



November 29, 2022

## **Ivanhoe Electric Reports Clear Demonstration of the Disruptive Power of Typhoon™ and Computational Geoscience Software to Find Hidden Porphyry Copper in the United States and Globally**



### **First Drill Hole at Typhoon™ Far Southwest Anomaly Confirms Discovery of Copper at 1,059 Meters Depth**



### **East Ridge Discovery Continues to Grow with Step-Out Drilling**

**NEW YORK, New York – Ivanhoe Electric (NYSE American: IE; TSX: IE) Executive Chairman Robert Friedland and President and Chief Executive Officer Taylor Melvin are pleased to provide an update on drilling operations and the remarkable discovery of copper mineralization at the Typhoon™ “Far Southwest” Anomaly, at the Santa Cruz Copper Project west of Casa Grande, Arizona.**

**Mr. Friedland commented: “With the terabits of information gained from our 6,500-acre proprietary Typhoon™ geophysical survey, we can leverage our exploration dollars by drilling precisely where Typhoon™ indicates we should. We continue to demonstrate the exceptional reliability of Typhoon™ data processed by Computational Geosciences Inc. – first by making the discovery of East Ridge reported on [November 8<sup>th</sup>](#) and now by finding deep, intrusive-hosted copper mineralization at the Far Southwest Anomaly. We know of no other geophysical technology that directly detects deep chargeable copper mineralization at depths of over 3,000 feet. This American-owned technology is truly revolutionary and should be celebrated as such.”**

**Mr. Melvin commented: “This is an exciting time for the team at Ivanhoe Electric. Our repeated exploration drilling successes at the East Ridge discovery and now at the Far Southwest Anomaly demonstrate the power of our proprietary Typhoon™ technology and provide us with excellent opportunities for near-term resource expansion. The recent visual results at East Ridge hole SCC-109 showing oxide copper mineralization further demonstrate the potential for new discovery at the Santa Cruz Copper Project.”**

## **Deep copper mineralization at Far Southwest Anomaly identified by Typhoon™ and confirmed by exploration drilling**

Exploration drill hole SCC-098 was collared approximately 1,000 meters (0.62 miles) southwest of the nearest drill hole in the Santa Cruz resource area. After over 1,000 meters (3,300 feet) of basin-fill gravel cover, which obscures the underlying geology to conventional geophysical techniques, our drill hole crossed a fault and entered primary chalcopyrite and pyrite mineralization within intrusive rocks.

The intersection of these low to moderate concentrations of copper as chalcopyrite and accessory pyrite within a Laramide-age diorite porphyry with potassic alteration is an excellent technical achievement and demonstrates the utility of Typhoon™ to find new copper. We expect this zone will represent relatively low-grade “primary-style” sulfide mineralization and believe it should be viewed as strong evidence in support of delineating another faulted-off portion of the Santa Cruz mineral system. Based on our geological team’s understanding of the faults and structural relationships in the Santa Cruz district, **we interpret the potential for leachable copper oxides, enriched copper sulfides and primary sulfides to exist within this fault block at somewhat shallower depths.** We believe this mineralization potential to be located several hundred meters to the northeast of drill hole SCC-098. This relationship of primary sulfides to the enriched and leachable copper zones is already well established at both the Santa Cruz Deposit and East Ridge and may or may not repeat at the Far Southwest Exploration Area.

**Core sample from drill hole SCC-098 at the Far Southwest Typhoon™ Anomaly at 1,058.9 meters depth, showing Oracle Granite with brassy-yellow chalcopyrite (a copper sulfide mineral that is approximately 33% copper by weight and duller metallic pyrite, iron sulfide mineral) within and along a white quartz vein.**



**360-degree photogrammetry video of drill core from drill hole SCC-098 at 1,058.88 meters depth, showing Oracle Granite with brassy-yellow chalcopyrite (a copper sulfide mineral that is approximately 33% copper by weight) and duller metallic pyrite (iron sulfide mineral) mineralization within and along a white quartz vein.**

***Click on the image below for the high-resolution video.***



Core sample from drill hole SCC-098 at 1,058.88 meters depth, showing Oracle Granite with brassy-yellow chalcopyrite (a copper sulfide mineral that is approximately 33% copper by weight) and duller metallic pyrite (iron sulfide mineral) mineralization within and along a white quartz vein.



