



NYSE American / TSX: IE

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**RE-INVENTING MINING FOR THE  
ELECTRIFICATION OF EVERYTHING**

**Corporate Presentation | November 2024**





## 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, cash flow, revenue, mine design, mining techniques and processes, timing of estimated production, equipment, staffing, emissions, use of land, estimates of mineral resources, use of energy storage technologies; use of renewable energy to supply up to 70% of the Santa Cruz Project’s electricity needs; the completion of the Santa Cruz Project Prefeasibility Study in Q2 2025; the ability to secure, and the timing of submitting and securing state and local permits 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 continuation, timing, and location of drilling activities and the number of drill rigs operating in Saudi Arabia, and the timing, location and results of survey work in Saudi Arabia; funding of the Exploration Alliance between Ivanhoe Electric and BHP; the Alliance’s exploration activities in areas of interest; the Alliance’s use of the new generation Typhoon geophysical survey system and CGI inversion software; the formation of joint ventures with BHP based Alliance exploration; the ability to secure further exploration partnerships; the potential for new opportunities for Typhoon and CGI; the ability to secure long-term project financing; the establishment of a vanadium battery business in the United States; the funding of the Red Sun Joint Venture; our ability to advance and expand our portfolio of US exploration projects focused on copper; our ability to accelerate and de-risk the mineral exploration process; beneficial US energy transition; copper supply projections; 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 changes in the prices of copper or other metals Ivanhoe Electric is exploring for; the results of exploration and drilling activities and/or the failure of exploration programs or studies to deliver anticipated results or results that would justify and support continued exploration, studies, development or operations; the final assessment of exploration results and information that is preliminary; the significant risk and hazards associated with any future mining operations, extensive regulation by the US government as well as local governments; changes in laws, rules or regulations, or their enforcement by applicable authorities; the failure of parties to contracts with Ivanhoe Electric to perform as agreed; and the impact of political, economic and other uncertainties associated with operating in foreign countries, and the impact of the COVID-19 pandemic 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 filed with the U.S. Securities and Exchange Commission

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.



## CORNERSTONE ASSET



Santa Cruz Copper Project in Arizona



High-Grade Resource on Private Land



Estimated First Production in 2029

## DISRUPTIVE TECHNOLOGIES



Typhoon™ Geophysical Surveying System



Computational Geosciences (“CGI”)



Vanadium Redox Flow Batteries

## MINERAL EXPLORATION ASSETS



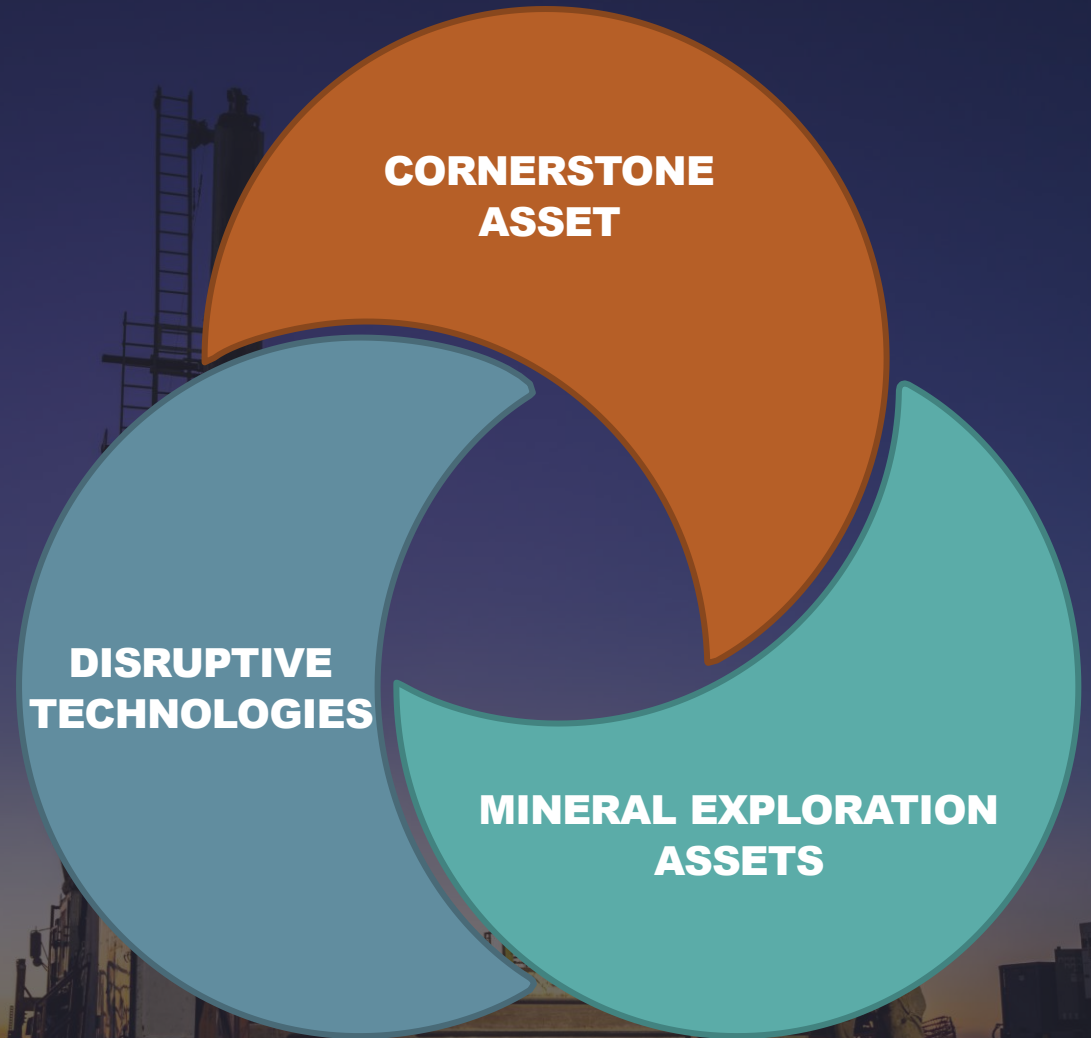
U.S. Portfolio Focused on Electric Metals Exploration



