

ASCU:TSX  
ASCUF:OTCQX

# COPPER

## Invest In Sustainability

Corporate Presentation February 2023



ARIZONA SONORAN  
COPPER COMPANY

# Cautionary Information

This presentation (“Presentation”) is being furnished on a confidential basis in order to provide readers certain information with respect to the business and operations of Arizona Sonoran Copper Company Inc. (the “Company” or “ASCU”).

This presentation contains forward-looking information within the meaning of applicable Canadian and United States securities legislation. All information contained in this presentation, other than statements of current and historical fact, is forward-looking information. Often, but not always, forward-looking information can be identified by the use of words such as “plans”, “expects”, “budget”, “guidance”, “scheduled”, “estimates”, “forecasts”, “strategy”, “target”, “intends”, “objective”, “goal”, “understands”, “anticipates” and “believes” (and variations of these or similar words) and statements that certain actions, events or results “may”, “could”, “would”, “should”, “might” “occur” or “be achieved” or “will be taken” (and variations of these or similar expressions). All of the forward-looking information in this presentation is qualified by this cautionary note.

Forward-looking information is not, and cannot be, a guarantee of future results or events. Forward-looking information is based on, among other things, opinions, assumptions, estimates and analyses that, while considered reasonable by the company at the date the forward-looking information is provided, inherently are subject to significant risks, uncertainties, contingencies and other factors that may cause actual results and events to be materially different from those expressed or implied by the forward-looking information. The risks, uncertainties, contingencies and other factors that may cause actual results to differ materially from those expressed or implied by the forward-looking information are described under the heading “Risk Factors” in the ASCU Final prospectus dated November 9, 2021 and filed on SEDAR, and recent financial disclosures. Should one or more risk, uncertainty, contingency or other factor materialize or should any factor or assumption prove incorrect, actual results could vary materially from those expressed or implied in the forward-looking information. Accordingly, you should not place undue reliance on forward-looking information. ASCU does not assume any obligation to update or revise any forward-looking information after the date of this presentation or to explain any material difference between subsequent actual events and any forward-looking information, except as required by applicable law. This presentation contains certain financial measures which are not recognized under IFRS, such as cash cost, sustaining and all-in sustaining cash cost per pound of copper. For a detailed description of each of the non-IFRS financial performance measures used in this presentation, please refer to ASCU’s management’s discussion and analysis for the nine months ended September 30, 2021 available on SEDAR at [www.sedar.com](http://www.sedar.com). All amounts in this presentation are in U.S. dollars unless otherwise noted.

## Technical Information

The scientific and technical information in this Presentation, other than in respect of metallurgy, was prepared under the supervision of Mr. Allan Schappert, Stantec. The scientific and technical information in this Presentation in respect of metallurgy was prepared under the supervision of Dr. Martin Kuhn, MAG. Each of Mr. Allan Schappert and Dr. Martin Kuhn is a Qualified Person as defined by National Instrument 43-101—Standards of Disclosure for Mineral Projects.

The potential quantity and grade presented in the Exploration Target ranges are conceptual and have insufficient exploration and drill density to define a Mineral Resource. At this stage, it is uncertain if further exploration will result in the targets being delineated as a Mineral Resource. Estimates of exploration targets are not Mineral Resources and are too speculative to meet the NI 43-101 reporting standards.

ASCU has conducted extensive exploration work to delineate the exploration target contained in this presentation. This work includes analysis and interpretations from four historical and the two recently drilled core holes into the project, similarities of mineralization intercepted to that of the adjacent Cactus project (for mineralization and alteration characteristics, and grade architecture), and review of geophysical and surface ionic leach programs to support realistic target ranges for extent, thickness, and grade. The Exploration Target ranges assume an underground target for exploration purposes.

## Peers

The comparable information about other issuers was obtained from public sources and has not been verified by the Company. Comparable means information that compares an issuer to other issuers. The information is a summary of certain relevant operational and valuation attributes of certain mining and resource companies and has been included to provide the prospective investor an overview of the performance of what are expected to be comparable issuers. The comparables are considered to be an appropriate basis for comparison with the Company based on their industry, size, operating scale, commodity mix, jurisdiction, capital structure and additional criteria. The comparable issuers face different risks from those applicable to the Company. Investors are cautioned that there are risks inherent in making an investment decision based on the comparables, that past performance is not indicative of future performance and that the performance of the Company may be materially different from the comparable issuers. If the comparables contain a misrepresentation, investors do not have a remedy under securities legislation in any province in Canada. Accordingly, investors are cautioned not to put undue reliance on the comparables in making an investment decision.

# Capital Structure & Ownership

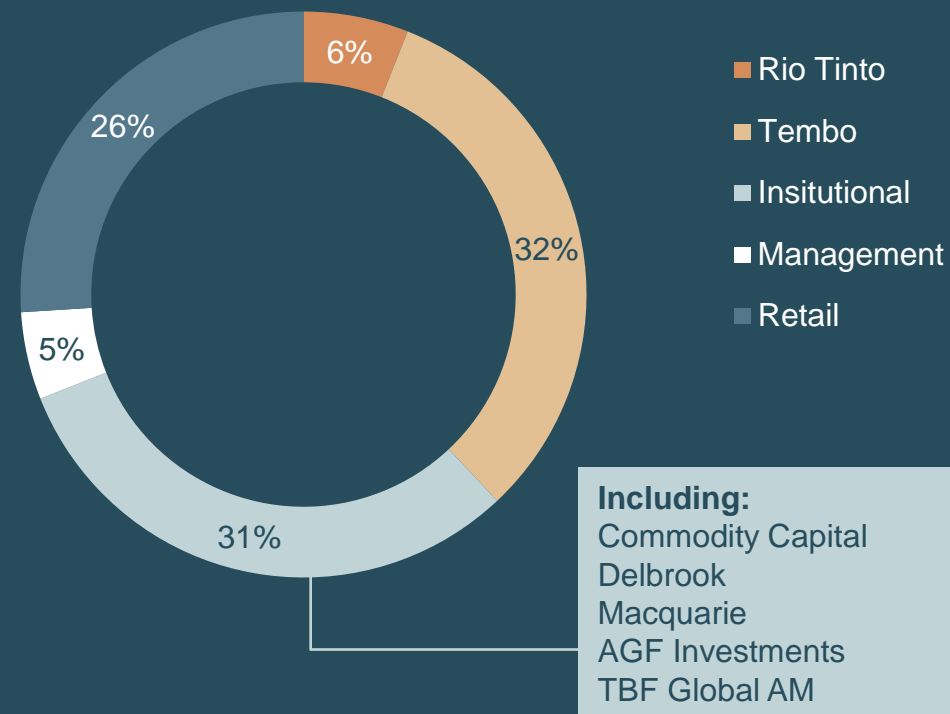
## CAPITAL STRUCTURE

|                                 |                  |
|---------------------------------|------------------|
| Market Capitalization           | <b>C\$195M</b>   |
| Shares Outstanding (M)          | <b>103.9</b>     |
| Warrants (M)                    | <b>6.4</b>       |
| Options (M)                     | <b>2.9</b>       |
| RSU's (M) <sup>(1)</sup>        | <b>0.3</b>       |
| DSU's (M)                       | <b>0.4</b>       |
| Fully Diluted Share Capital (M) | <b>113.9</b>     |
| Cash as at Feb 16, 2023         | <b>US\$31M</b>   |
| Debt                            | <b>Debt Free</b> |

Notes:

(1) RSUs may be issued in shares or cash

## OWNERSHIP



## ANALYST COVERAGE

cg/Canaccord  
Genuity

EXPLORATION  
insights

iA

STIFEL | GMP

CORMARK  
SECURITIES INC.

CAPITAL MARKETS  
HAYWOOD

RBC  
Capital  
Markets

# ASCU: An Emerging Copper Developer in the USA

A Goal to Provide the US with Locally Sourced Copper



**Brownfield  
Exploration and  
Development  
Project in Tier 1  
Jurisdiction**



**Private  
Landownership =  
State and County  
Led Permitting  
process**



**Proposed Copper  
Heap Leach, SXEW  
Operation<sup>(1)(2)</sup>**



**Building Scalability  
and Growth**



**Experienced  
Leadership Team;  
Strong Supportive  
Sponsors**



**Supportive  
Copper Market  
Fundamentals  
ESG Framework  
in Place, Path to  
Net Zero**

# Management Team with Track Record of Execution



**George Ogilvie, P.Eng.**  
**PRESIDENT, CEO & DIRECTOR**

+30 years of management, operating and technical experience in the mining industry. Previously **President & CEO of Battle North (sold to Evolution Mining), CEO of Kirkland Lake, and CEO of Rambler Metals**



**Ian McMullan, P.Eng., MBA**  
**COO**

+25 years of mining experience in operational and management roles. **20 year tenure with Newmont** including responsibility for ramp-up and expansion of Leeville and Carlin Portal (Newmont/Barrick). **Previously VP of Mining at Klondex**



**Nick Nikolakakis, BSc, MBA**  
**VP FINANCE AND CFO**

+27 years of North American executive mining finance experience. Former **VP Finance and CFO of Battle North, Rainy River and Placer Dome, VP Corporate Finance at Barrick and other positions at North American Palladium and BMO Nesbitt Burns.**



**Rita Adiani, LLB Hons**  
**SVP STRATEGY & CORPORATE DEVELOPMENT**

+16 years of mining experience across strategy & business development, investment banking and corporate law. Previously **EVP and Head of Business Development at Xiana Mining, MD at NRG Capital Partners, VP at Societe Generale and Senior Corporate Finance Manager at La Mancha**



**Doug Bowden, MSc.**  
**VICE PRESIDENT, EXPLORATION**

+40 years mining experience throughout North America and Mexico. Responsible for managing exploration programs for Amselco, BP Minerals, Kennecott and Western Uranium. **Senior executive positions held at Gold Summit Corporation, Western Uranium and Concordia**



**Travis Snider, B.Sc, Env Chem, SME**  
**VICE PRESIDENT, SUSTAINABILITY & EXTERNAL RELATIONS**

+20 years experience in the mining industry in Arizona. Previously **Mining Project Manager at Engineering & Environmental Consultants, SVP of Operations for Sierra Resource Group and VP of Mining & Oil operations for Wilcox**



**Alison Dwoskin, CPIR**  
**DIRECTOR, INVESTOR RELATIONS**

+15 years in investor relations. **Formerly Manager, Investor Relations of Klondex Mines and Eastmain Resources.** Began her career at a Toronto-based IR firm, broadly specializing in mining

## STRONG SPONSOR SUPPORT

**RioTinto**

- Global leading diversified metals and mining company with operations in 35 countries.
- Innovating technologies to advance the mining industry
- Shareholder since 2022

