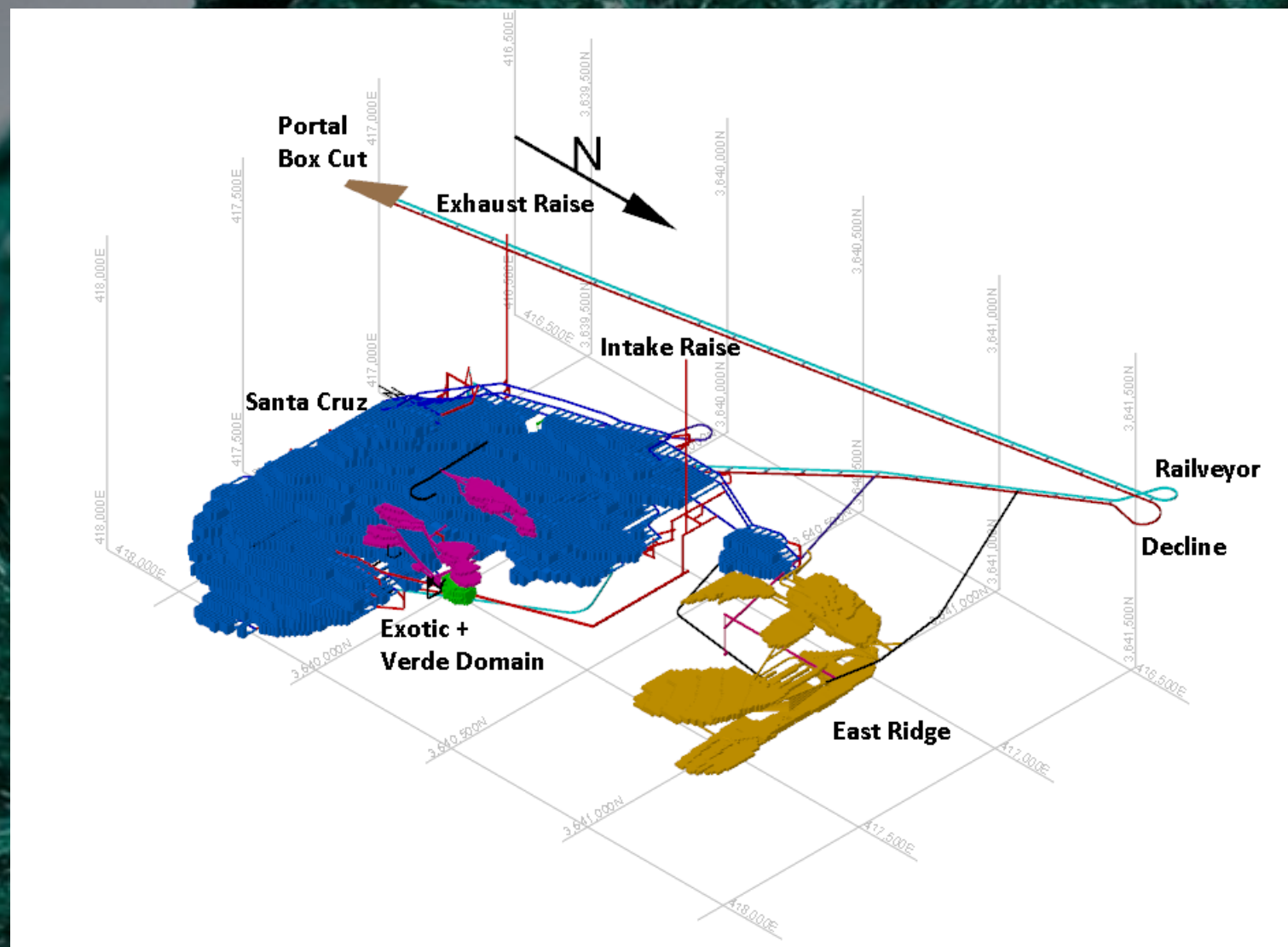


### LEGEND

Geology		Mineral Resource	
	Bedrock Interface Surface		Verde Domain
Drill Holes & Traces		Assays	
	Historical Drill Hole Collar		Pending Assays
	Drill Hole Trace		
	Ivanhoe Electric Drill Hole Collar		
	Drill Hole Trace		



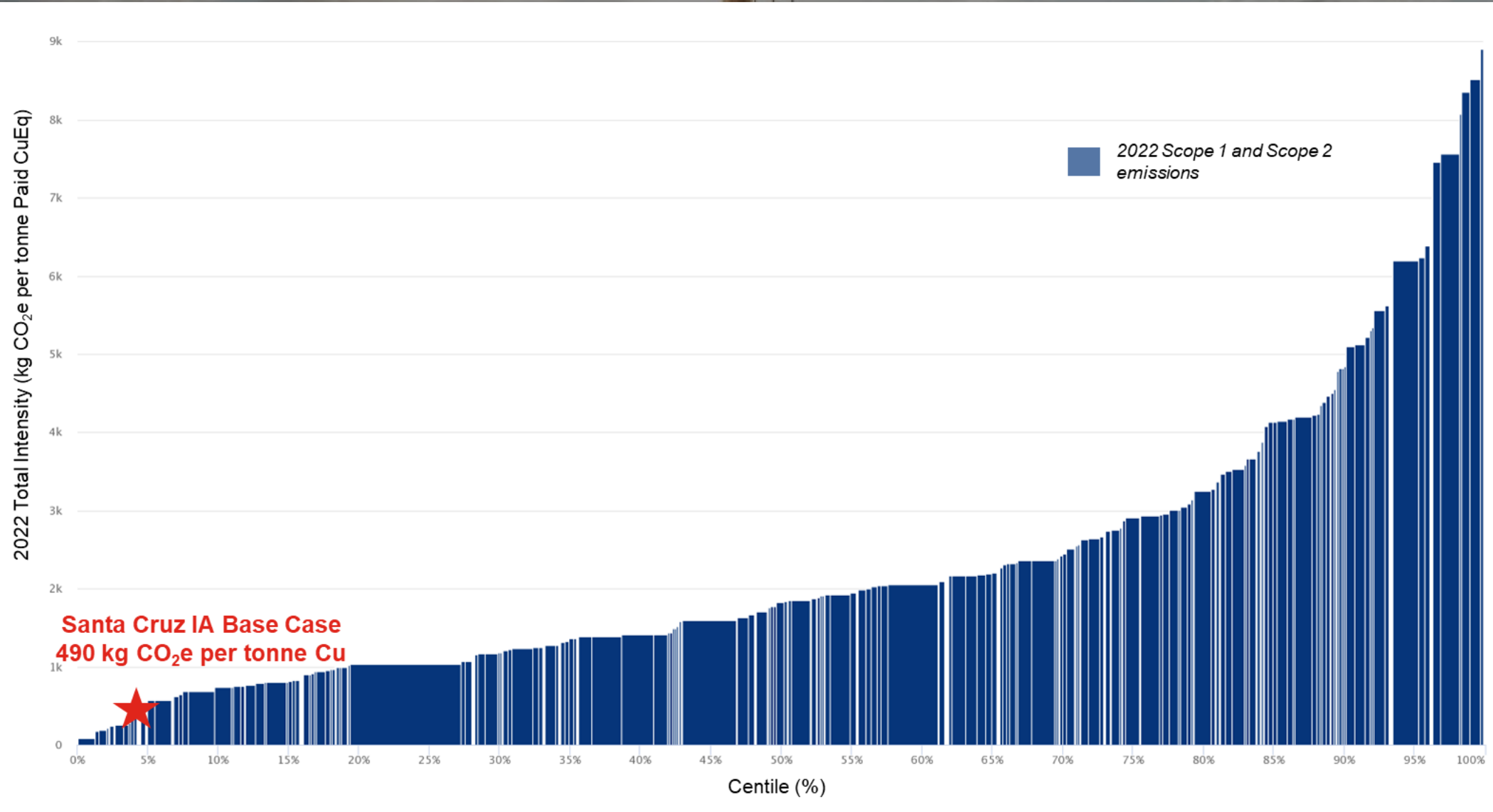
# Phased Approach Minimizes Initial Capital Requirements