Ma’aden Joint Venture in Saudi Arabia



BHP Exploration Alliance in Southwest U.S.



Experienced Senior Management Team,  
Led By Founder Robert Friedland



# Ivanhoe Electric – Experienced Management Team



**ROBERT FRIEDLAND**  
Founder and Executive Chairman  
⚡ Industry-leading company builder, entrepreneurial explorer, and technology innovator



**TAYLOR MELVIN**  
President and Chief Executive Officer  
⚡ 20+ years experience investment banking and corporate development with J.P. Morgan and Freeport-McMoRan



**QUENTIN MARKIN**  
EVP, Business Development and Strategy Execution



**JORDAN NEESER**  
Chief Financial Officer



**GLEN KUNTZ**  
SVP, Mine Development



**GRAHAM BOYD**  
SVP, Exploration



**MARK GIBSON**  
Chief Geophysics Officer



**CASSANDRA JOSEPH**  
General Counsel and Corporate Secretary



**LARA SIMS**  
VP, Health and Safety



**MIKE PATTERSON**  
VP, Investor Relations and Business Development



# Ivanhoe Electric – Project Portfolio



**HOG HEAVEN, MT**

**TINTIC, UT**

**SANTA CRUZ COPPER PROJECT, AZ**

**Ivanhoe ELECTRIC** **BHP**

USA

**IVANHOE ELECTRIC & MA'ADEN'S 50/50 JOINT VENTURE**

**MA'ADEN**

**Ivanhoe ELECTRIC**

SAUDI ARABIA

Ivanhoe Electric Continues to Pursue Generative Exploration, Actively Advancing Opportunities Across Key Regions



## 2023

## 2024

## 2025+

✓ ~\$325 Million Raised

⚡ Long-Term Project Financing

### SANTA CRUZ COPPER PROJECT

✓ Published Mineral Resource Estimate (“MRE”)

✓ General Plan Amendment Approved

⚡ Complete Santa Cruz PFS

✓ 5,975 Acres Acquired

✓ Secured 100% of Mineral Rights

⚡ Secure Key State and Local Permits

✓ Published Initial Assessment (“IA”)

⚡ Advancing Preliminary Feasibility Study (“PFS”) and Permitting

⚡ Advancing MRE Update

### PROPRIETARY TECHNOLOGY

✓ Purchased New Typhoon™ Units

✓ Established U.S.-Based Vanadium Redox Battery Business

⚡ Advance U.S.-Based Vanadium Redox Battery Business

### MINERAL EXPLORATION

✓ Established Ma’aden Joint Venture and \$127 Million Investment

✓ Commenced Drilling at Umm Ad Dabah in Al Amar Belt

⚡ Advance and Expand U.S. Project Portfolio

✓ Commenced First Typhoon™ Survey in Al Amar Belt

✓ Established Southwest U.S. BHP Alliance and \$15 Million in Funding

⚡ Pursue Additional Exploration Partnerships

✓ Extensive Drilling at U.S. Project Portfolio

⚡ Leverage Typhoon™ and CGI Technology to Pursue New Exploration Opportunities



# SANTA CRUZ COPPER PROJECT



# Santa Cruz Copper Project – Location



5,975 acres of private land, mineral, and associated water rights in Casa Grande, Arizona



Excellent access to existing infrastructure including rail, highways, and electric transmission lines