## TEMBO CAPITAL

- Private equity fund investing in junior and mid-tier mining companies, with low cost, quality assets managed by high caliber teams
- Shareholder since 2020



Toronto  
Corporate  
Office



Arizona  
Corporate  
Office/Site

# Experienced Board of Directors



**David Laing, B.Sc. Eng**

**CHAIR OF THE BOARD OF DIRECTORS**

+40 years experience in the mining industry with roles across operations, project development, mining finance & M&A. **Previously EVP and Senior VP of Operations for Endeavour Mining, COO of Equinox Gold, True Gold and Quitana Resources. Currently Chair of Fortuna Silver and Director of Northern Dynasty Mineral, Blackrock Silver Corp and Amarillo Gold Corp**



**Thomas Boehlert, ICD.D**

**DIRECTOR**

+30 years in the agribusiness, mining & energy. Experienced finance executive at 6 international public & private resource companies. 14 years' experience in infrastructure and energy project finance banking at **Credit Suisse. Previously EVP, CFO of Bunge Limited, President, CEO of First Nickel Inc., EVP, CFO for Kinross Gold Corporation & CFO of Texas Genco. Previously also non-executive director of Harry Winston and TMAC Resources**



**George Ogilvie, P.Eng.**

**PRESIDENT, CEO & DIRECTOR**

+30 years of management, operating and technical experience in the mining industry. **Previously President & CEO of Battle North (sold to Evolution Mining), CEO of Kirkland Lake, and CEO of Rambler Metals.** Began his career with AngloGold in South Africa, also held roles at Hudbay and served as Area Manager for Dynatek



**Alan Edwards, B.Sc. Eng, MBA**

**DIRECTOR**

+35 years of operational and executive experience in the mining sector. **Previously CEO of Oracle Mining, President & CEO of Copper One and Frontera Copper, COO of Apex Corporation. Currently also director of Americas Gold and Silver, Entrée Resources & Orvana Minerals**



**Mark Palmer, B.Sc**

**DIRECTOR**

+30 years in the mining industry with roles in finance and industry. Currently Partner at **Tembo. Previously at Rothschild and responsible for EMEA Mining Investment Banking at UBS. Also served as Vice Chair of Canaccord Genuity. Currently also serves on the board of Orion Minerals**



**Sarah Strunk**

**DIRECTOR**

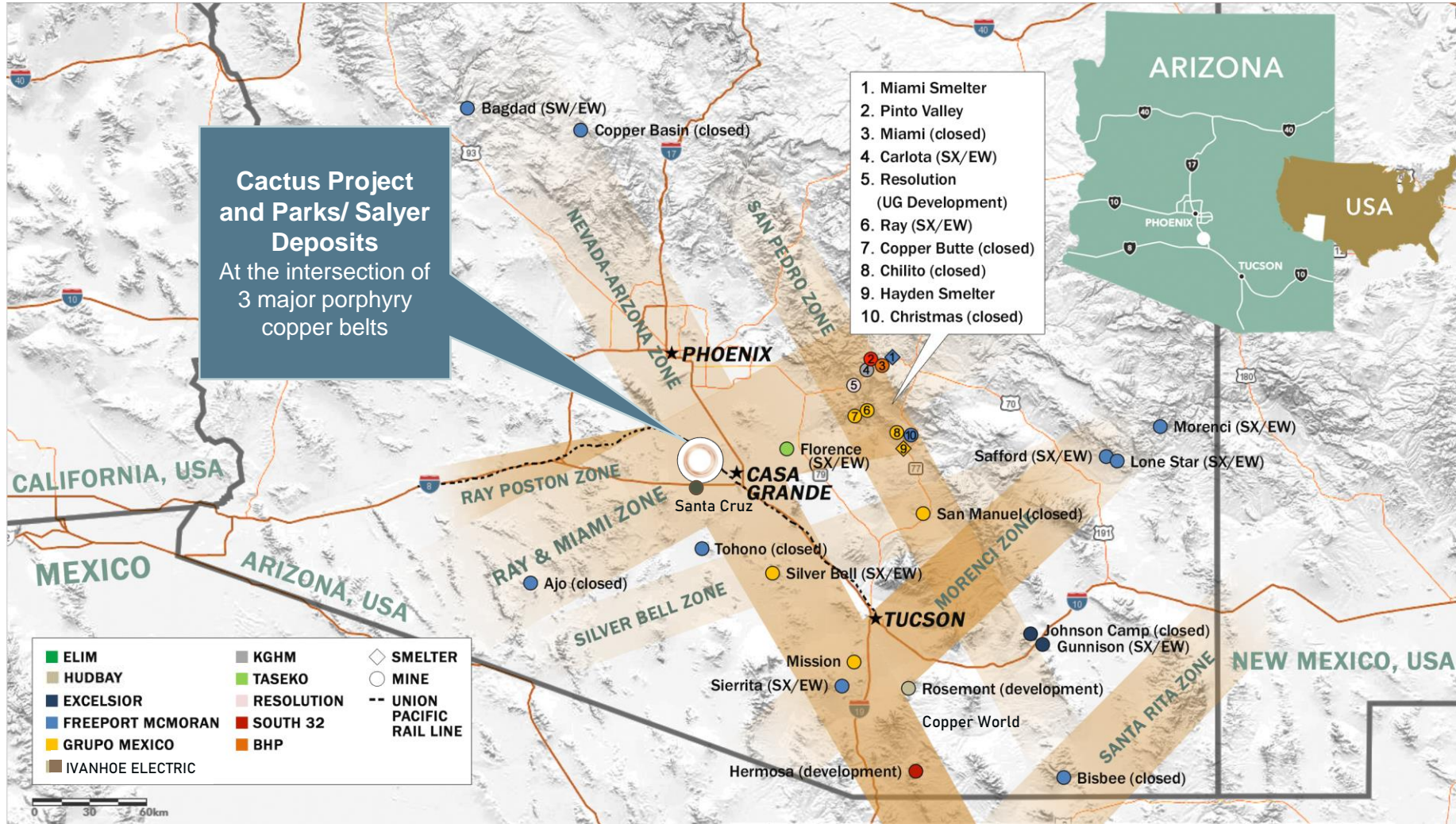
+37 years in the mining law, with commercial, legal and transactional experience. Currently Chair at **Fennemore Craig. Previously at Cyprus Amax Minerals Corporation. Also served on the Board of Arizona Mining Association, as Trustee of the Foundation for Natural Resource and Energy Law, and as Chairman of Brio Gold**



# Location Advantage

# ARIZONA: Globally Recognized Top Tier Jurisdiction to Operate

Accessible Infrastructure and Skilled Labour-force



Arizona is the **USA's leading copper-producing state** which accounted for **70%** of domestic output of copper in 2022<sup>(1)</sup>



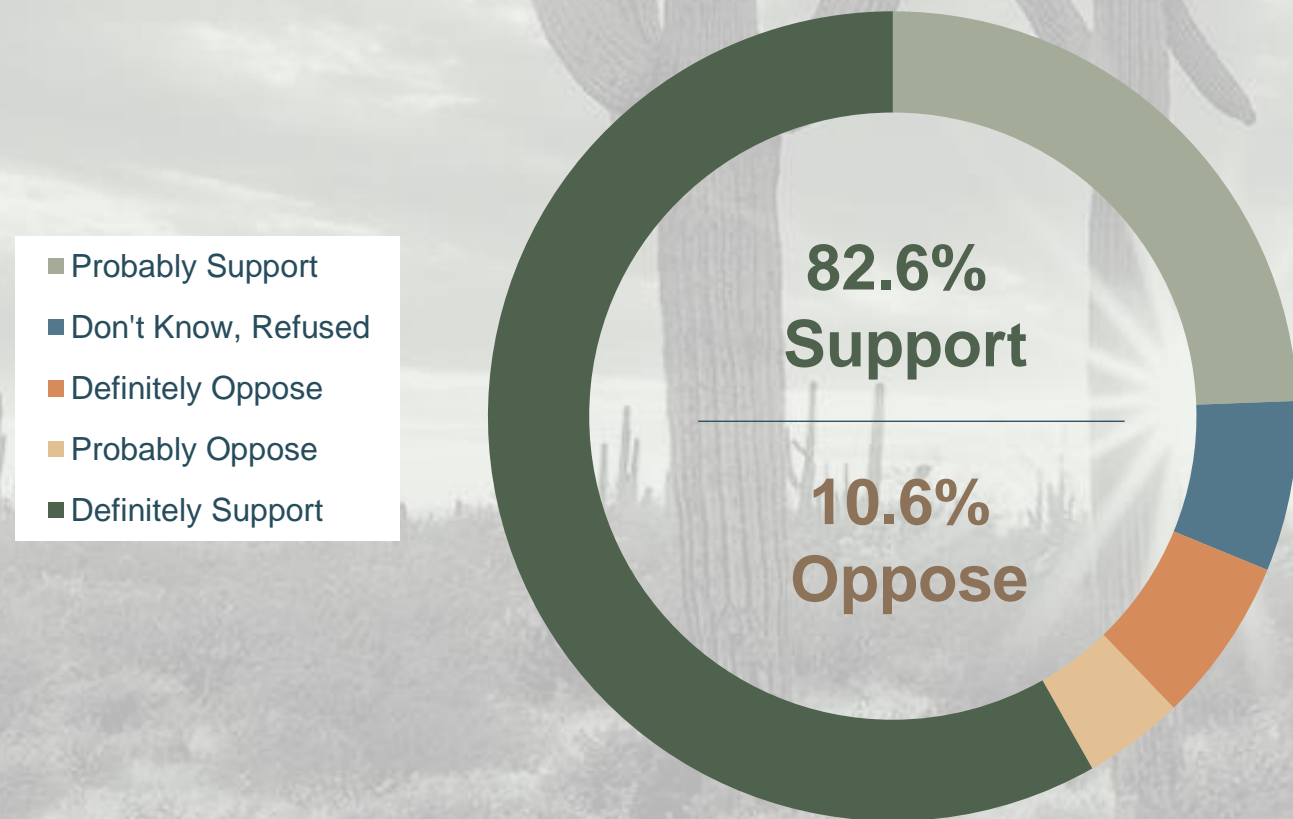
Arizona ranked **No. 5** for the year 2021 in Fraser Institute's Investment Attractiveness Index<sup>(2)</sup>

Notes: (1) USGS Copper Data Sheet- Mineral Commodity Summaries 2023 (2) Fraser Institute Annual Survey of Mining Companies 2021, available at [www.fraserinstitute.org](http://www.fraserinstitute.org)



# Local Support for the Cactus Mine

Overwhelming support for the Cactus Mine in Casa Grande – economic survey shows \$8.5 Billion of indirect and direct revenues to the local community.