- ⚡ **Twin declines to access high-grade copper mineralization**
  - Each 4.3 km long
  - 1.9 km extension in Year 8 to access lower portion
- ⚡ **LOM 105.2 Mt mineralized material mined at 1.58% copper**
  - Santa Cruz: 88.6 Mt at 1.60% copper
  - Santa Cruz Exotic: 1.9 Mt at 2.66% copper
  - 4.9 Mt low-grade (0.56% copper) to access mineralization
- ⚡ **Standard longhole stoping and drift and fill methods with paste backfill for support**



# Santa Cruz IA: Base Case 70% Renewable Power to Result in Low Estimated CO<sub>2</sub>e per Tonne Copper – “Clean Copper”

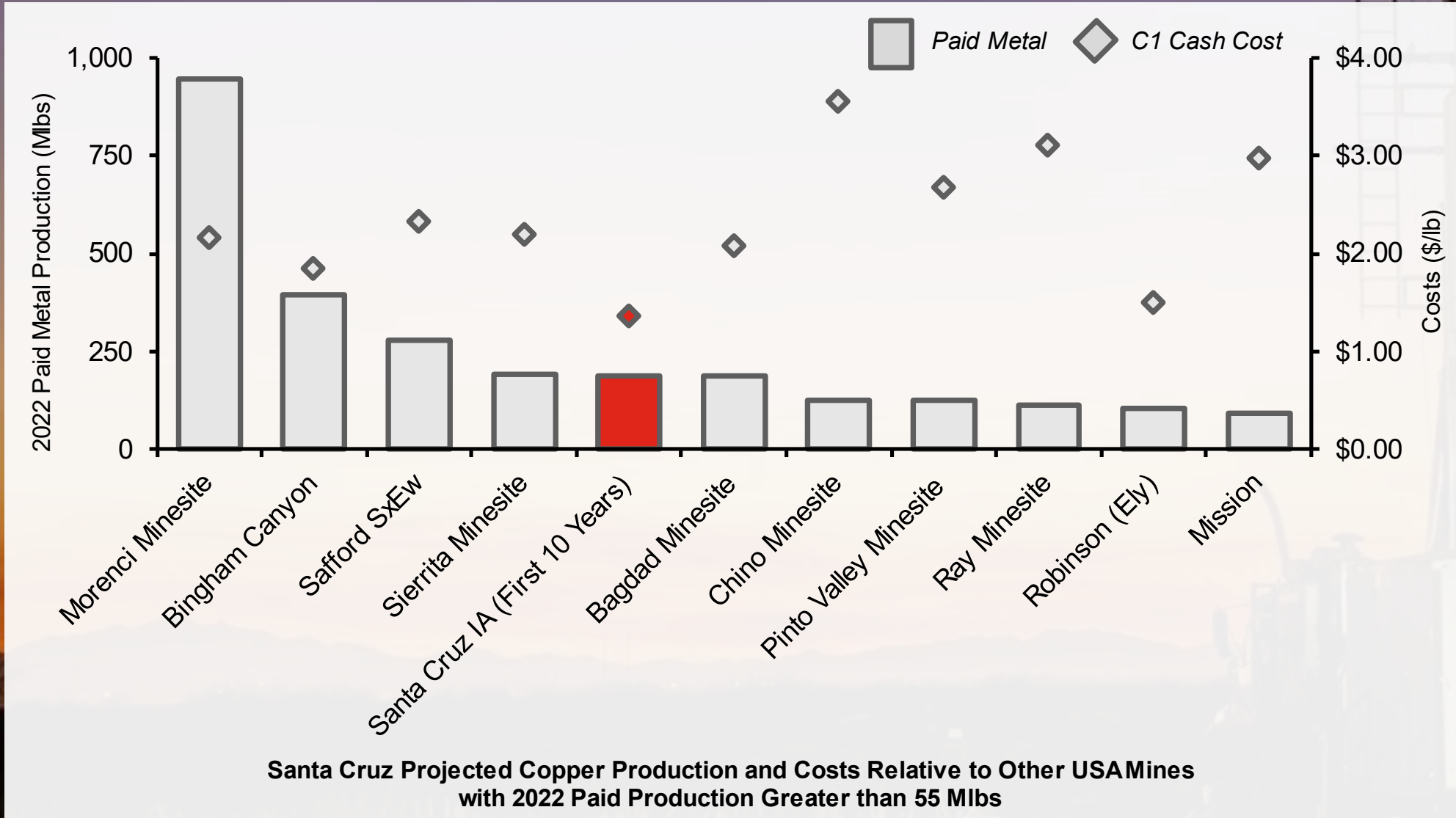