MRE of 4.7 million tonnes ("MT") contained copper at average grade of 1.24%



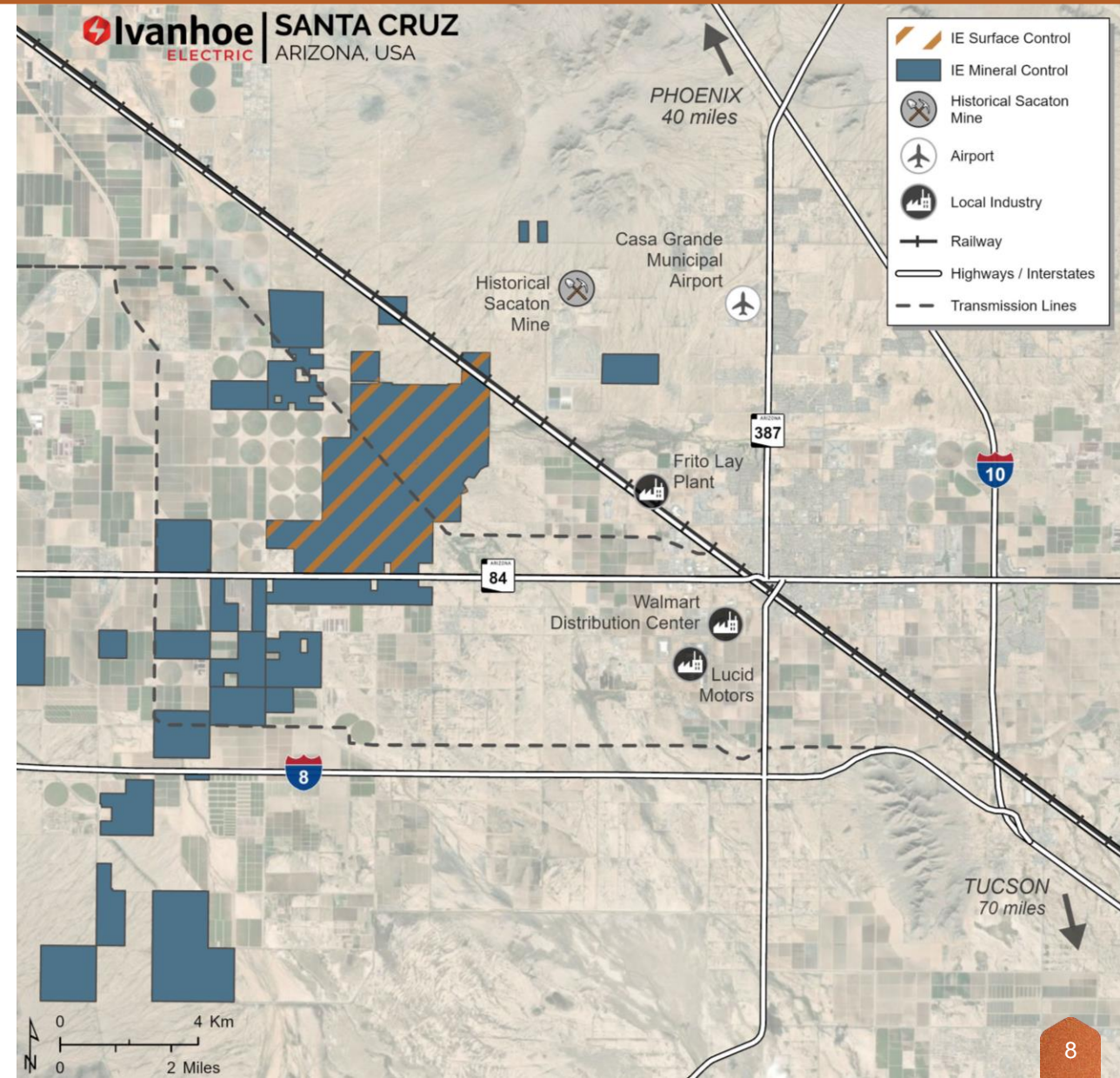
Santa Cruz IA released Q4 2023 demonstrating robust economics



Provision for on-site solar power to supply up to 70% of Project's electricity demand



PFS on-track for completion in Q2 2025 and will support long-term project financing