|              |               |
|--------------|---------------|
| GOP:         | 93.0% Support |
| Dem:         | 66.7% Support |
| PND:         | 84.4% Support |
| IND:         | 91.1% Support |
| Casa Grande: | 81.5% Support |
| Maricopa:    | 84.8% Support |

Polling completed by Highground Public Affairs Consultants in December 2021

# Major Permits in Place – De-risked Project Development on Private Land

Water Rights in Hand, Access to Water Onsite

## COMPLETED PERMITS

| Permit   | Permit Office |
|--|---------------|
| Air Quality Dust Permit  | Pinal County  |
| Arizona Pollution Discharge Elimination System (402) (SWPPP) ★   | ADEQ          |
| Water Rights ★   | ADWR          |
| Aquifer Protection Permit (for Stockpile Project) ★  | ADEQ          |
| General Plan Amendment (including development agreement and city zoning change from residential to industrial) ★ | Casa Grande   |
| Aquifer Protection Permit (Major Amendment) ★  | ADEQ          |

★ Indicates major permit

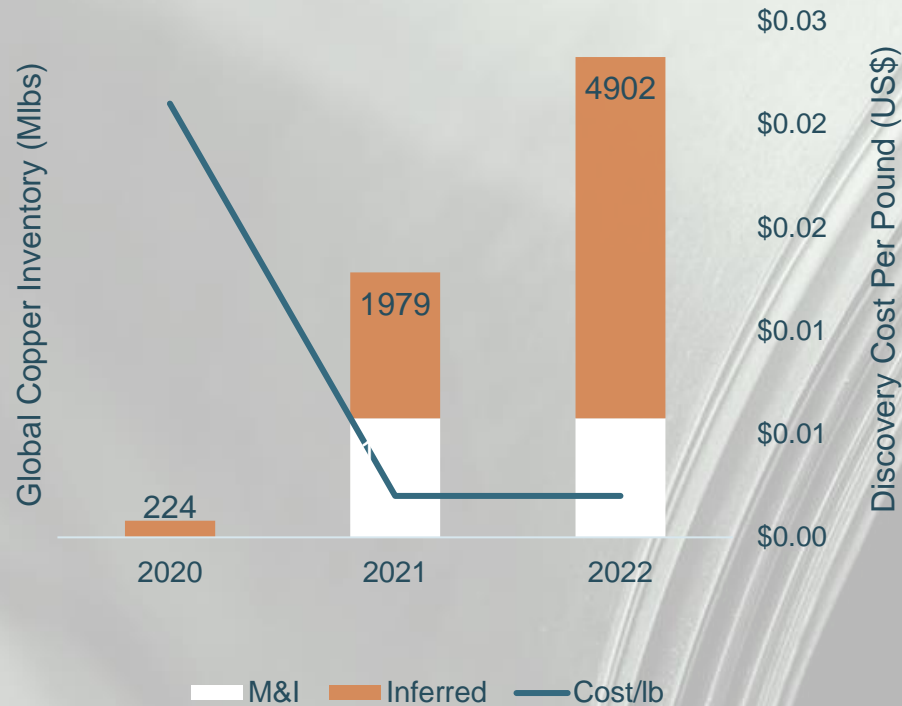
## OUTSTANDING PERMITS – STREAMLINED PROCESS

| Permit  | Permit Office                | Status                                       |
|---|------------------------------|--|
| Industrial Air Permit ★                           | Pinal County                 | Submission being review                      |
| Mined Lands Reclamation Permit (MLRP) ★           | AZ State Mine Inspector      | Submission being review                      |
| Reclamation Bond                                  | AZ State Mine Inspector      | Application post-PFS                         |
| Radio Station License, Wireless Communication     | FCC                          |  |
| Notice of Intent to Clear Land                    | AZ Department of Agriculture | Required pursuant to a construction decision |
| Mining Construction Permits                       | Pinal County                 |  |
| Above-Ground Tank Storage                         | ADEQ                         |  |
| State Notice of Startup/Miner Registration Number | AZ State Mine Inspector/MSHA |  |

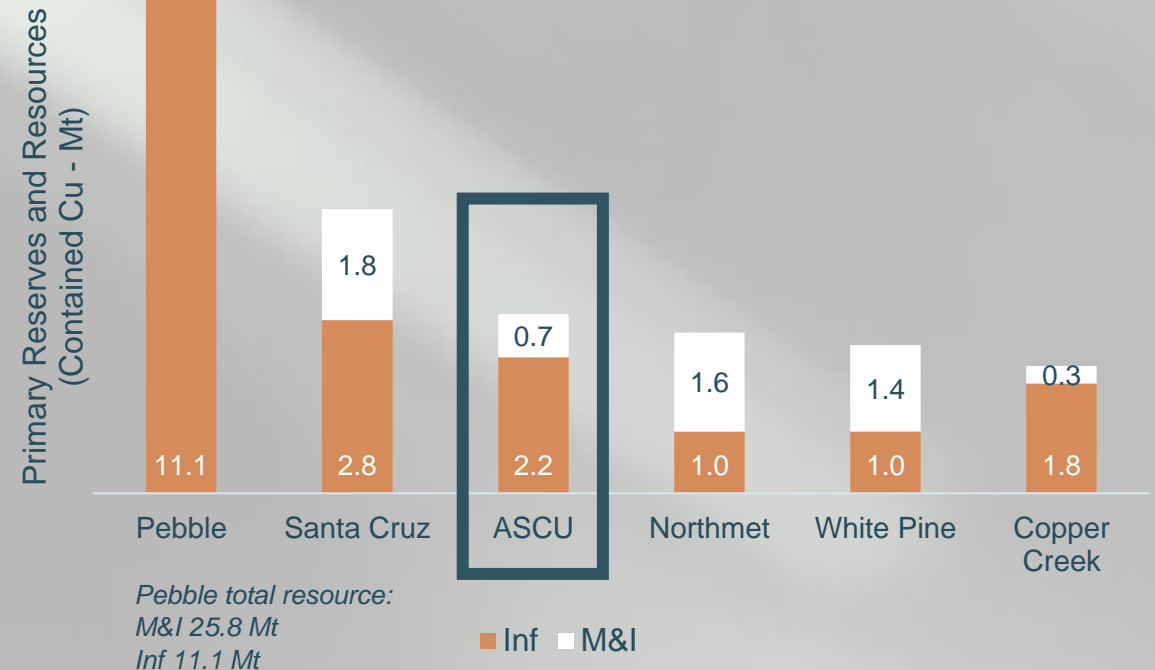
# Among the Most Developed Independent US Development Copper Assets

Permitting well advanced and on track to complete a PFS

## LOW DISCOVERY COST PER POUND



## SIGNIFICANT INDEPENDENT COPPER DEVELOPMENT ASSETS IN THE USA



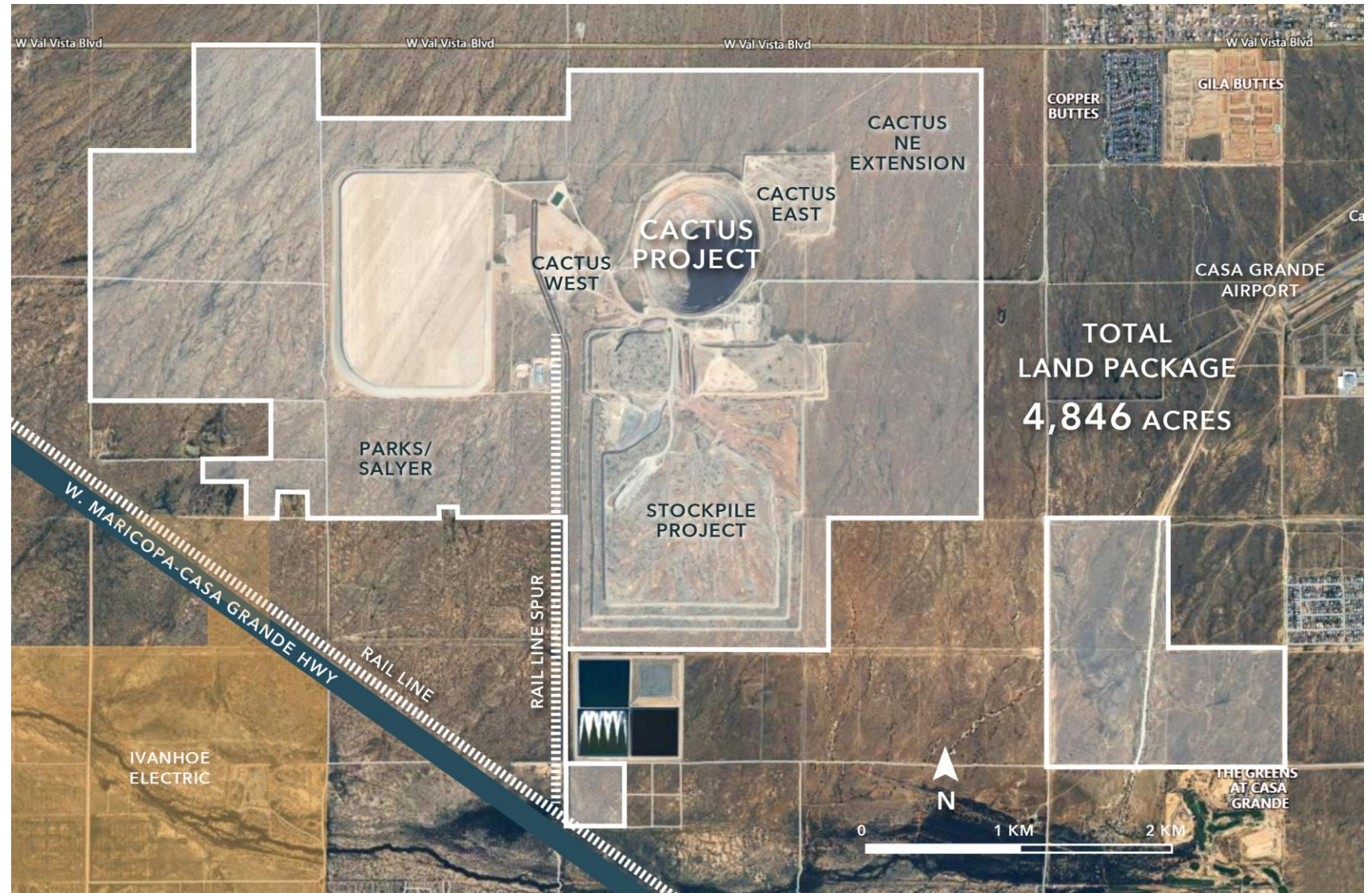
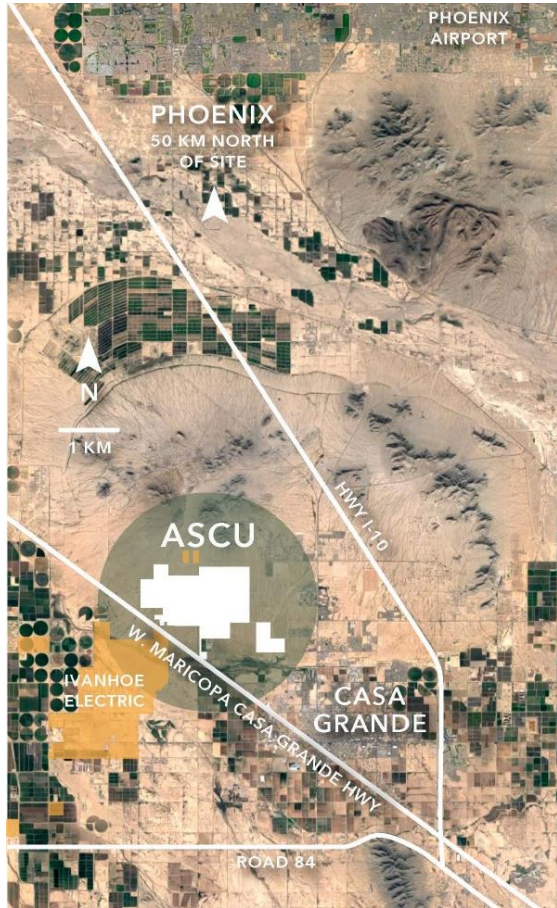
Source: S&P Capital IQ USA and company reports | Metals and Mining Projects based on active, independent, development stage assets in the USA, as of Feb 15, 2022. Not including projects currently under JV. See PR dated Sept 28, 2022 for disclosures regarding the Cactus and Parks/Salyer MRE.