**Santa Cruz IA Base Case  
490 kg CO<sub>2</sub>e per tonne Cu**





# Santa Cruz IA: Potential to be a Significant Copper Producer in the US with Low Estimated Operating Costs



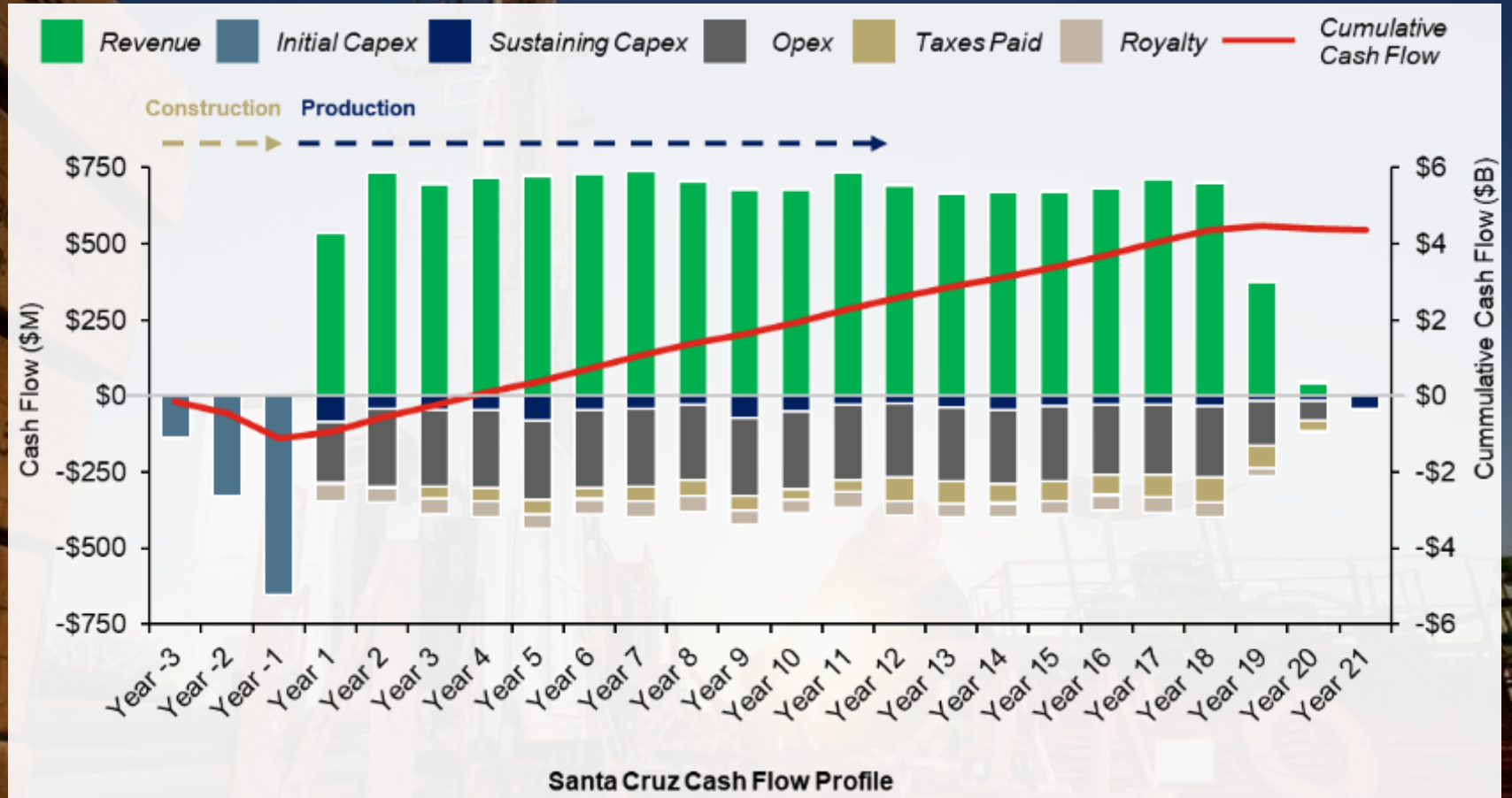


# Santa Cruz Initial Assessment

## Strong Projected Economics at \$3.80/lb Copper

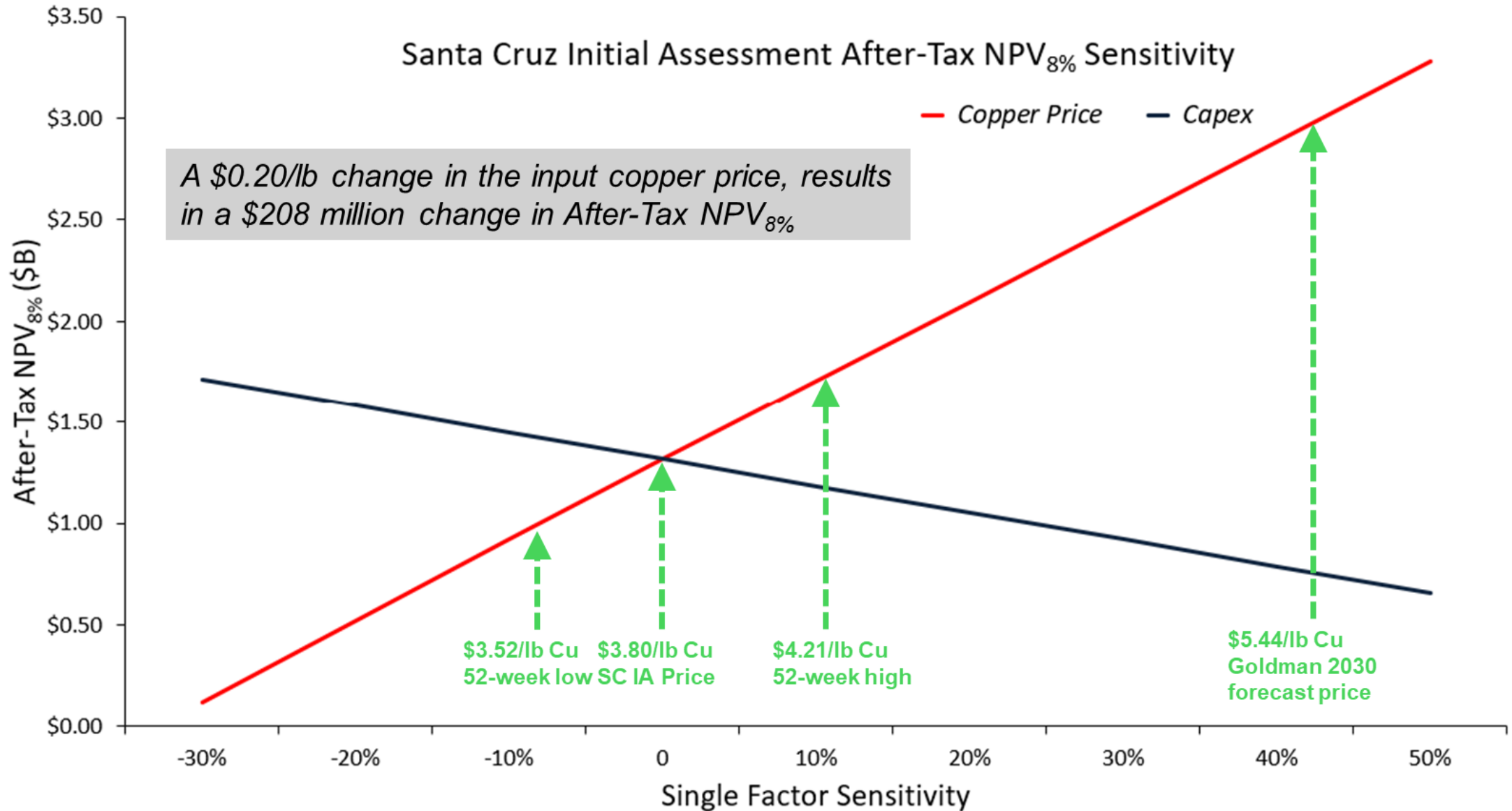
### IA Estimates

- ⚡ Initial capex \$1.15B, LOM sustaining capex \$0.98B
- ⚡ \$12.9B LOM revenue
- ⚡ \$5.2B LOM Pre-tax Free Cash Flow
- ⚡ \$1.6B Pre-tax NPV<sub>8%</sub>, IRR 25.1%
- ⚡ \$1.3B After-tax NPV<sub>8%</sub>, IRR 23.0%