# Santa Cruz Copper Project – Initial Assessment

At \$3.80/lb Copper and 8% Discount Rate

**\$1.6B**

PRE-TAX NPV

**\$1.3B**

AFTER-TAX NPV

**25.1%**

PRE-TAX IRR

**23.0%**

AFTER-TAX IRR

**\$208M**

NPV PER  
\$0.20/LB CU CHANGE

**3.7 Years**

AFTER-TAX  
PAYBACK PERIOD

**\$5.2B**

LOM PRE-TAX  
FREE CASH FLOW

**\$12.9B**

LOM REVENUE

**\$1.15B**

INITIAL PROJECTED  
CAPITAL

**\$14 k/Tonne**

CAPITAL INTENSITY

**20 Years**

MINE LIFE

**1.6MT**

ESTIMATED COPPER  
PRODUCTION



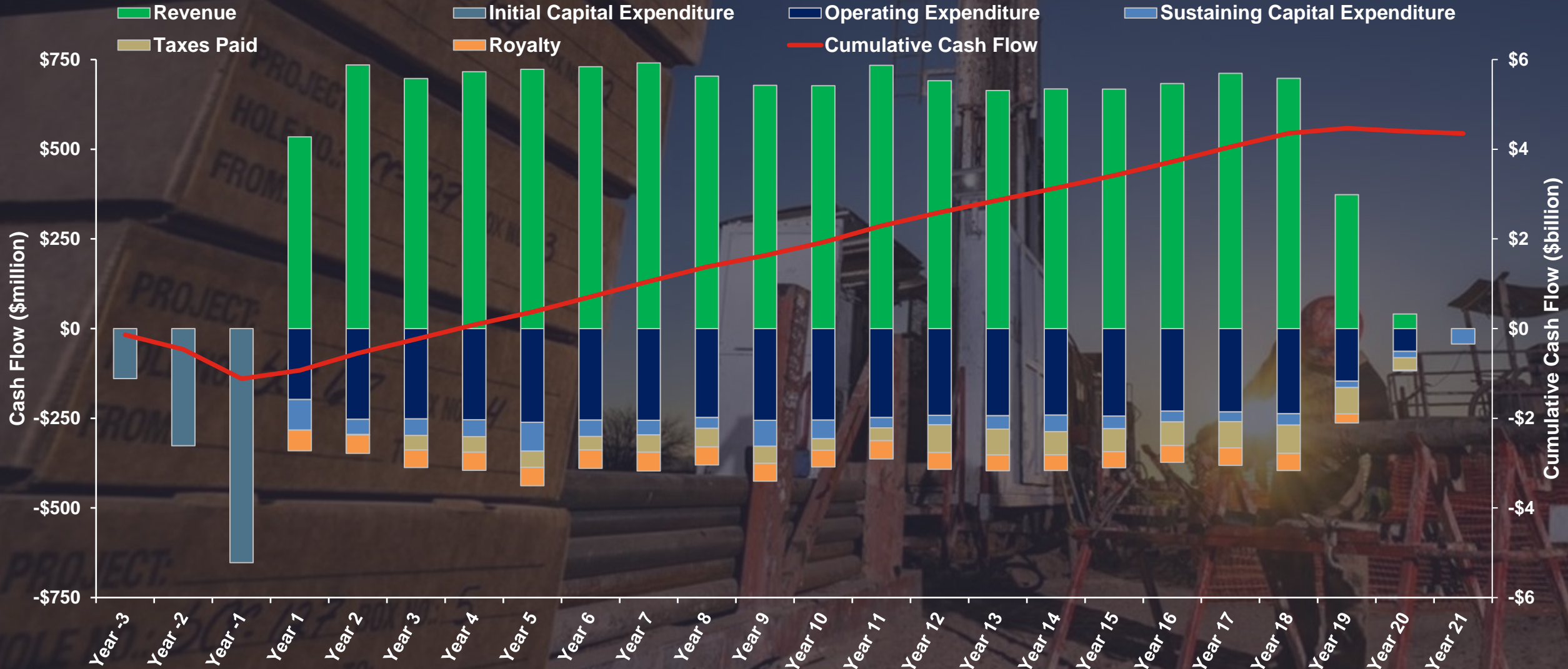


# Santa Cruz Copper Project – Initial Assessment Cash Flow



At \$3.80/lb Copper and 8% Discount Rate