# ASCU Projects

# Cactus Project, Low-Risk Brownfield Project

Leachable Base Case Economics / Optionality for Primary Sulphides



# Brownfield Infrastructure Advantage

Valued at approximately \$100M



- Offices, core shack and ancillary buildings
- Power substation
- Onsite metallurgical testing
- Water wells and water pond permitted
- Access to water

- Rail line (to ship concentrate to refinery)
- Stockpile (part of Integrated Cactus PEA)
- Vent raise, shaft and underground workings (has not been upgraded)

| PEA BASE CASE PROJECT METRICS <sup>(1)(2)</sup><br>Cactus Mine's Oxide and Enriched Material |  |
|--|--|
|  | Over the Life of Mine  |
| <b>Mine Life</b>   | 1.27 B lbs of Cu over 18 years   |
| <b>Average Production</b>  | 28 ktpa (56Mlbs); Peaks at 40 ktpa (80Mlbs)  |
| <b>Operating Costs</b>   | <ul style="list-style-type: none"> <li>• US\$9.06/ton</li> <li>• US\$1.55/lb</li> <li>• US\$1.88/lb (incl. 3.18% royalty on Cactus)</li> </ul> |
| <b>Capex</b>   | <ul style="list-style-type: none"> <li>• Initial Construction Capex: US\$124M</li> <li>• Sustaining Capex over LOM: US\$340M</li> </ul>        |
| <b>Free Cash Flow (Post tax Undiscounted)(US\$3.35/lb Cu)</b>                                | <ul style="list-style-type: none"> <li>• US\$960M</li> </ul>   |
| <b>NPV8 Post-Tax</b>   | <ul style="list-style-type: none"> <li>• \$312 M</li> </ul>  |
| <b>IRR Post-Tax</b>  | <ul style="list-style-type: none"> <li>• 33%</li> </ul>  |



### Upcoming PFS to Expand on PEA Base Case and Test Sulphide Leaching Optionality

Between the PEA and the forthcoming Prefeasibility study, ASCU is considering the following:

- Mining inventory review to include from:
  - Base Case: Cactus West, Cactus East, Stockpile oxides and enriched material
  - Parks/Salyer oxide and enriched material
  - OPTIONALITY: Primary Sulphides
- Development plan sequencing
- Metallurgical recoveries
- Operating cost parameters
- Capital cost parameters
- Macro inputs

Sources/Notes: (1) Integrated Cactus PEA, Table 1-6, 1-7 (2) The Integrated Cactus PEA is preliminary in nature, it includes inferred mineral resources that are considered too speculative geologically to have economic considerations applied to them that would enable them to be categorised as mineral reserves and there is no certainty that the preliminary economic assessment will be realised

(3) Mineralized Material Sources:

1. Stockpile
2. Cactus East
3. Cactus West
4. Parks/Salyer
5. Primary Sources

# Cactus Mine Leachable-Only Mineral Resource Estimate

Grades Significantly Increase Underground

| LEACHABLE MINERAL RESOURCE |                       |                      |                           |              |                           |
|----------------------------|-----------------------|----------------------|---------------------------|--------------|---------------------------|
|                            | Total                 | Open Pit & Stockpile |                           | Underground  |                           |
| <b>Indicated</b>           | <b>1,065,900 Klbs</b> | 919,700 Klbs         | <b>0.696%<br/>Cu TSol</b> | 146,200 Klbs | <b>0.954%<br/>CuTSol</b>  |
| <b>Inferred</b>            | <b>1,211,300 Klbs</b> | 672,100 Klbs         | <b>0.334%<br/>Cu TSol</b> | 315,700 Klbs | <b>0.881%<br/>Cu TSol</b> |

**UG high-grade  
contributing  
to economics**

Sources/Notes: Integrated Cactus PEA, Tables 14-16 and 14-17

Maiden Reserves expected with PFS – 70-80% conversion expected

Almost 50% of Cactus Resources comprise of Indicated Resources

Infill to measured drilling to resume in Q2 2023

Organic upside potential exists in-pit and on 4 km mine trend



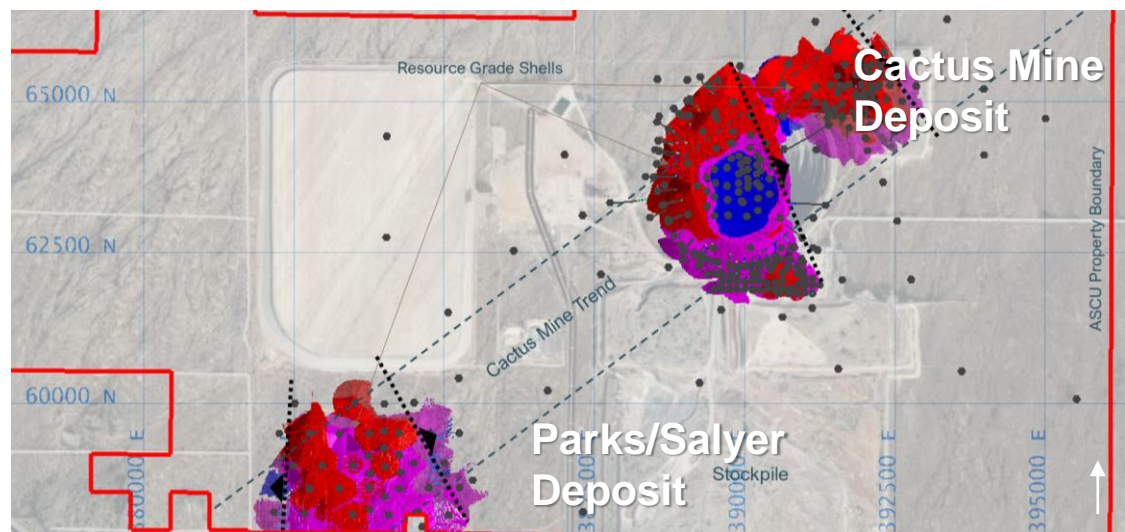
# Parks/Salyer Project – Grades ✓ Thicknesses ✓

Opportunity to Integrate into the Cactus PFS

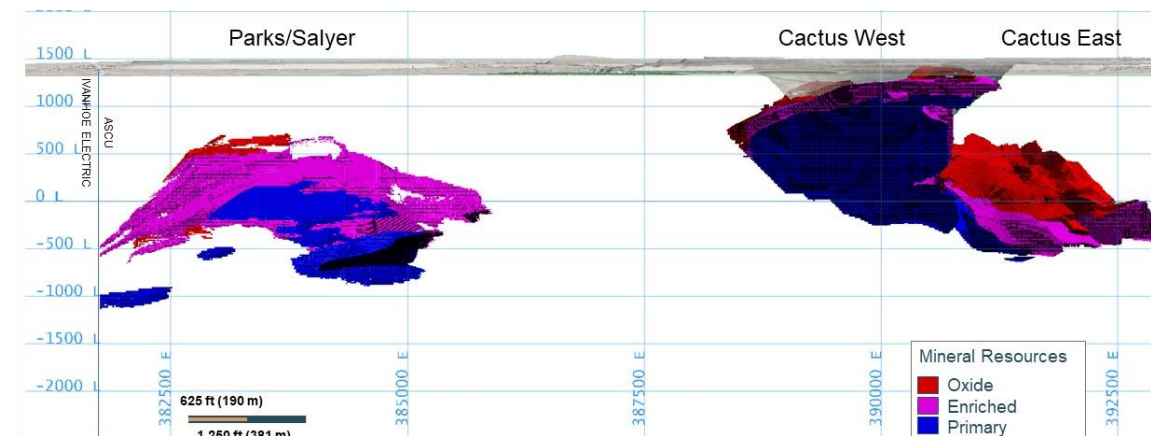
- Mineral resource grade in excess of 1%
- Newly defined deposit is being reviewed for inclusion to the Base Case project for the upcoming PFS
- Traditional horst-graben copper porphyry system from P/S, extending northeast beyond Cactus East
- Drilling Programs to upgrade to maiden reserves with the PFS:
  - Currently infill to indicated program from current inferred category (105,000 ft program) for upcoming PFS
  - Q2-Q4 2023 infill program (90,000 ft program) to upgrade to the measured category spacing for FS in 2024

|  |   |
|--|---|
| <p><b>Contained Copper</b><br/><b>2.9 B lbs</b></p> <p>Ox and Enr <b>84%</b>      Primary <b>16%</b></p> | <p><b>Grade</b><br/><b>1.015% T Cu</b></p> <p><b>1.06% T Sol Cu</b></p> |
| <p><b>Contained Copper</b><br/><b>1.46 M tons</b></p>  | <p><b>Tons</b><br/><b>143.6 M</b></p>                                   |

## PLAN VIEW



## OBLIQUE VIEW



Source: See slide 37 for notes to the mineral resource estimate. Effective date August 31, 2022

# Beyond the Base Case: Primary Sulphide Optionality

Currently column leach testing primary sulphides via Rio Tinto's Nuton™ technologies

- Initial testing showed +72% leaching recoveries of primary sulphides
- Technology assumes simple heap leach and SX/EW plant flowsheet