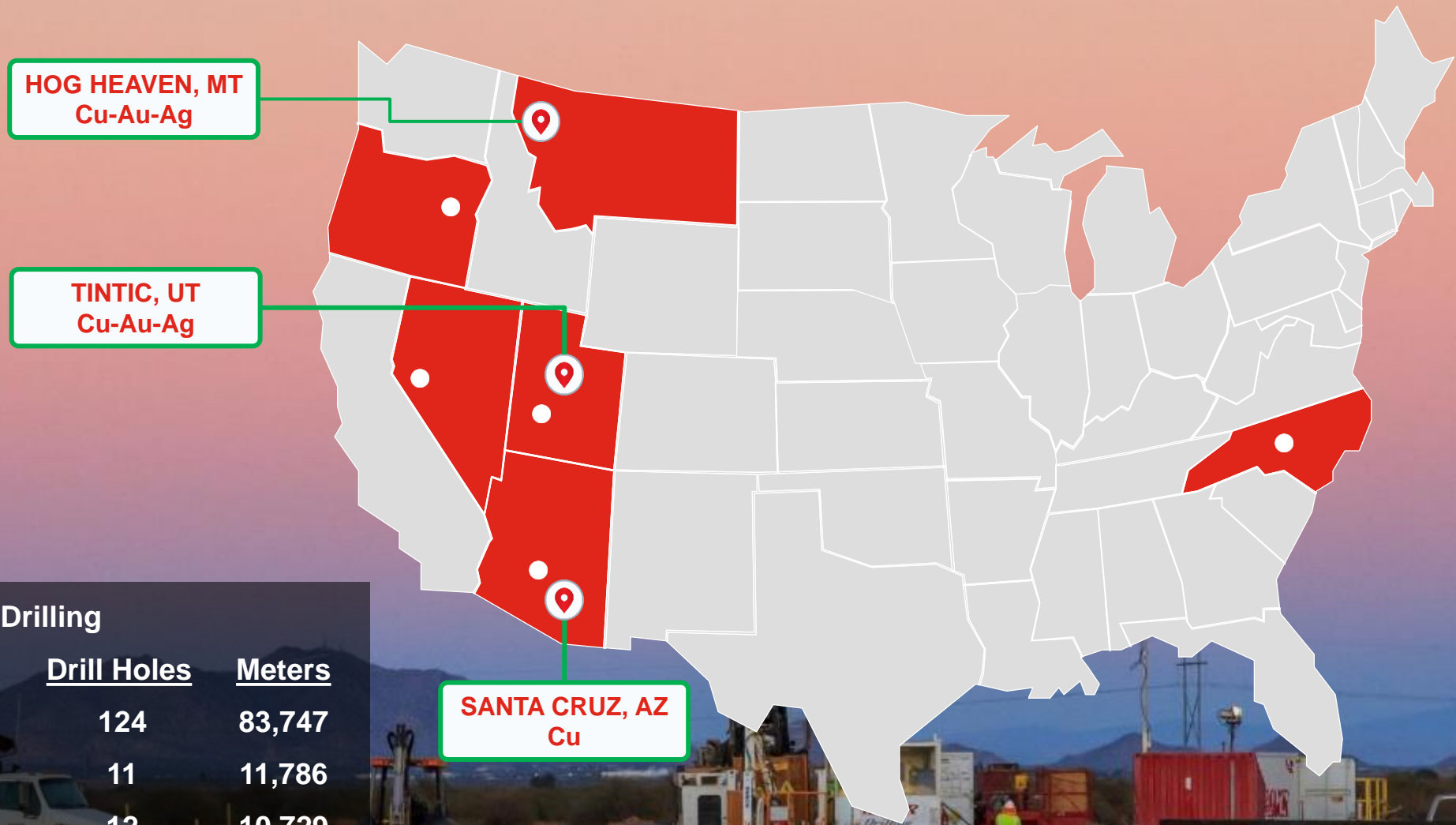


# Santa Cruz IA: Illustrative NPV Sensitivity





# US-Focused Portfolio Provides Exposure to Major Discovery Potential



**2023/2024 YTD Drilling**

<u>Project</u>	<u>Drill Holes</u>	<u>Meters</u>
Santa Cruz	124	83,747
Tintic	11	11,786
Hog Heaven	12	10,729
• Other projects	11	6,063
<b>TOTAL</b>	<b>158</b>	<b>112,325</b>