### **Step-out drilling at East Ridge discovers additional significant oxide copper mineralization**

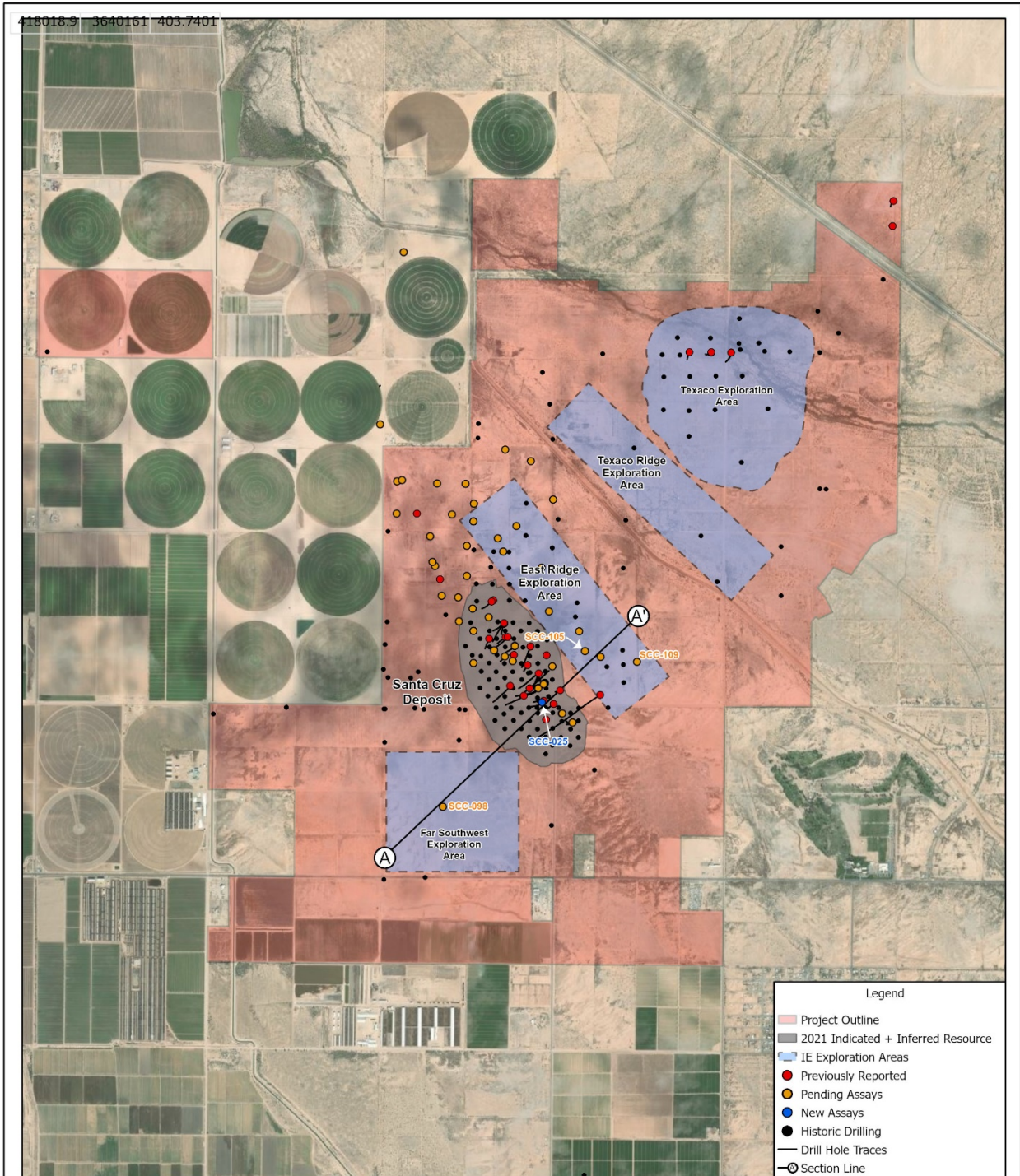
Exploration drilling continues at the East Ridge discovery area, following the recent success of drill hole SCC-105 (reported on [November 8<sup>th</sup>](#)). Ivanhoe Electric has discovered additional oxide copper mineralization in drill hole SCC-109, located approximately 400 meters to the east-southeast of SCC-105, and approximately 125 meters east of mineralized holes previously drilled by ASARCO of Tucson, Arizona. SCC-109 intersected copper mineralization dominantly as atacamite in fractures beginning at a downhole depth of approximately 657 meters and continuing for over 47 meters. This area is open for expansion to the north, east and south from SCC-109.