If successful, includes 1B+ pounds of copper for assessment in the upcoming PFS

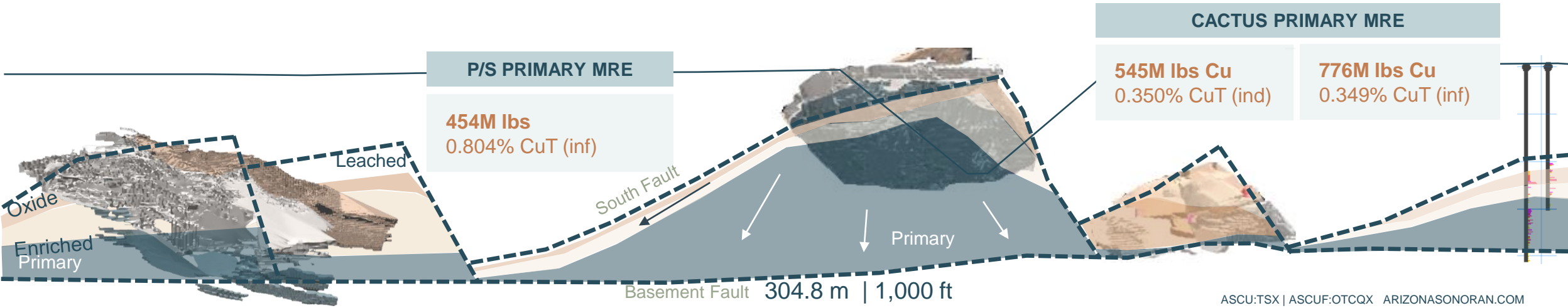
- Primary mineralization open around Cactus West and NE of Cactus East

**Project Primary Indicated**  
**545 M lbs**

**Project Primary Inferred**  
**1.2 B lbs**

## ABOUT NUTON™

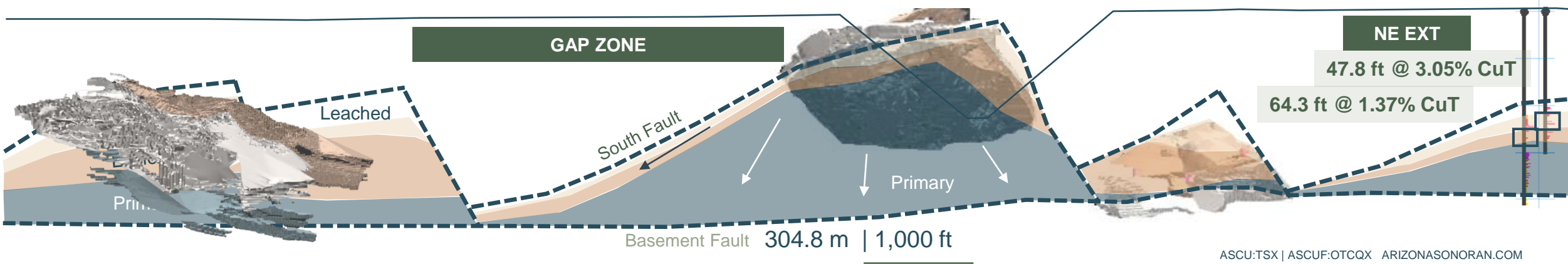
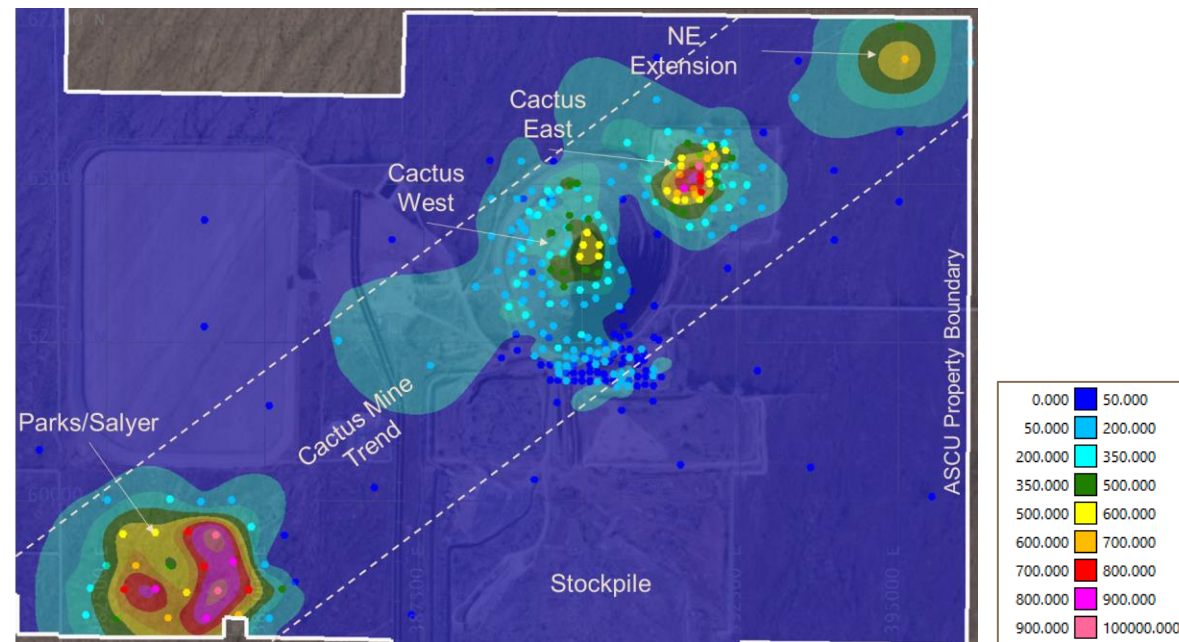
- Nuton™ is a proprietary suite of copper leach technologies
- Potential to unlock low-grade copper sulphide resources, copper bearing waste and tailings, and achieve higher copper recoveries on oxide and transitional material
- Potential to deliver leading environmental performance
- Testing material from: Los Azules, Argentina (McEwen Copper), Tantahuatay-AntaKori, Peru (Regulus Resources), Gunnison, Arizona (Excelsior)



# Beyond the Base Case: Exploration along 4 km Mine Trend

## Building Scale and Potential Future Operational Pipeline

- Ionic leach program and magnetics show highly prospective zones all along the 4 km porphyry copper mine trend
- Gap Zone: Historic condemnation drilling extended 100 ft in depth
- NE Extension: Historic drilling intercepted 3% Cu, approx. 0.5mi from Cactus East
- A 20,000 ft (6,100 m) exploration program is being considered



# Leachable Material Metallurgical Programs

Simple heap-leach and SXEW process for Base Case and Option with Primary Sulphides

01

## Cactus Programs complete with favourable leach cycles

- Enriched Material is acid generating, reducing reliance on external acid sources

02

## Parks/Salyer Met Programs currently underway in onsite facility

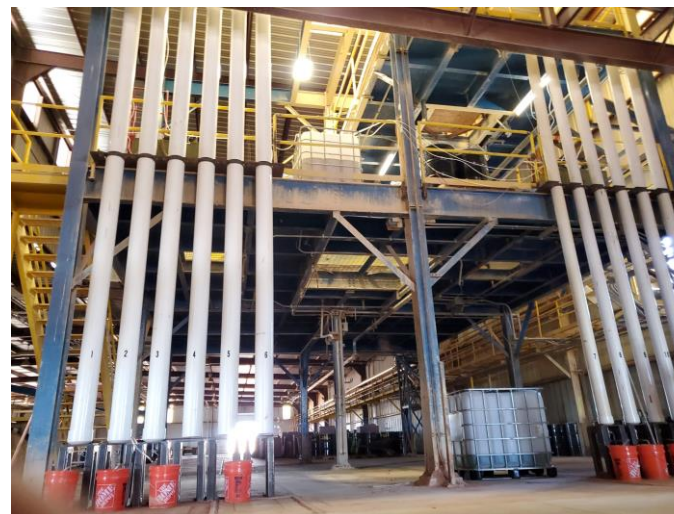
- 20 ft columns online (Stockpile, P/S, Cactus)
- 30 ft columns being constructed
- Initial views indicate similarities to Cactus results

03

## Rio Tinto's Nuton innovations department well underway testing primary sulphides

- Columns began in late 2023

| Cactus Met Program (updated Feb 2022) | Leach Cycle             | Recoveries   | Gross Acid Consumption (lb/ton) | Net Acid Consumption (lb/ton) |
|---------------------------------------|-------------------------|--------------|---------------------------------|-------------------------------|
| Stockpile (Oxide)                     | 90 day leach cycle      | 90% (% CuAS) | 22                              | 16                            |
| OP & UG (Oxide)                       | 90 day leach cycle      | 92% (% CuAS) | 22                              | 16                            |
| OP & UG (Enriched)                    | 200-220 day leach cycle | 73% (% CuCN) | 21                              | 0                             |