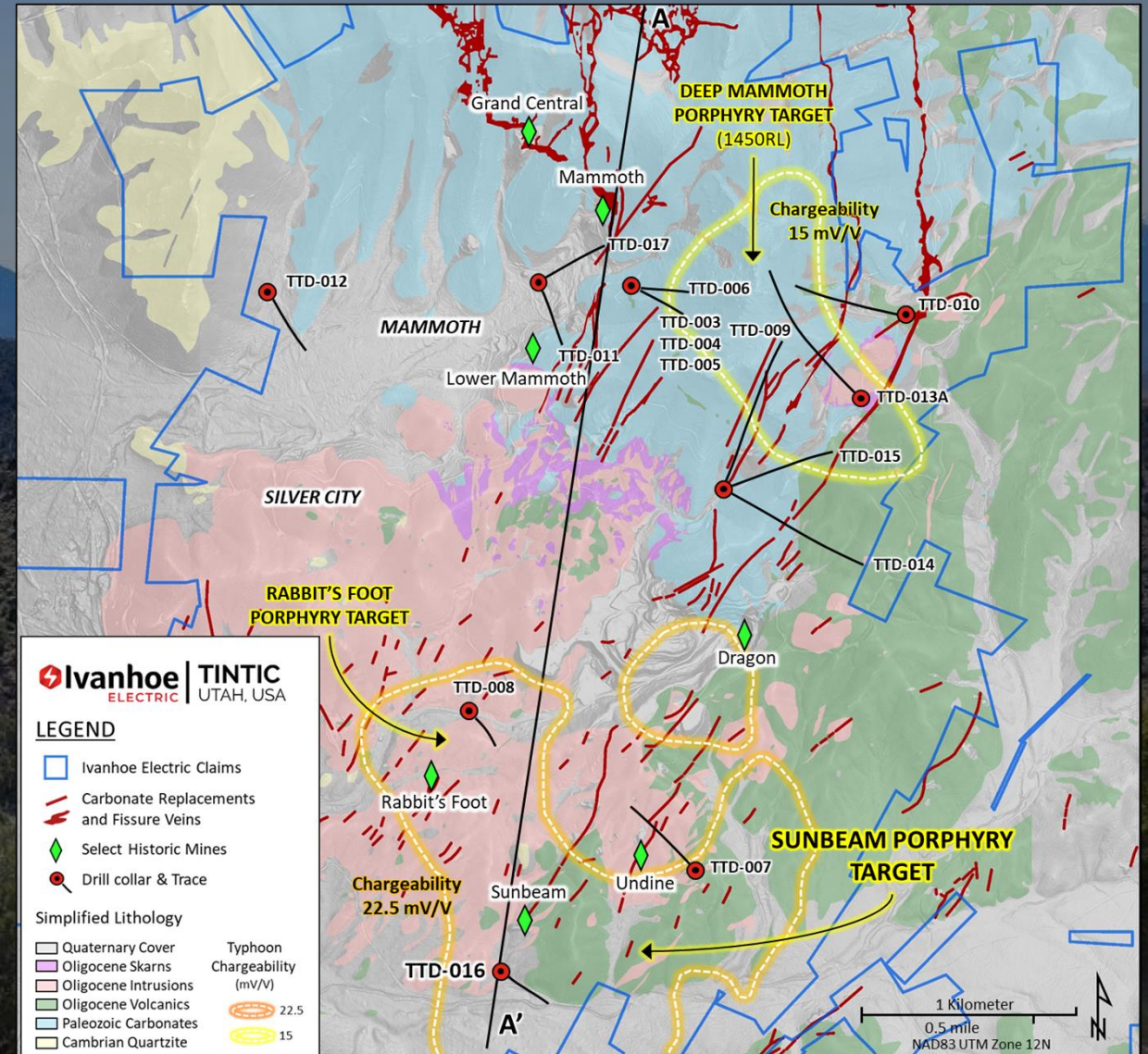
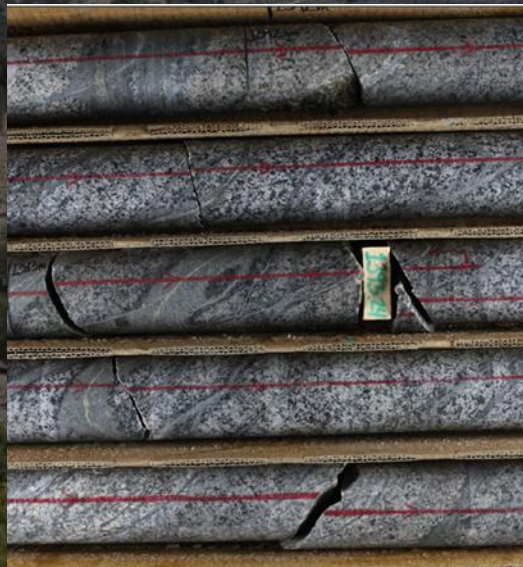
# Tintic – Technology Enabled Exploration in a Historic Mining District

- ⚡ Located on private land in a historic mining district, 60km south of Bingham Canyon, with similar geologic characteristics
- ⚡ Drilling ongoing: 11 holes totaling over 11k meters  
Program continues in 2024 with one active drill rig in the winter
- ⚡ Exploration drilling highlights:
  - Intersected a porphyry system at Typhoon™ target
  - Drill hole TTD-016 hit over 600 meters of stockwork veining and sulfides at Sunbeam
  - Established key controls on porphyry mineralization for district
  - Drilling has moved to test below the most significant mines in the district





# Typhoon™ Survey Guides Ongoing Exploration for Large Porphyry Systems

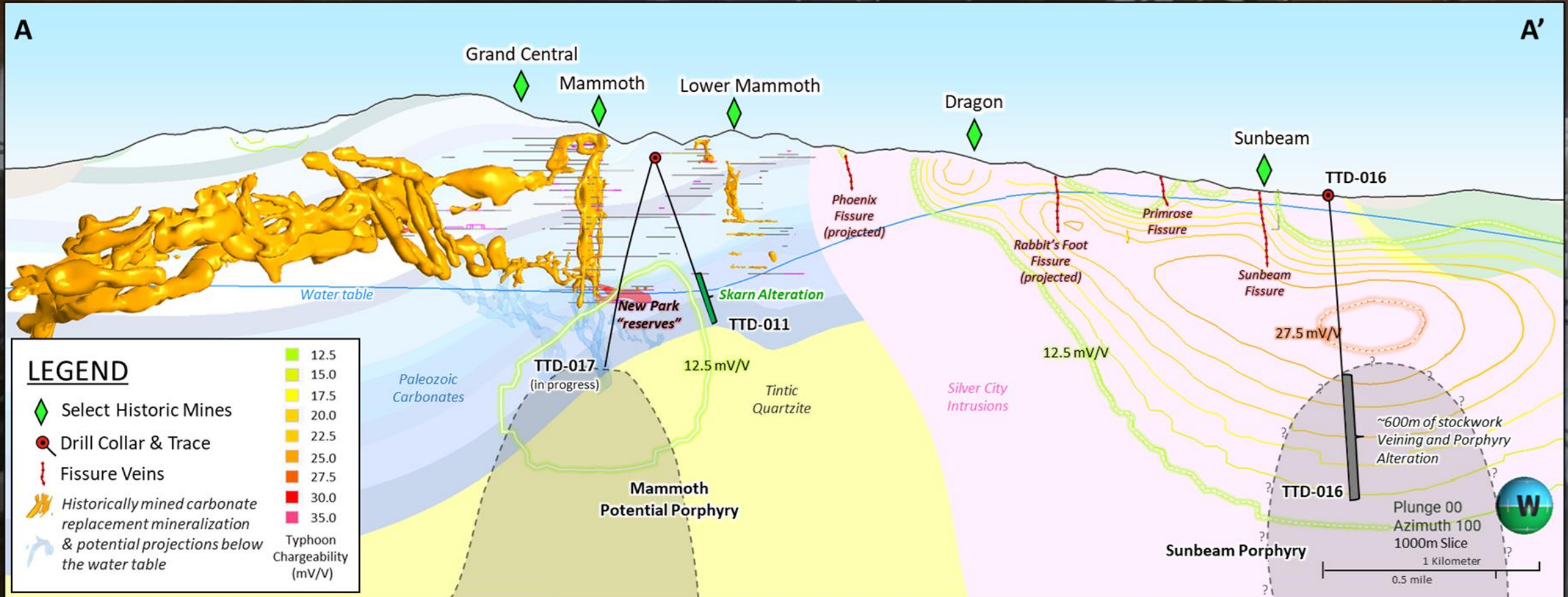


TTD-016: 1391 to 1394m strong sulfide mineralization in vein stockworks



# Exploration Drilling Finds Porphyry System at Sunbeam

Historical mining stopped at the water table, but mineralization is believed to continue to depth