Atacamite is a deep green, leachable copper-chloride mineral which is 60% copper by weight. Chrysocolla is a bright blue, leachable copper oxide mineral which is approximately 30% copper by weight. These leachable minerals are amenable to a solvent extraction/electrowinning (“SX/EW”) process allowing for direct copper cathode production.

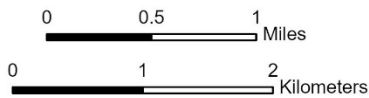
**Core sample from East Ridge drill hole SCC-109 at 701.1 meters depth showing Oracle Granite with deep green atacamite mineralization along fractures.**



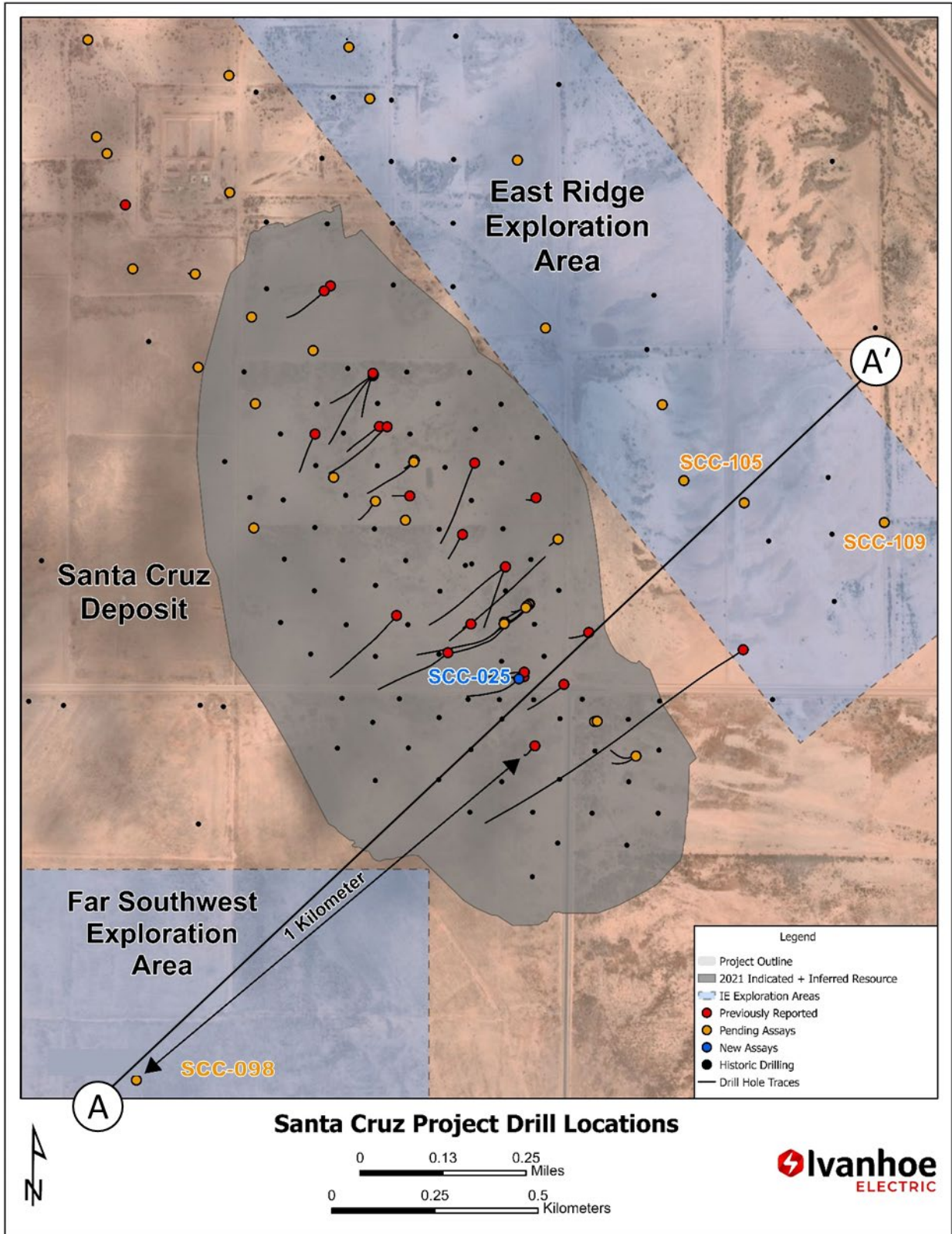
**Santa Cruz Project map with drill hole locations, exploration areas and section location.**