Cactus mine site above, with Trusone Facility on the right side of the image

Inside the Trusone building: 12 online 20 ft columns online, image on the right

Updated metallurgy, see press release dated February 23, 2022

# The Cactus Project Timeline

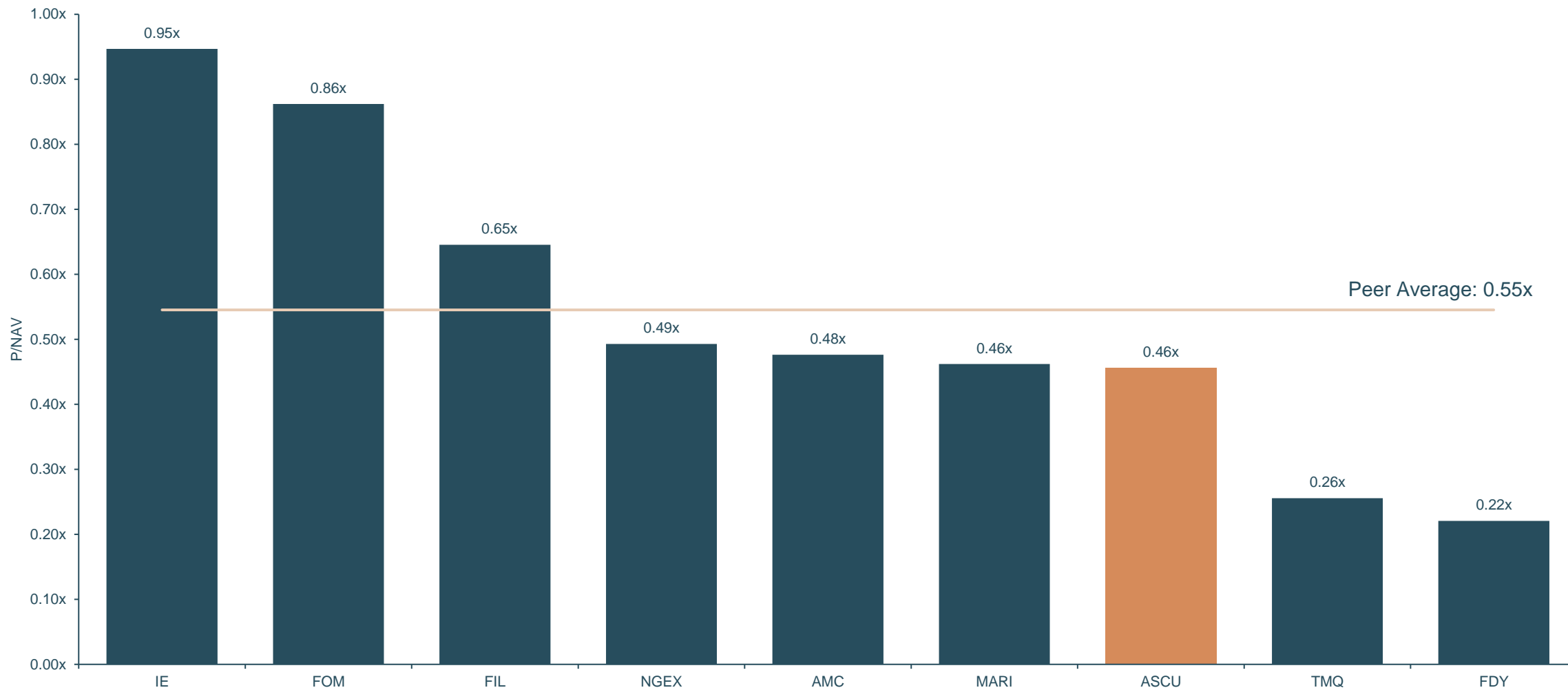
Integrating Cactus and Parks/Salyer with the Primary Sulphide Material

| Task                                 |   | 1Q23 | 2Q23 | 3Q23 | 4Q23 | 1Q24 | 2Q24 | 3Q24 | 4Q24                          | 2025 | 2026 | 2027 |
|--------------------------------------|---|------|------|------|------|------|------|------|-------------------------------|------|------|------|
| PFS Drilling / Assays                |   | █    | █    |      |      |      |      |      |                               |      |      |      |
| Metallurgy                           |   | █    | █    | █    |      |      |      |      |                               |      |      |      |
| Detailed Mine Design and Engineering |   | █    | █    | █    |      |      |      |      |                               |      |      |      |
| Pre-Feasibility                      |   |      |      |      | █    | ★    |      |      |                               |      |      |      |
| Permitting                           |   | █    | █    | █    | █    | █    | █    | █    |                               |      |      |      |
| Feasibility Study                    |   |      |      |      |      |      | █    | ★    |                               |      |      |      |
| Contingent on Positive FS            | Construction Decision and Project Financing |      |      |      |      |      | █    | █    |                               |      |      |      |
|                                      | Construction                                |      |      |      |      |      |      |      | 18 month build as per the PEA |      |      |      |
|                                      | Production                                  |      |      |      |      |      |      |      |                               |      | █    |      |



# Peer Benchmarking

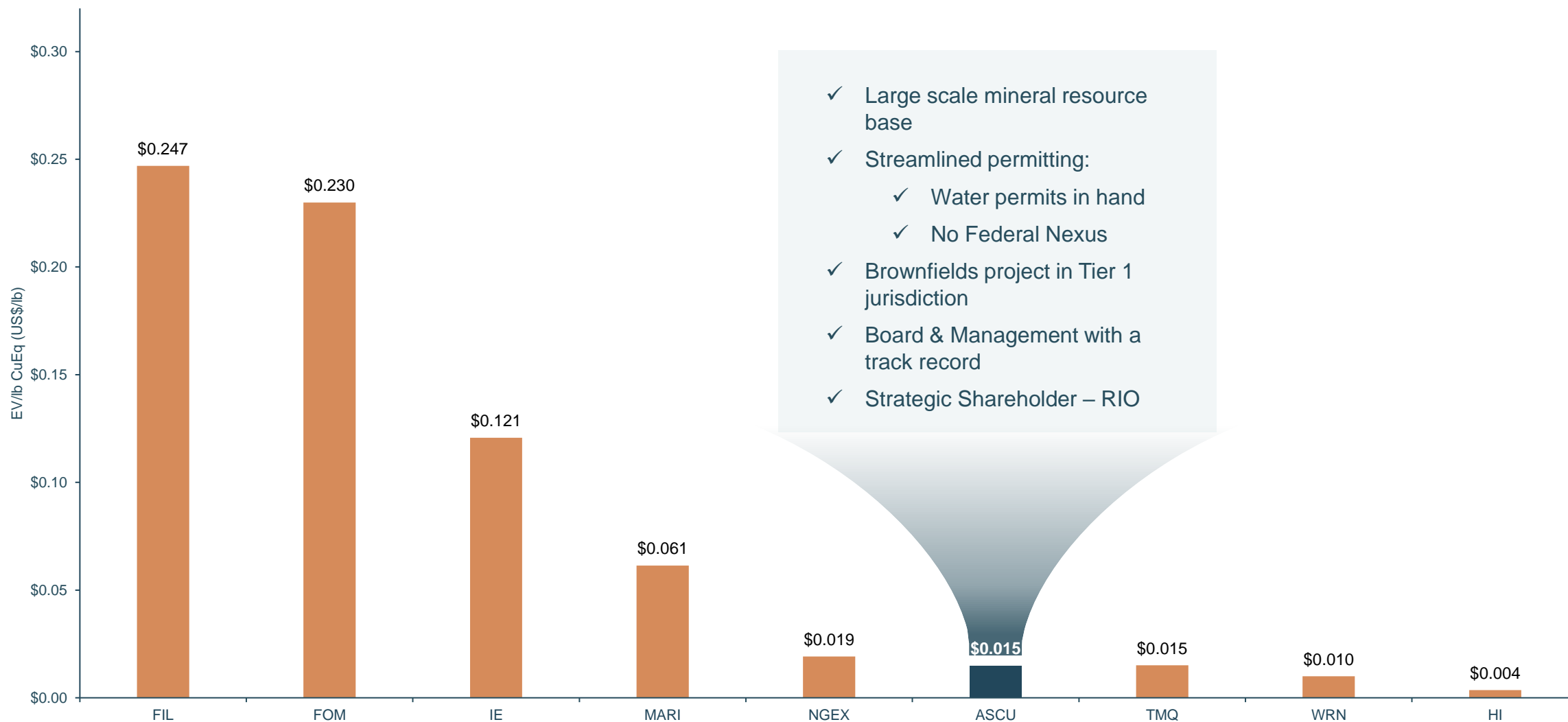
# Copper Development Peers (P/NAV)



Source: Company Filings, Capital IQ, February 15, 2023

# Value Proposition: Benchmarking to Copper Developers












Low-Risk Copper Developer in Top Tier Jurisdiction



Source: Company Filings, Capital IQ. February 16, 2023



# Benchmarking ASCU to Copper Developers

|  |  |  |  |  |  |  |  |  |  |  |  |
|--|---|--|---|---|---|---|---|---|---|---|---|
| Market Capitalization (C\$)                                  | \$169M  | \$1.4B   | \$2.8B  | \$784M  | \$304M  | \$534M  | \$533M  | \$315M  | \$112M  | \$59M   | \$133M  |
| Asset Name   | Cactus / Parks Salyer   | Santa Cruz / Tintic  | Filo del Sol  | McIlvenna Bay   | Marimaca  | Los Helados   | Kay   | Casino  | Arctic  | Copperwood  | Cu Creek / Contact Cu   |
| Economic Study Level   | PEA   | Resource   | PFS   | FS  | PEA   | Resource  | Historic  | PEA   | FS  | FS  | Historic  |
| Development Type (Greenfields or Brownfields)                | Brownfields   | Greenfields  | Greenfields   | Brownfields   | Greenfields   | Greenfields   | Brownfields   | Greenfields   | Greenfields   | Greenfields   | Greenfields   |
| Jurisdiction   | Arizona   | Arizona / Utah   | Argentina   | Saskatchewan  | Chile   | Chile   | Arizona   | Yukon   | Alaska  | Michigan  | Arizona   |
| Fraser Institute Policy Perception Index (Rating Out of 100) | 85  | 85 / 91  | 77  | 91  | 69  | 69  | 85  | 80  | 85  | 72  | 85  |
| Measured & Indicated Attributable Resource (Mlbs CuEq)       | 1,611   | 6,197  | 6,019   | 2,096   | 1,477   | 14,609  | -   | 14,830  | 2,629   | 5,259   | 4,126   |
| Inferred Attributable Resource (Mlbs CuEq)                   | 4,894   | 4,073  | 2,116   | 337   | 712   | 4,658   | -   | 6,605   | 2,792   | 3,723   | 673   |
| Mine Life (Years)  | 18  | -  | 13  | 18  | 12  | -   | -   | 27  | 13  | 10  | -   |
| Annual Attributable LOM Production (Mlbs CuEq Payable)       | 62  | -  | 274   | 65  | 79  | -   | -   | 329   | 135   | 74  | -   |
| LOM C1 Cash Cost (US\$/lb CuEq)                              | \$1.55  | -  | \$1.23  | \$1.79  | \$1.22  | -   | -   | \$1.00  | \$1.69  | \$1.74  | -   |
| Capital Intensity (US\$/lb CuEq)                             | \$2.20  | -  | \$4.62  | \$4.47  | \$3.61  | -   | -   | \$10.45   | \$4.81  | \$3.69  | -   |
| Headline After-Tax IRR (%)                                   | 33%   | -  | 23%   | 22%   | 34%   | -   | -   | 18%   | 23%   | 18%   | -   |
| Headline After-Tax NPV (US\$M)                               | \$312   | -  | \$1,280   | \$370   | \$524   | -   | -   | \$2,334   | \$1,108   | \$117   | -   |
| Economic Study Long-Term Copper Price (US\$/lb Cu)           | \$3.35  | \$3.70   | \$3.00  | \$3.50  | \$3.15  | \$3.00  | -   | \$3.60  | \$3.00  | \$3.10  | \$3.80  |

Source: S&P Capital IQ. Company Filings. The Integrated Cactus PEA is preliminary in nature, it includes inferred mineral resources that are considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as mineral reserves and there is no certainty that the preliminary economic assessment will be realized. Data as of February 15, 2023

## High Quality Project

A simple porphyry copper project in a top tier jurisdiction with robust economics and low capital intensity

## Growth focused

Multi-billion-pound project pipeline includes Cactus, Parks/Salyer leachable material, sulphide optionality and exploration opportunity

## A Team with a Successful Track Record

A proven track record of delivering successful mining projects. The team takes an environmental and socially conscious approach to project development