# Hog Heaven - Potential High-Grade Extensions and Porphyry Source

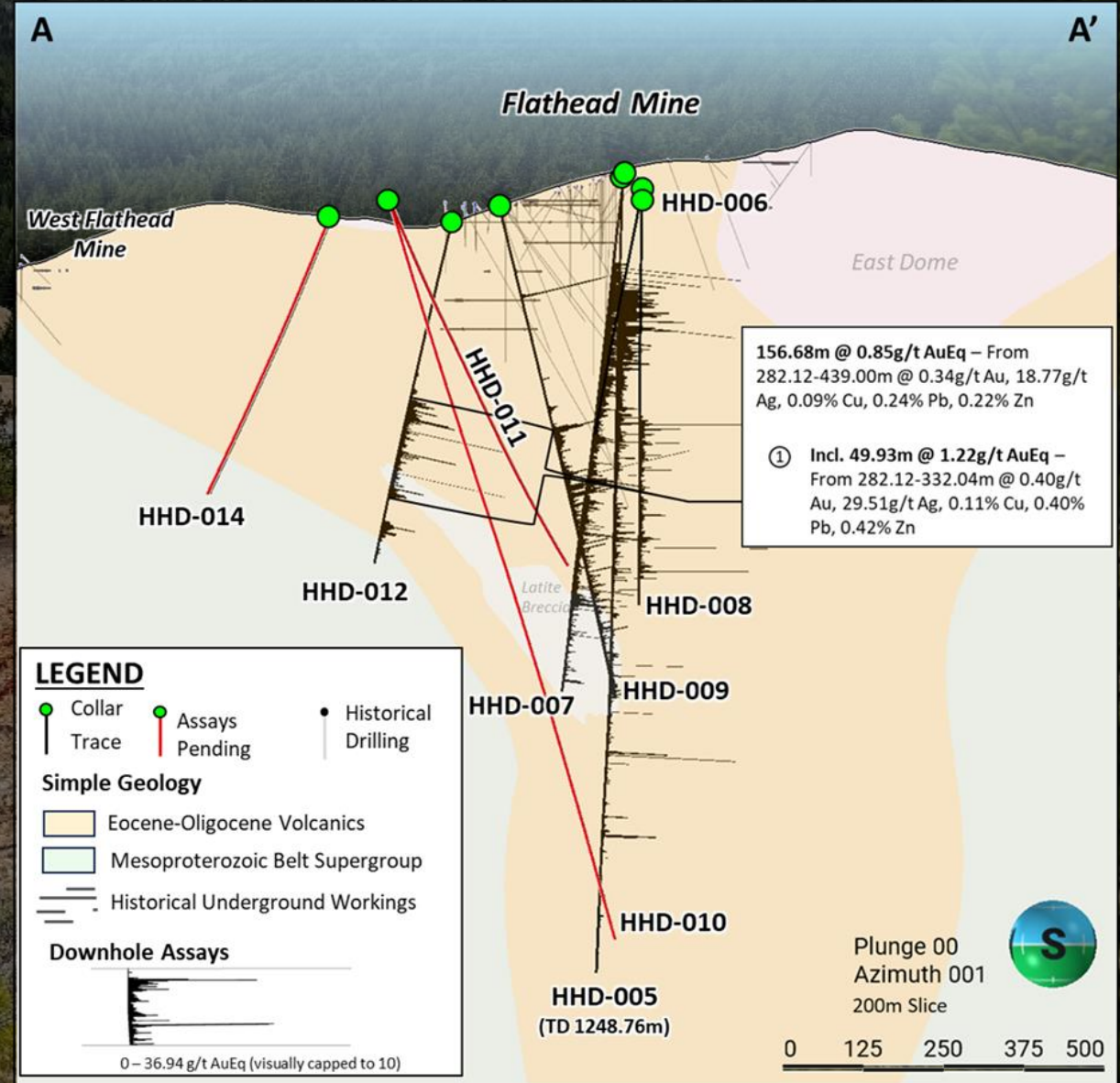
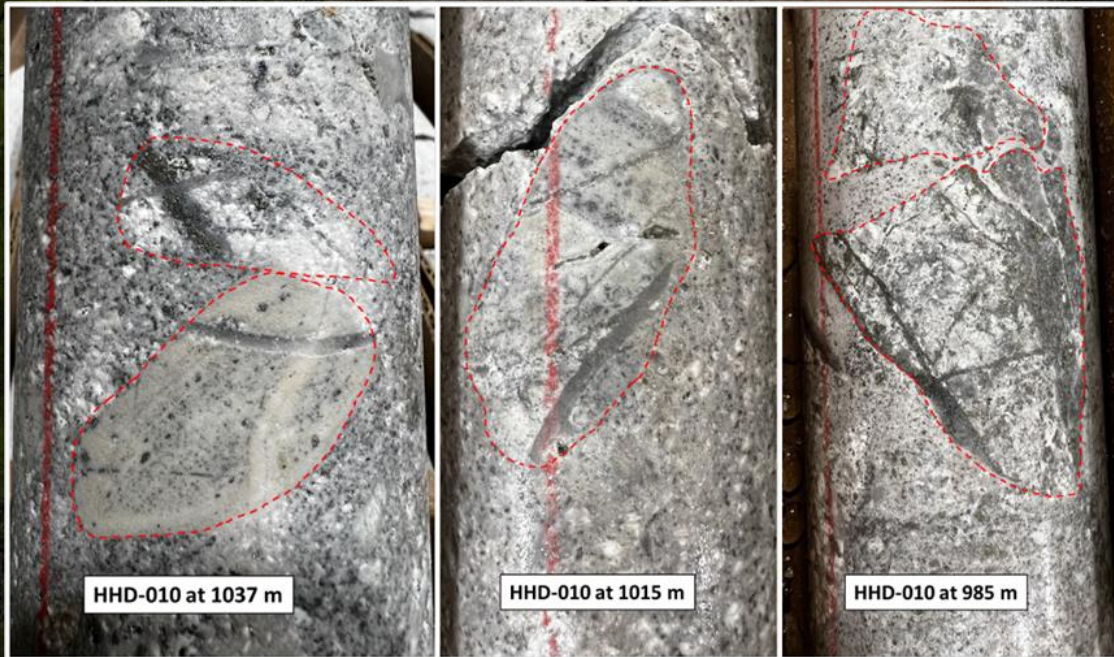
- ⚡ The Hog Heaven district consists of several high-sulfidation epithermal mineral deposits and prospects as well as several now-closed mines, including the Flathead Mine
- ⚡ Historic Flathead Mine produced high-grade silver with associated lead, zinc, copper and gold and is open at depth
- ⚡ Drilling underway on private land to search for porphyry copper mineralization
- ⚡ Typhoon™ survey completed in November 2023 provides new toolkit to search for deep mineralization