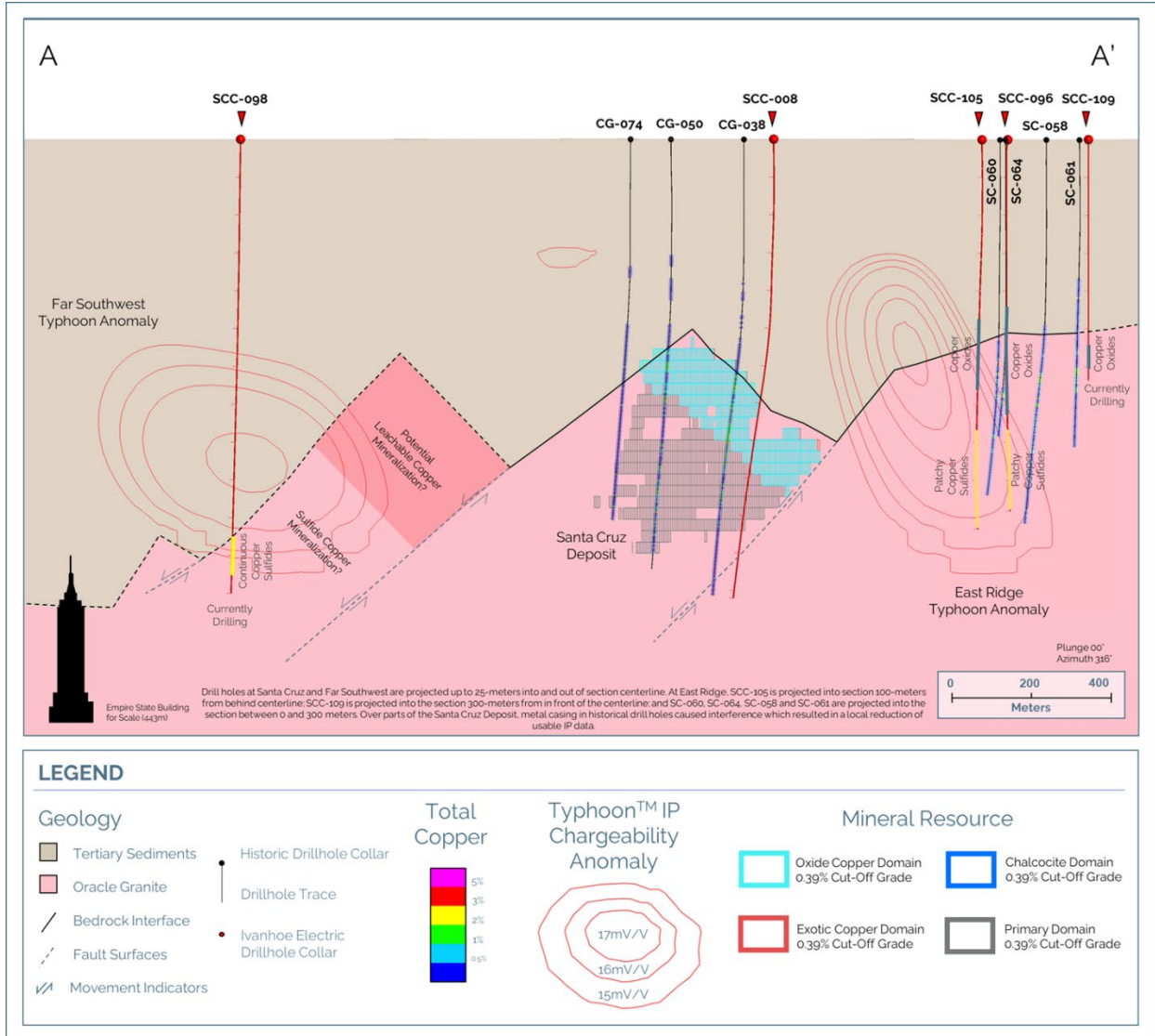
**Santa Cruz Project Drill Locations**



Zoomed in map showing the Santa Cruz, East Ridge and Far Southwest with drill hole locations and relative distances.