## Santa Cruz Copper Project Cash Flow Profile

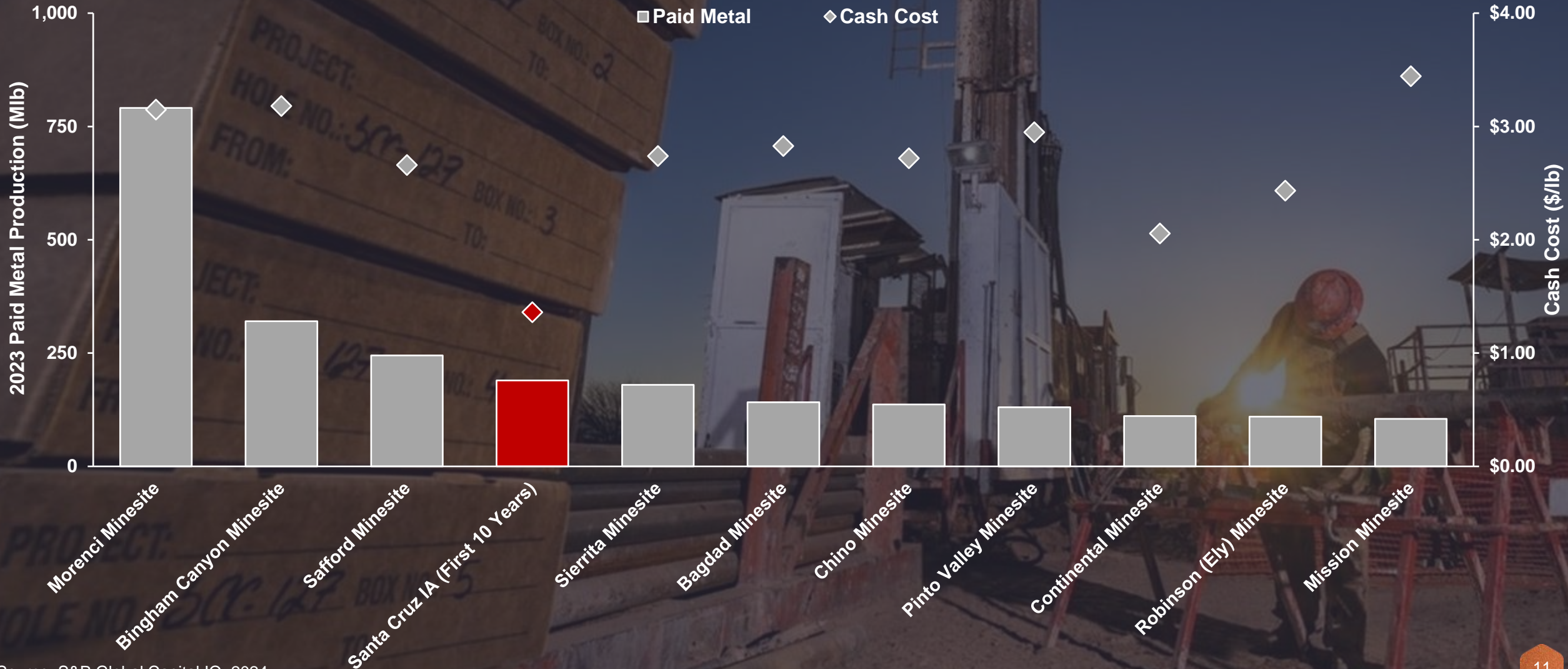




# Santa Cruz Copper Project – Initial Assessment Production

At \$3.80/lb Copper and 8% Discount Rate

## Projected Copper Production and Costs Relative to Other U.S. Mines with 2023 Paid Production Greater than 75 Mlbs

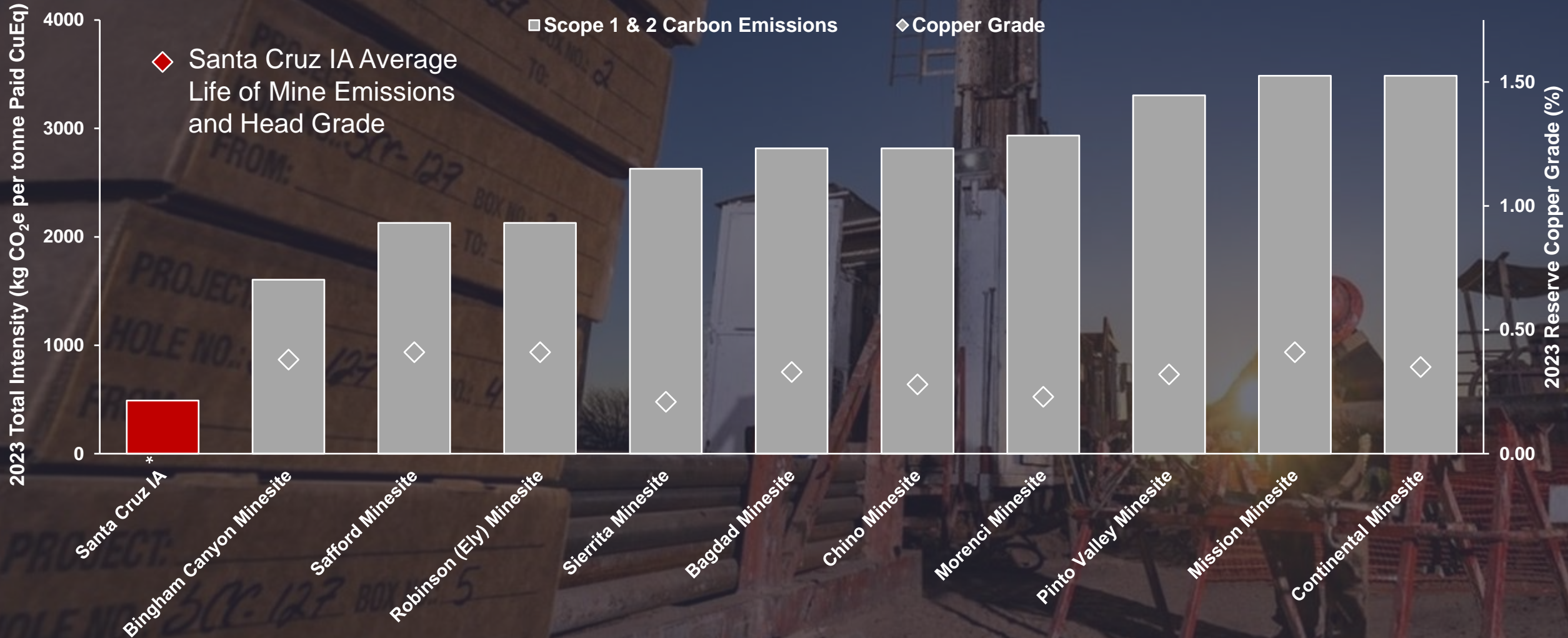




# Santa Cruz Copper Project – Initial Assessment Emissions



## Projected Scope 1 and 2 Carbon Emissions Relative to Other U.S. Mines with 2023 Paid Production Greater than 75 Mlbs



Source: Wood Mackenzie, 2023 (single year 2023 emissions data shown, the Santa Cruz 2023 IA has not been reviewed by Wood Mackenzie); S&P Global Capital IQ, 2024