# Hog Heaven – Drilling Continues to Expand Mineralized Areas

- ⚡ Drilling at Hog Heaven continues to step out in search of the porphyry source
- ⚡ Multiple intersections of the shallow high sulfidation epithermal system continue to expand the footprint of precious and base metal mineralization







- ⚡ Exclusive access to explore a vast ~48,500 km<sup>2</sup> area of the underexplored Arabian Shield in Saudi Arabia
- ⚡ \$147.5 million investment by Ma'aden into Ivanhoe Electric to fund the JV and Ivanhoe Electric's US projects
  - \$66 million to fund the JV, including \$13 million to build 3 new generation Typhoon™ units
- ⚡ Ma'aden is a 9.8% shareholder in Ivanhoe Electric



# Initial Typhoon™ Survey Identifies Three Prospective Chargeability Anomalies for Subsequent Drill Testing

⚡ Three chargeability anomalies have been Identified by Typhoon™ on the Umm Ash Shalahib Exploration License to the south of Ma'aden's Al Amar Gold-Copper-Zinc Mine

⚡ The Umm Ash Shalahib Typhoon survey will eventually cover more than 65 km<sup>2</sup> and is substantially complete

⚡ Exploration drilling on the three currently identified anomalies expected in H1 2024



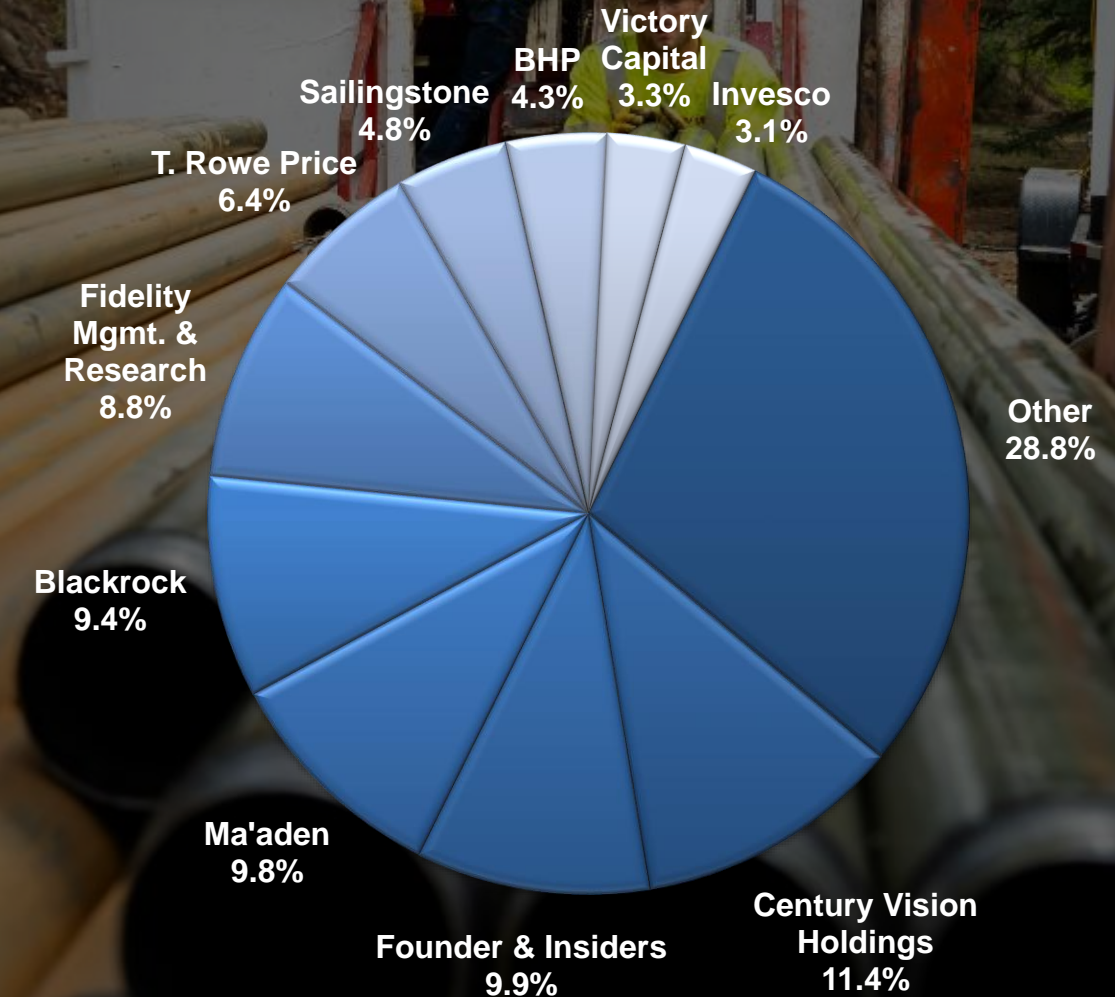


# Ivanhoe Electric – Significant Institutional and Insider Ownership

## Public Market Overview

- ⚡ Current Market Cap: ~\$900 million
- ⚡ Shares Outstanding: ~120 million
- ⚡ 12/31/23 Consolidated Cash: ~\$205 million

**Financial Strength to Execute  
Business Plan and Advance  
Projects**





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## Forward-Looking Statements

Certain statements in this presentation constitute “forward-looking statements” or “forward-looking information” within the meaning of applicable US and Canadian securities laws. Such statements and information involve known and unknown risks, uncertainties and other factors that may cause the actual results, performance or achievements of the company, its projects, or industry results to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements or information. Such statements can be identified by the use of words such as “may”, “would”, “could”, “will”, “intend”, “expect”, “believe”, “plan”, “anticipate”, “estimate”, “scheduled”, “forecast”, “predict” and other similar terminology, or state that certain actions, events or results “may”, “could”, “would”, “might” or “will” be taken, occur or be achieved. These statements reflect the company’s current expectations regarding future events, performance and results and speak only as of the date of this news release.

Such statements in this presentation include, without limitation: the projections, assumptions and estimates contained in the Initial Assessment related to the Santa Cruz Project, including, without limitation, those relating to exploration, development, capital and operating costs, production, grade, recoveries, metal prices, life of mine, mine sequencing, NPV, IRR, payback, mine design, mining techniques and processes, equipment, staffing, emissions, use of land, estimates of mineral resources, use of energy storage technologies; use of renewable energy; the acquisition of all mineral titles; the advancement of the Santa Cruz Project Prefeasibility Study; the potential for improved mining methods, mining rates, and metallurgical recovery compared to what was modeled for the Verde Domain in the Initial Assessment; the upside potential for the Santa Cruz Project economics; the ability to convert a greater portion of resources to probable mineral reserves as part of the Prefeasibility Study for the Santa Cruz Project; the functioning of our technology; the potential of Typhoon™ to discover undetectable deposits; the ongoing exploration drilling and potential mineral discoveries at the Tintic and Hog Heaven Projects; the continued use of Typhoon™ at Umm Ash Shalahib; the timing and expected completion of exploration drilling on identified anomalies at Umm Ash Shalahib; our ability to accelerate and de-risk the mineral exploration process; beneficial US energy transition; potential copper supply squeeze; potential new discoveries and planned or potential developments in the businesses of Ivanhoe Electric.