**Section image showing the intersection of copper mineralization within drill hole SCC-098 at a depth of 1,059 meters below surface, under more than 1,000 meters (3,300 feet) of basin-fill gravel cover. Typhoon anomaly depths and locations at the Far Southwest Anomaly plot above and adjacent to sulfide bedrock chargeable zones, this is interpreted to be due to cultural interference from a gas pipeline.**





## High-grade assay results continue from Santa Cruz Deposit infill drill program

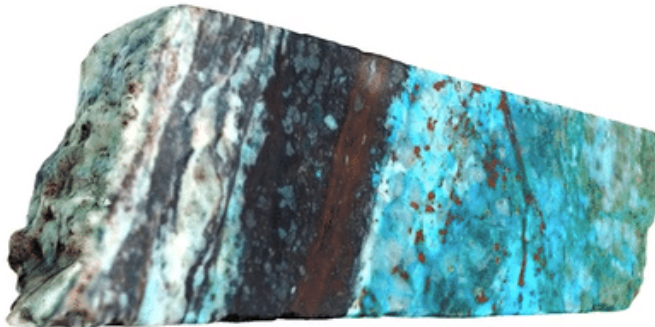
Infill drilling continues to return assay results that both confirm the current resource and further refine our geologic understanding of the Santa Cruz Deposit. A recent program highlight included the partial return of assays from drill hole SCC-025 which targeted an area of high-grade mineralization located in the southern area of the deposit.

**360-degree photogrammetry video of drill core from drill hole SCC-025 at 650.15 meters depth showing Oracle Granite with bright blue chrysocolla (a leachable mineral that is approximately 30% copper by weight) and deep green atacamite (a leachable mineral approximately 60% copper by weight) and deep red iron oxides along fractures.**

*Click on the image below for the high-resolution video.*



Core sample from drill hole SCC-025 at 650.15 meters showing Oracle Granite with bright blue chrysocolla (a leachable mineral that is approximately 30% copper by weight), deep green atacamite (a leachable mineral that is approximately 60% copper by weight), and deep red iron oxides along fractures.



**Core sample from drill hole SCC-025 at 643.55 meters depth showing Oracle Granite with bright blue chrysocolla (a leachable mineral that is approximately 30% copper by weight) and thin bands of deep red iron oxides along fractures.**



**Highlighted intercepts from recent Santa Cruz Deposit area drilling**  
 (Refer to the [Santa Cruz Drill Results page](#) on Ivanhoe Electric’s website for complete details of all reported drill holes.)

DRILL HOLE	FROM (M)	TO (M)	INTERVAL LENGTH (M)	TOTAL COPPER (%)	TOTAL SOLUBLE COPPER (%)
SCC-025	613.5	671.0	57.5	2.51	2.39
<i>Including</i>	<b>613.5</b>	<b>667.0</b>	<b>53.5</b>	<b>2.64</b>	<b>2.52</b>
	677.0	687.0	10.0	0.76	0.31
	695.0	728.0	33.0	1.08	0.91

\*Total Soluble Copper is the calculated summation of all soluble copper derived from the sequential copper analysis suite.  
 \*Reported intervals are calculated using a 0.39% total copper cut-off grade and allowing up to a maximum of 6-meters of material less than 0.39% total copper.  
 \*Results are core intervals and may not be true widths but are believed to be representative of actual drill thicknesses.  
 \*Some rounding errors may occur.

Mining, metallurgical, geotechnical and hydrological trade-off studies are nearly complete and will collectively form the overall framework to support the Preliminary Economic Assessment (“PEA”) for the Santa Cruz Project. The PEA is scheduled for completion during the second quarter of 2023.

Geotechnicians, Adriana Ledesma and Deidra Contreras converting drill blocks and cleaning drill core at the Santa Cruz core shed.



**Tom White, Senior Hydrogeologist, and Enkhbayar Byambajav, Geologist, viewing the latest drill rig core delivery at the Santa Cruz core shed, Casa Grande, Arizona.**



**Angelica Folk, Senior Geotechnician, sampling core at the Santa Cruz Copper Project.**



## **Quality Assurance/Quality Control (QA/QC) Procedure**

Ivanhoe Electric employs a comprehensive quality assurance and quality control protocol across all aspects of the Company's data collection, sampling and analytical procedures. Recovered drill core is inspected, logged, and thoroughly marked for sampling at 2-meter intervals. Sampled drill core is sawn into two lengthwise halves of which one-half of each drill core is maintained for future reference and the other half of each drill core is sent to Skyline Assayers and Laboratories of Tucson, Arizona, USA or Société Générale de Surveillance SA ("SGS") of Vancouver, British Columbia, Canada, both of which are ISO 17025 accredited laboratories, to complete all sample preparation and assaying. Samples are analyzed employing total copper, total molybdenum, and sequential copper assaying for acid-soluble and cyanide-soluble copper determinations. Laboratory analysis also employs four-acid ICP-MS analysis for silver and lithochemical determinations. For quality assurance and quality control purposes, certified standards, blank samples, and controlled sample duplicates are inserted into the sample stream at prescribed intervals and conditions to monitor laboratory performance.