**ARIZONA SONORAN**  
COPPER COMPANY

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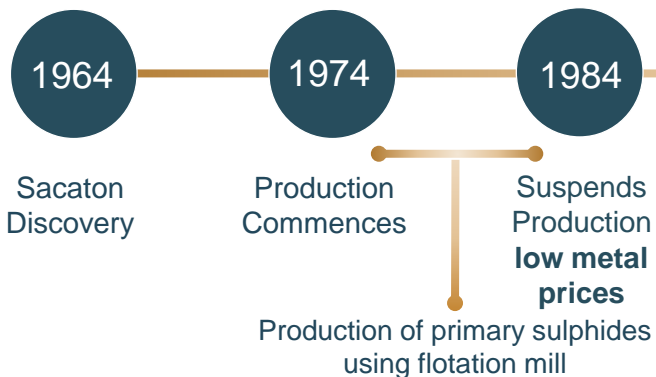
[www.arizonasonoran.com](http://www.arizonasonoran.com) | [www.cactusmine.com](http://www.cactusmine.com)



# Appendix

# The Cactus Mine Project History and Path Forward

## ASARCO

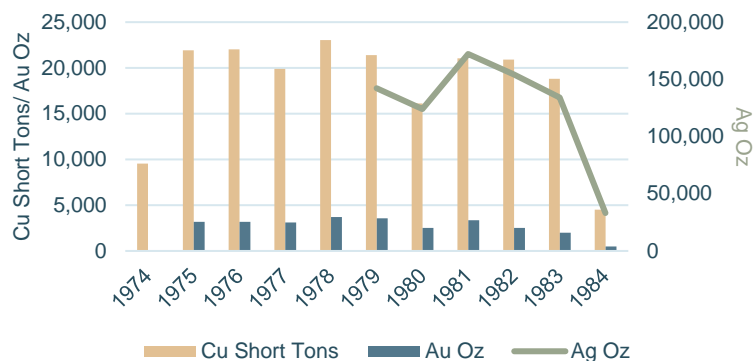


Sacaton  
US\$20M  
Remediation  
Complete  
2019

## ARIZONA SONORAN COPPER COMPANY



## HISTORICAL PRODUCTION (CONCENTRATE)



# Our ESG Framework – Setting the Pace for Net Zero Carbon Emissions



- ASCU is actively exploring use of renewable energy for its operations with the goal of becoming a “Net Zero Carbon Emissions” copper producer
- Ability to also reduce carbon footprint by Arizona Public Service’s transition to renewable resources (65% by 2030 and 100% by 2050)

# Journey Towards Net Zero - Partnership with Minviro

## PFS / FS

- Design parameters used to scope impact
- GHG inventory assessment (Scope 1, 2 and 3)
- Consideration of impact of diesel fuel, sulfuric acid, carbonate minerals, electricity, cement in operations across Scopes 1 and 2
- 100% renewable energy solutions
- Careful water use and management
- Waste and pollution management – air quality, dust management and tailings management
- Establishing carbon trading and offset policies/trading to the extent required

## PRODUCTION AND REPORTING

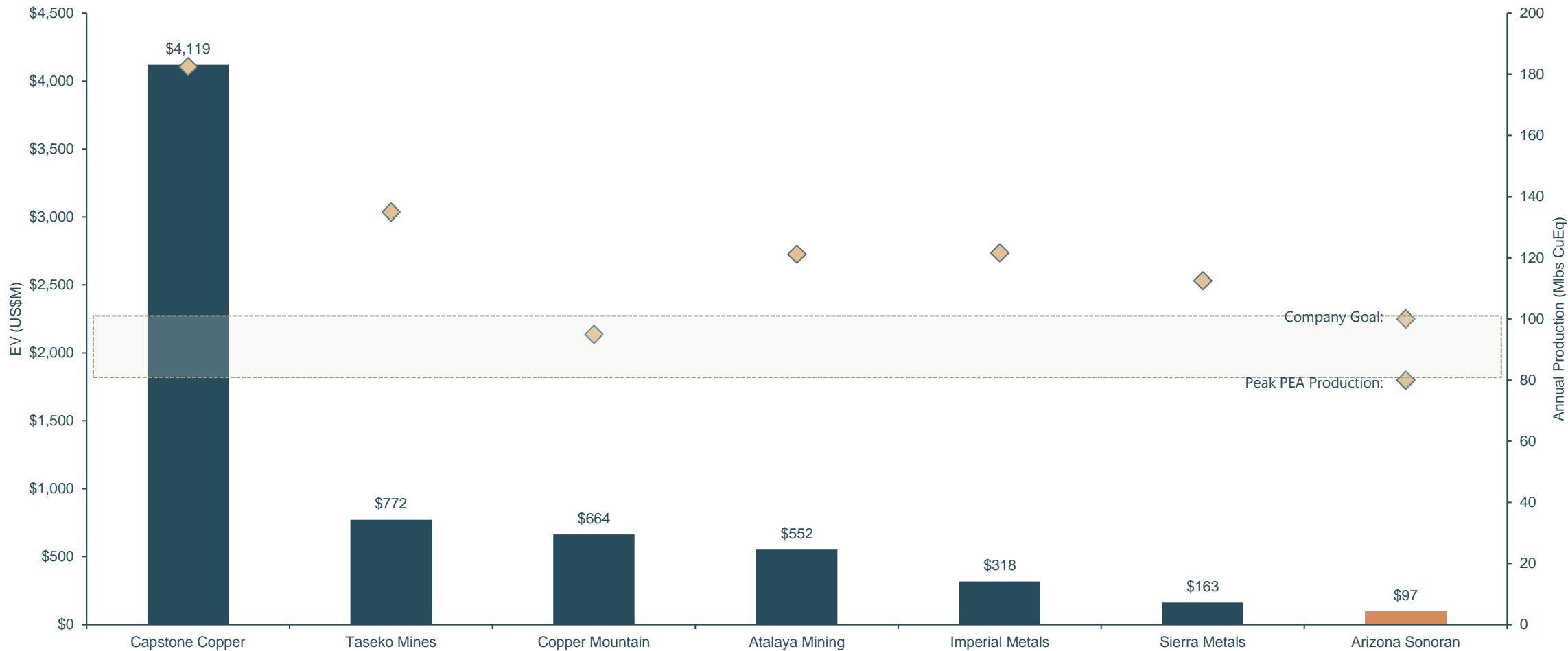
- Establishing reporting KPIs
- Reporting to international standards (e.g. SASB, TCFD)

## Construction

- Investment in low carbon technologies and minimizing direct impacts (Scope 1 & 2)
- Supply chain management to minimize Scope 3 emissions
- Local procurement and workforce hiring generating positive social impact
- Compliance with global standards (e.g., Equator Principles) to align with debt financing



# Junior Copper Producer Benchmarking (Enterprise Value and Production)



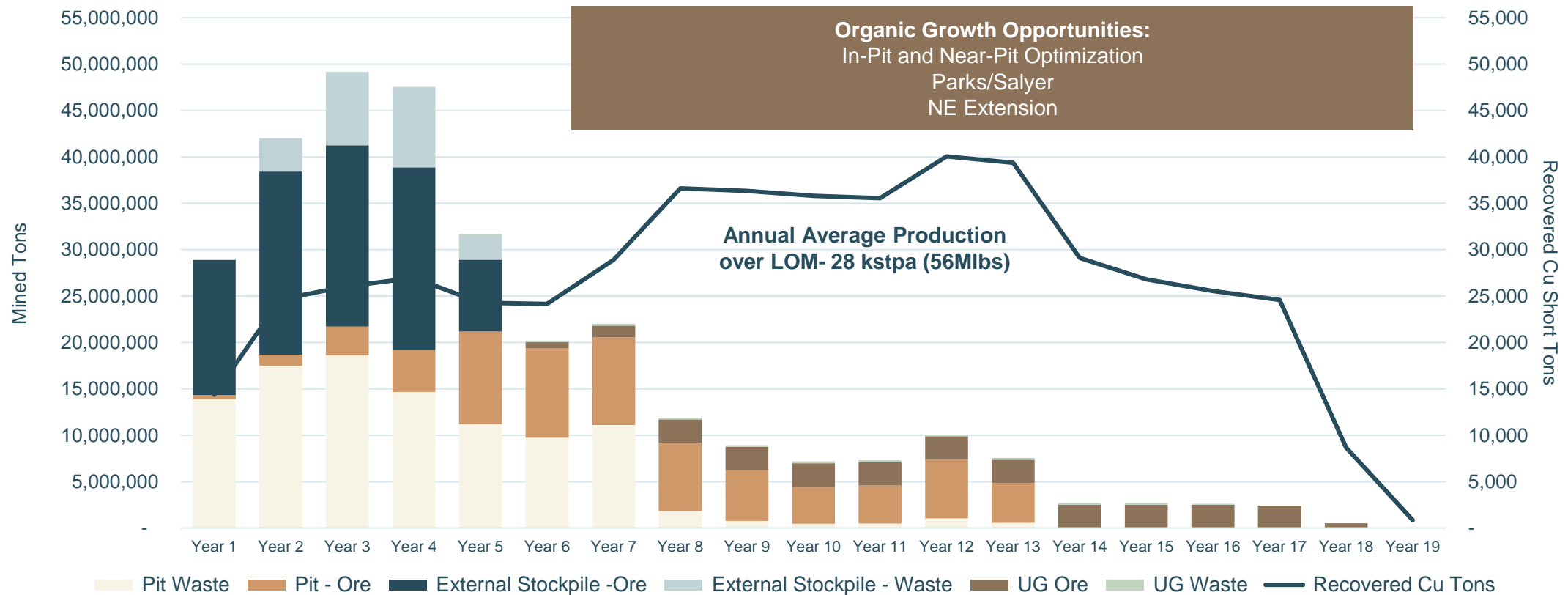
Source: Company Filings, Capital IQ – February 15, 2023

(1) Arizona Sonoran production shown as peak production of ~80 Mlbs, an additional data point is shown as the Company's goal of +100 Mlbs of annual copper production



# Cactus PEA Production Schedule – Opportunity beyond 40 kstpa (80 Mlbs)

**CACTUS PRODUCTION SCHEDULE<sup>(1)(2)</sup>**  
**Heap Leach & SX/EW Processing**



**The mining schedule reflects a layered mining plan targeted at early production with low capex, maximising project returns. Initial plant capacity is designed at 22 kstpa with expansion to 35 kstpa concurrent with underground mining in full ramp up by year 7 of the project start-up. Significant organic expansion opportunities exist**

Sources/Notes: (1) Integrated Cactus PEA, Table 16-8 and figure 16-23 (2) The Integrated Cactus PEA is preliminary in nature, it includes inferred mineral resources that are considered too speculative geologically to have economic considerations applied to them that would enable them to be categorised as mineral reserves and there is no certainty that the preliminary economic assessment will be realized