Forward-looking statements are based on management’s beliefs and assumptions and on information currently available to management. Such statements are subject to significant risks and uncertainties, and actual results may differ materially from those expressed or implied in the forward-looking statements due to various factors, including we have no mineral reserves, other than at the San Matias project; we have inferred resources that may never be upgraded to a higher category of resource or reserve; we have a limited operating history on which to base an evaluation of our business and prospects; we depend on our material projects for our future operations; our mineral resource calculations at the Santa Cruz Project are only estimates; actual capital costs, operating costs, production and economic returns may differ significantly from those we have anticipated; the title to some of the mineral properties may be uncertain or

defective; our business is subject to changes in the prices of copper, gold, silver, nickel, cobalt, vanadium and platinum group metals; we have claims and legal proceedings against one of our subsidiaries; our business is subject to significant risk and hazards associated with exploration activities, mine development, construction and future mining operations; we may fail to identify attractive acquisition candidates or joint ventures with strategic partners or be unable to successfully integrate acquired mineral properties or successfully manage joint ventures; our success is dependent in part on our joint venture partners and their compliance with our agreements with them; our business is extensively regulated by the United States and foreign governments as well as local governments; the requirements that we obtain, maintain and renew environmental, construction and mining permits are often a costly and time-consuming process; our non-U.S. operations are subject to additional political, economic and other uncertainties not generally associated with domestic operations; and our operations may be impacted by the COVID-19 pandemic, including impacts to the availability of our workforce, government orders that may require temporary suspension of operations, and the global economy. These factors should not be construed as exhaustive and should be read in conjunction with the other cautionary statements and risk factors described in Ivanhoe Electric’s Annual Report on Form 10-K and other documents filed with the SEC.

No assurance can be given that such future results will be achieved. Forward-looking statements speak only as of the date of this presentation. Ivanhoe Electric cautions you not to place undue reliance on these forward-looking statements. Subject to applicable securities laws, the company does not assume any obligation to update or revise the forward-looking statements contained herein to reflect events or circumstances occurring after the date of this presentation, and Ivanhoe Electric expressly disclaims any requirement to do so.

## Market and Industry Data

This presentation includes market and industry data and forecasts obtained from independent research reports, publicly available information, various industry publications, other published industry sources or internal data and estimates. Independent research reports, industry publications and other published industry sources generally indicate that the information contained therein was obtained from sources believed to be reliable, but do not guarantee the accuracy and completeness of such information. Although the Company believes that the publications and reports are reliable, the Company has not independently verified the data. Internal data, estimates and forecasts are based on information obtained from trade and business organizations and other contacts in the markets in which we operate and the Company’s understanding of industry conditions. Although the Company believes that such information is reliable, we have not had such information verified by any independent sources. As a result, Recipients of this presentation should be aware that any such information and data set forth in this presentation and estimates and beliefs based on such information and data, are uncertain and may not be reliable.



# Scientific and Technical Information

The Initial Assessment (“IA”) is entitled “S-K 1300 Initial Assessment & Technical Report Summary, Santa Cruz Project, Arizona”, is dated September 6, 2023, and was prepared in accordance with Subpart 1300 and Item 601 of Regulation S-K. The IA was prepared by the following firms: SRK Consulting (U.S.), Inc. (SRK), Nordmin Engineering, Ltd. (Nordmin), M3 Engineering and Technology Corp. (M3), Met Engineering, LLC (Met Engineering), Call & Nicholas, Inc. (CNI), INTERA Incorporated (INTERA), KCB Consultants Ltd. (KCB), Tetra Tech, Inc. (Tetra Tech), Life Cycle Geo, LLC (LCG), and Haley & Aldrich, Inc. (H&A).

The IA is preliminary in nature and includes an economic analysis that is based, in part, on inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable the inferred mineral resources to be categorized as mineral reserves. Mineral resources are not mineral reserves and do not have demonstrated economic viability. Accordingly, there is no certainty that the results of the IA will be realized.

The IA contains economic analyses which include and exclude inferred mineral resources. This presentation focuses on the economic analysis including inferred mineral resources. For more information regarding the economic analysis without inferred mineral resources, see the IA, which is available on the SEC’s EDGAR website as an exhibit to a Form 8-K filed by the Company in connection with the September 6, 2023 announcement.

Other disclosures of a scientific or technical nature included in this presentation have been reviewed, verified, and approved by Glen Kuntz, P.Geol., a Qualified Person as defined by Regulation S-K, Subpart 1300 promulgated by the U.S. Securities and Exchange Commission and by Canadian National Instrument 43-101. Mr. Kuntz is an employee of Ivanhoe Electric.

Ivanhoe Electric will have prepared and filed a corresponding technical report prepared under Canadian National Instrument 43-101 within 45 days of the September 6, 2023 news release. This report will be available on the company’s website and on the company’s SEDAR+ profile.

For the purposes of Canadian National Instrument 43-101, the independent Qualified Persons responsible for preparing the scientific and technical information disclosed in the September 6, 2023 news release are Anton Chan (SRK); Matt Sullivan (SRK); Joanna Poeck (SRK); Christian Ballard (Nordmin); Laurie Tahija (M3); John Woodson (M3); Jim Moore (Met Engineering); Rob Cook (CNI); Jim Casey (KCB); Annelia Tinklenberg (INTERA); Daryl Longwell (Tetra Tech); Tom Meuzelaar (LCG); and Eric Mears (H&A). Each Qualified Person has reviewed and approved the information in the September 6, 2023 news release, which is incorporated by reference into the Prospectus, relevant to the portion of the scientific and technical information for which they are responsible.

The technical report summary and technical report include relevant information regarding the assumptions, parameters and methods of the mineral resource estimates on the Santa Cruz Project, as well as information regarding data verification, exploration procedures and other matters relevant to the scientific and technical disclosure contained in this presentation.

Disclosures of a scientific or technical nature included in this presentation pertaining to Ma’aden JV in Saudi Arabia have been reviewed, verified and approved by Charles N. Forster, P.Geol., and Mark Gibson, P.Geol., both who are Qualified Persons as defined by Regulation S-K, Subpart 1300 promulgated by the U.S. Securities and Exchange Commission and by Canadian National Instrument 43-101. Mr. Forster is a Senior Advisor to Ivanhoe Electric and Mr. Gibson is Chief Geophysics Officer of Ivanhoe Electric.





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