## **Qualified Persons**

Disclosures of a scientific or technical nature included in this news release, including the sampling, analytical and technical data underlying the information, have been reviewed, verified, and approved by Glen Kuntz, P. Geo., and Christopher Seligman, MAusIMM CP (Geo), each of whom 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. Each of Mr. Kuntz and Mr. Seligman is an employee of Ivanhoe Electric.

Ivanhoe Electric has had prepared an independent technical report summary for the Santa Cruz Project prepared under SEC Regulation S-K, Subpart 1300 and an independent technical report prepared under Canadian National Instrument 43-101. The reports are available on the company's website, on EDGAR and on the company's SEDAR profile:

- "Technical Report Summary on the Santa Cruz Project, Arizona, USA" prepared by Nordmin Engineering Ltd. ("Nordmin") with an effective date of June 7, 2022 (S-K 1300 Report).
- "NI 43-101 Technical Report and Mineral Resource Estimate for the Santa Cruz Project, Arizona, USA" prepared by Nordmin with an effective date of June 7, 2022.

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 news release.

## About Ivanhoe Electric

Ivanhoe Electric is an American technology and mineral exploration company that is re-inventing mining for the electrification of everything by combining advanced mineral exploration technologies, renewable energy storage solutions and electric metals projects predominantly located in the United States. Ivanhoe Electric uses its Typhoon™ transmitter, an accurate and powerful geophysical survey system, together with advanced data analytics provided by its subsidiary, Computational Geosciences, to accelerate and de-risk the mineral exploration process as well as to potentially discover deposits of critical metals that may otherwise be undetectable by traditional exploration technologies. Through its controlling interest in VRB Energy, Ivanhoe Electric also develops and manufactures advanced grid-scale vanadium redox battery storage systems. Finally, through advancing its portfolio of electric metals projects located primarily in the United States, headlined by the Santa Cruz Copper Project in Arizona and the Tintic Copper-Gold Project in Utah, as well as projects in Montana, Oregon and North Carolina, Ivanhoe Electric is also well positioned to support American supply chain independence by delivering the critical metals necessary for electrification of the economy.

## Contact Information

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## Forward-looking statements

Certain statements in this news release constitute “forward-looking statements” or “forward-looking information” within the meaning of applicable U.S. 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 news release include without limitation, statements regarding: (i) the potential for mineralization to be located several hundred meters to the northeast of drill hole

SCC-098, (ii) future exploration and drilling activities; and (iii) the completion of a PEA for the Santa Cruz Project during the second quarter of 2023.

This news release also contains references to estimates of Mineral Resources. The estimation of Mineral Resources is inherently uncertain and involves subjective judgments about many relevant factors. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. The accuracy of any such estimates is a function of the quantity and quality of available data, and of the assumptions made and judgments used in engineering and geological interpretation (including estimated future production, the anticipated tonnages and grades that will be mined and the estimated level of recovery that will be realized), which may prove to be unreliable and depend, to a certain extent, upon the analysis of drilling results and statistical inferences that ultimately may prove to be inaccurate. Mineral Resource estimates may have to be re-estimated based on: (i) fluctuations in copper, gold or other metal prices; (ii) results of drilling and other exploration activities; (iii) metallurgical testing and other studies; (iv) proposed mining operations, including dilution; (v) the evaluation of mine plans subsequent to the date of any estimates and/or changes in mine plans; (vi) the possible failure to receive required permits, approvals and licenses; and (vii) changes in law or regulation.

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 U.S. 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 the company 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 described in Ivanhoe Electric's registration statement on Form S-1, as amended, filed with the U.S. Securities and Exchange Commission and base PREP prospectus filed with Canadian securities commissions.

No assurance can be given that such future results will be achieved. Forward-looking statements speak only as of the date of this news release. 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 news release, and Ivanhoe Electric expressly disclaims any requirement to do so.