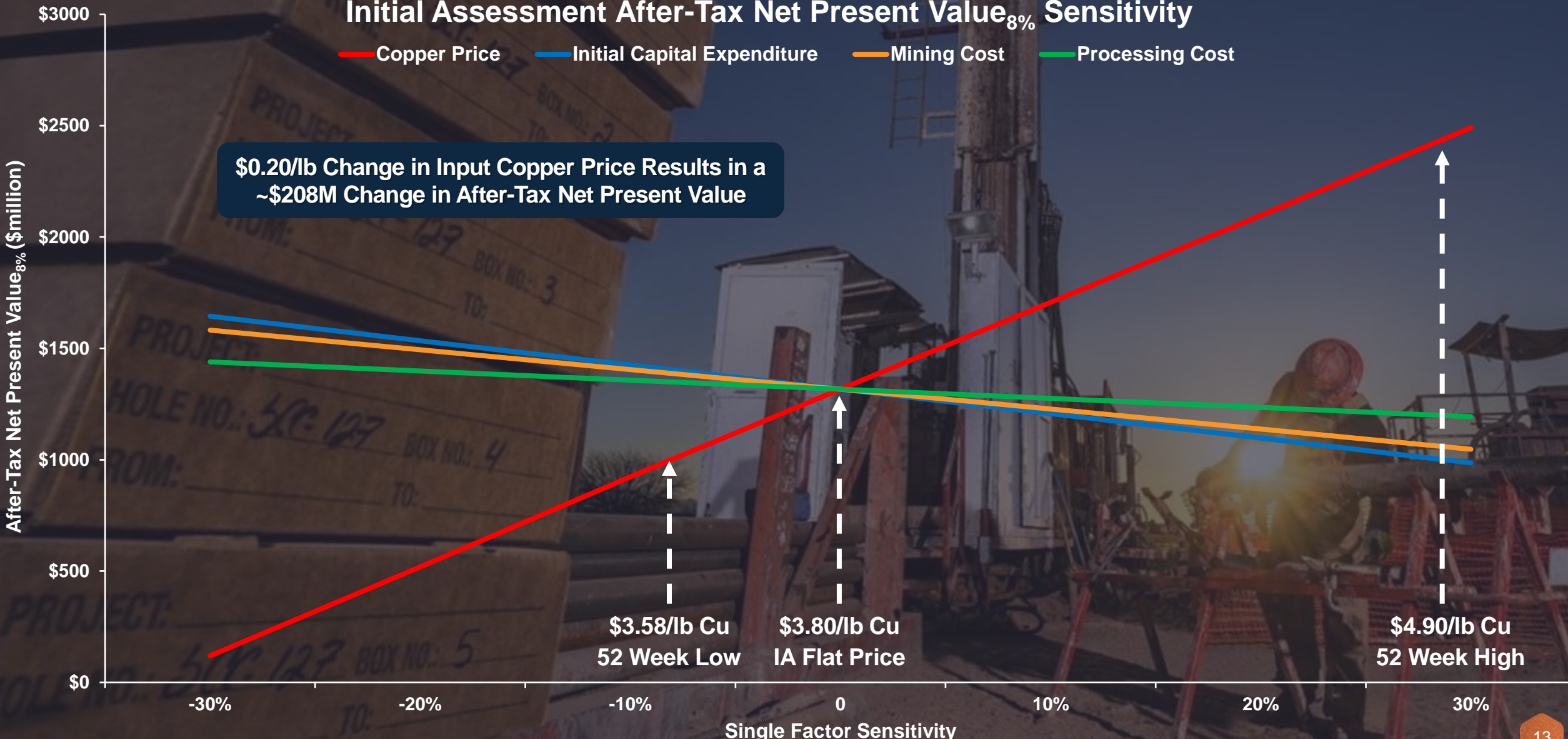
# Santa Cruz Copper Project – Initial Assessment Sensitivity

At \$3.80/lb Copper and 8% Discount Rate

## Initial Assessment After-Tax Net Present Value<sub>8%</sub> Sensitivity

— Copper Price — Initial Capital Expenditure — Mining Cost — Processing Cost

**\$0.20/lb Change in Input Copper Price Results in a  
~\$208M Change in After-Tax Net Present Value**





# Santa Cruz Copper Project – Permitting Process

## ✓ 9 PERMITS / RIGHTS COMPLETED TO SUPPORT

- ✓ Exploration Activities
- ✓ Land Use Conversion
- ✓ Land Reclamation



### PRELIMINARY FEASIBILITY STUDY PERMITS FOR DECLINE DEVELOPMENT

Planned Area of  
Development  
(Rezoning)

Mined Land  
Reclamation Plan

Major  
Site Plan

Aquifer Protection  
Permit(s) for Decline  
Development

ANTICIPATED  
SUBMITTAL  
DATE



Q4  
2024



Q1  
2025



513 Dewatering  
Permit for Decline  
Development

Industrial Air  
Permit for Decline  
Development

### ADDITIONAL REQUIRED MINING PERMITS AND AUTHORIZATIONS

- › Resource Conservation Recovery Act
- › Migratory Bird Treaty Act
- › Class V Underground Injection Control Permit
- › Encroachment Permit
- › Building and Construction Permits



**PROPRIETARY TECHNOLOGY**



# Typhoon™ Exploration Technology



Proprietary geophysical surveying technology accelerates mineral exploration



Two operating modes: induced polarization and electromagnetics



High voltage, up to 10 kV, for transmission through conductive cover and highly resistive host rocks



High power, up to 100 kW, to energize large volumes of rock and complete bigger surveys



High current, up to 200 amps, to detect mineralization at greater depths of up to 1.5 km through challenging cover geology







Industry-leading algorithms for 3D subsurface modeling, and optimized inversions for Typhoon™ data



Integrates inversion modeling with other exploration data to obtain holistic views of the subsurface and inform exploration drilling



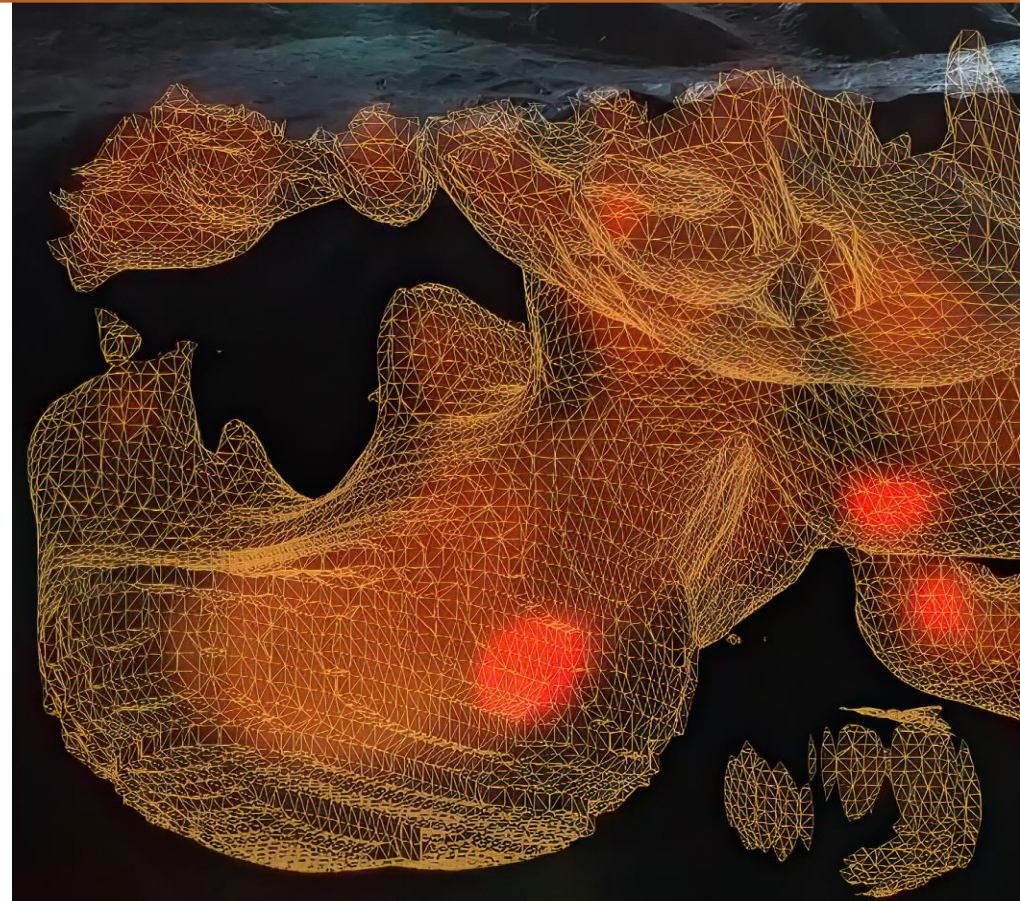
Innovative artificial intelligence solutions for mineral prospectivity



Track record of success in delivering value to clients and performing cutting-edge research



Transforming exploration as powerful Typhoon™ geophysical surveys meet cutting-edge CGI modeling





# VRB Energy Grid Scale Battery Solutions



90%-owned subsidiary of Ivanhoe Electric



Proven large-scale vanadium flow battery cell stacks and power modules



Ideal to stabilize isolated microgrids, integrating solar and wind power in a safe, reliable, low-maintenance, and environmentally friendly manner

## REORGANIZATION

U.S. Manufacturing  
NewCo



Red Sun  
Joint Venture

\$20 million in financing to establish U.S.-based grid scale vanadium redox flow battery manufacturing in Arizona

51% / 49% joint venture with Red Sun with \$35 million in funding to manufacture and sell vanadium redox flow batteries in Asian, Middle Eastern, and African markets





# MINERAL EXPLORATION



# Hog Heaven Project



Located on private land 50 miles southwest of Kalispell, Montana



Initial expansion drilling of historic epithermal mineralization returned significant intercepts

- HHD-014, 82 meters at 0.63% copper, 0.32 g/t gold and 37.8 g/t silver from 568 meters



Geological and geophysical evidence of one or more porphyry copper prospective areas



22 drill holes and 24,000 meters completed since drilling announced



Initial porphyry intersections show early signs of a potential gold-rich porphyry copper system





# Tintic Project



Located on private land in a historic mining district 60 miles south of Salt Lake City, Utah



Significant Typhoon™ chargeability anomalies identified, correlating with the most productive historical mines



15 drill holes and 18,500 meters completed since drilling announced



Identification of the Sunbeam Porphyry system



Recent drilling in the Mammoth area is testing for potential porphyry copper systems at depth





# Ma'aden Joint Venture



50/50 Joint Venture established in 2023



Exclusive access to explore a vast ~48,500 km<sup>2</sup> area of the underexplored Arabian Shield in Saudi Arabia



Ongoing Typhoon™ survey over Al Amar  
Exploration License covers 186 km<sup>2</sup> to date



Two high-priority geophysical anomalies identified in the Al Amar area



Initial drill program at Umm Ad Dabah ongoing and commenced less than a year since Typhoon™ arrival



Three Typhoon™ systems now operating across the Kingdom of Saudi Arabia





# BHP Exploration Alliance



Exploration Alliance funded by an initial investment of \$15 million from BHP



Alliance will focus initially on six areas of interest in the southwestern U.S.



Alliance will have access to a new generation Typhoon™ system and CGI inversion software



Ivanhoe Electric is the operator during the exploration phase, with any joint ventures formed owned 50 / 50



Field work commencing and staking of first areas underway





## SNAPSHOT (as of November 8, 2024)

Listings: **NYSE AMERICAN & TSX-V: IE**

Current Market Cap: **\$1.32 BILLION**

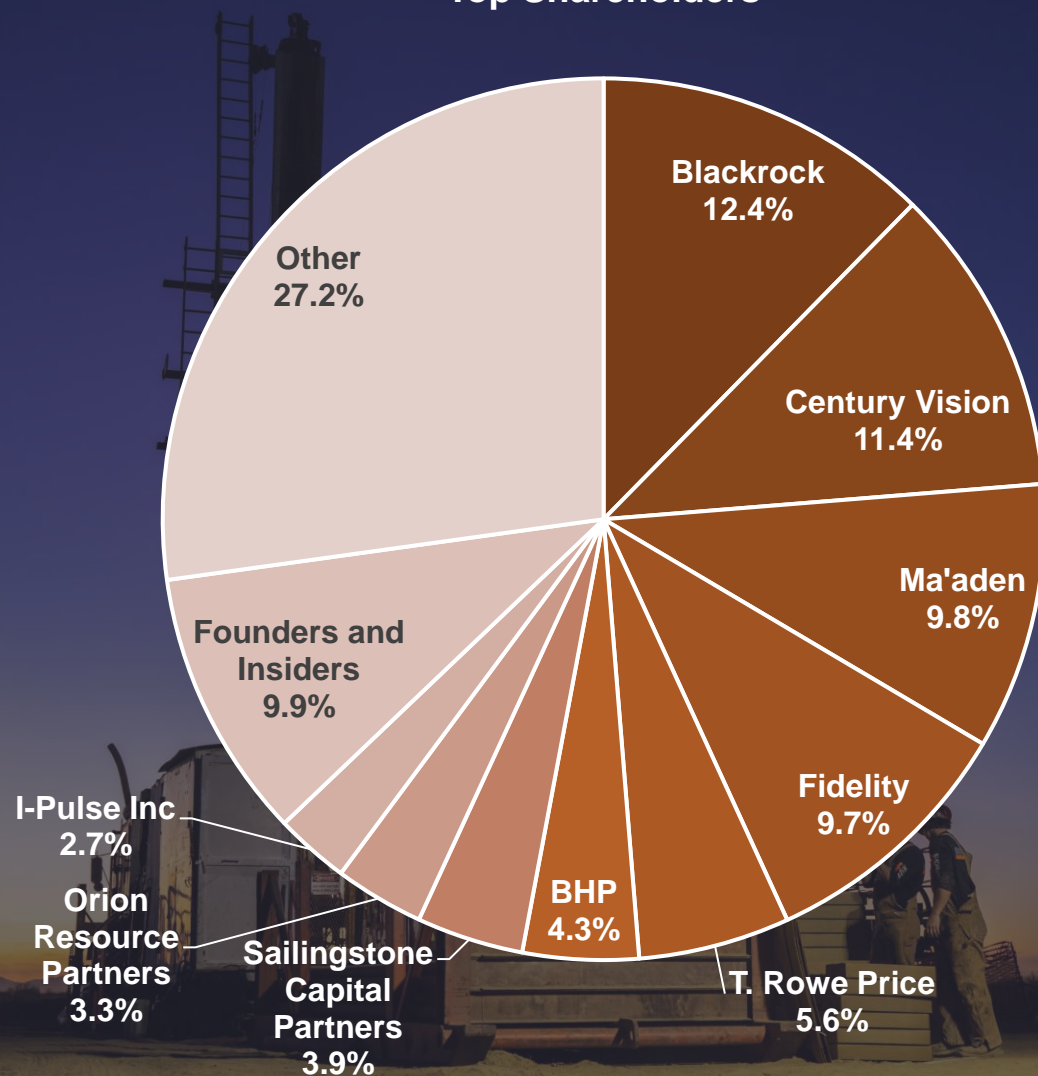
Shares Outstanding: **120.4 MILLION**

Cash at September 30, 2024: **\$81.1 MILLION**

## ANALYST COVERAGE

BMO Capital Markets	Andrew Mikitchook
Jefferies	Christopher LaFemina, Patricia Hove
Raymond James	Farooq Hamed
Scotia Capital	Orest Wowkodaw
J.P.Morgan	Bill Peterson
VIII Capital	Puneet Singh

## Significant Institutional and Insider Ownership Top Shareholders



Source: Bloomberg, November 8, 2024





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.Geo, 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 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, titled NI 43-101 Preliminary Economic Assessment & Technical Report, is 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 Joint Venture in Saudi Arabia have been reviewed, verified and approved by Charles N. Forster, P.Geo., and Mark Gibson, P.Geo., 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.

Disclosures of a scientific or technical nature included in this presentation pertaining to Tintic and Hog Heaven in the USA have been reviewed, verified and approved by Shawn Vandekerkhove, P.Geo., who is 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. Vandekerkhove is Director, New Opportunities of Ivanhoe Electric.



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