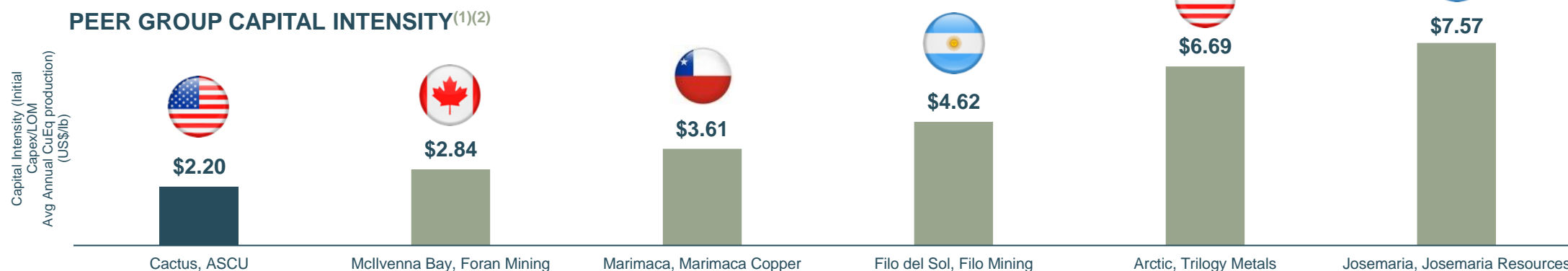
# Robust Returns from Lowest Capital Intensity vs Peer Group

Between the PEA and the upcoming Prefeasibility study, ASCU is reviewing the following:

- Mining inventory (potential to include P/S and Primary Material)
- Development plan sequencing
- Metallurgical recoveries
- Operating cost parameters
- Capital cost parameters
- Macro inputs

| PEA CONSTRUCTION CAPEX BREAKDOWN (US\$M)           |                               |               |                    |
|--|-------------------------------|---------------|--------------------|
| Direct & Indirect Cost Components                  | Leach Pads, Ponds & Pipelines | SXEW Facility | Total Capital Cost |
| Directs Subtotal                                   | \$18.4                        | \$45.9        | \$64.3             |
| Indirects Subtotal                                 | \$3.1                         | \$19.1        | \$22.2             |
| Contingency  | \$3.0                         | \$9.0         | \$12.0             |
| Total Process Construction Cost (22 ktpa)(Initial) | \$24.5                        | \$74.1        | \$98.5             |
| Land Acquisitions                                  | --                            | --            | \$22.9             |
| Project Other Costs                                | --                            | --            | \$2.6              |
| <b>Total Initial Construction Cost</b>             | <b>--</b>                     | <b>--</b>     | <b>\$123.9</b>     |

- Assumes contractor mining
- A contingency of 15% has been included in the capital cost for ancillary mine equipment, leach pad infrastructure and the SXEW facility



Sources: (1) Integrated Cactus PEA 2021 for ASCU – Table 21-2, Mcllvanna Bay Project, Foran Mining (Pre-feasibility Study for the Mcllvanna Bay Project, Report Date: 27 April 2020); Marimaca Project, Marimaca Copper (Preliminary Economic Assessment Marimaca Project Antofagasta, II Region, Chile; Report Date: 4 August 2020); Filo del Sol, Filo Mining (Pre-feasibility Study for the Filo del Sol Project; Report Date: January 13, 2019); Artic Project, Trilogy Metals (Arctic Feasibility Study Alaska, USA; Report Date: August 20, 2020); and Josemaria Copper-Gold Project, Josemaria Resources (Feasibility Study for the Josemaria Copper-Gold Project, San Juan Province, Argentina; Report Date: September 28, 2020) (2) The Integrated Cactus PEA is preliminary in nature, it includes inferred mineral resources that are considered too speculative geologically to have economic considerations applied to them that would enable them to be categorised as mineral reserves and there is no certainty that the preliminary economic assessment will be realised

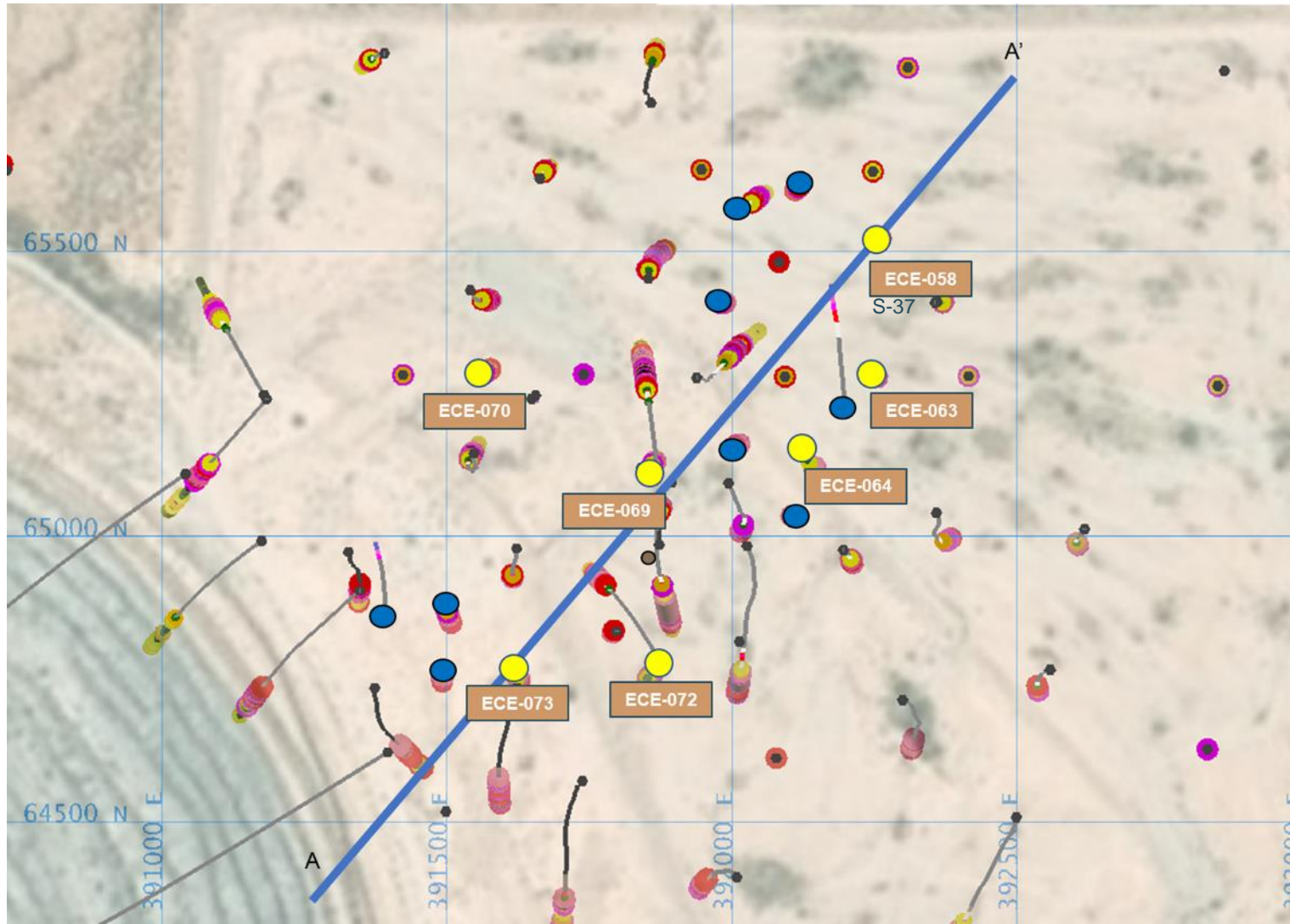
| Material Type          | Tons (kt)      | CuT % | TSol %       | Contained Cu (k lbs) | Contained Cu (k Tons) |
|------------------------|----------------|-------|--------------|----------------------|-----------------------|
| <b>INDICATED</b>       |                |       |              |                      |                       |
| <b>Cactus</b>          |                |       |              |                      |                       |
| Oxide                  | 31,400         |       | 0.559        | 349,700              | 176                   |
| Enriched               | 42,500         |       | 0.844        | 715,500              | 359                   |
| <b>Total Leachable</b> | <b>73,900</b>  |       | <b>0.723</b> | <b>1,065,200</b>     | <b>534</b>            |
| Primary                | 77,900         | 0.35  |              | 545,500              | 273                   |
| <b>Total Indicated</b> | <b>151,800</b> |       | <b>0.531</b> | <b>1,610,700</b>     | <b>806</b>            |
| <b>INFERRED</b>        |                |       |              |                      |                       |
| <b>Cactus</b>          |                |       |              |                      |                       |
| Oxide                  | 62,500         |       | 0.346        | 430,500              | 216                   |
| Enriched               | 55,100         |       | 0.498        | 548,800              | 274                   |
| <b>Total Leachable</b> | <b>117,600</b> |       | <b>0.417</b> | <b>979,300</b>       | <b>490</b>            |
| Primary                | 111,300        | 0.349 |              | 776,000              | 388                   |
| <b>Total Inferred</b>  | <b>228,900</b> |       | <b>0.384</b> | <b>1,755,300</b>     | <b>879</b>            |
| <b>Stockpile</b>       |                |       |              |                      |                       |
| Oxide                  | 77,400         |       | 0.144        | 223,500              | 111                   |
| <b>Parks/Salyer</b>    |                |       |              |                      |                       |
| Oxide                  | 14,100         |       | 0.827        | 233,700              | 117                   |
| Enriched               | 101,200        |       | 1.1          | 2,227,200            | 1,113                 |
| <b>Total Leachable</b> | <b>115,400</b> |       | <b>1.066</b> | <b>2,460,900</b>     | <b>1,230</b>          |
| Primary                | 28,300         | 0.804 |              | 454,400              | 228                   |
| <b>Total Inferred</b>  | <b>143,600</b> |       | <b>1.015</b> | <b>2,915,400</b>     | <b>1,458</b>          |
| <b>Total Resources</b> |                |       |              |                      |                       |
| <b>INDICATED</b>       |                |       |              |                      |                       |
| Total Leachable        | 73,900         |       | 0.723        | 1,065,200            | 534                   |
| <b>Total Indicated</b> | <b>151,800</b> |       | <b>0.531</b> | <b>1,610,700</b>     | <b>806</b>            |
| <b>INFERRED</b>        |                |       |              |                      |                       |
| Total Leachable        | 310,400        |       | 0.59         | 3,663,700            | 1,832                 |
| <b>Total Inferred</b>  | <b>449,900</b> |       | <b>0.544</b> | <b>4,894,200</b>     | <b>2,447</b>          |

# Notes to the Mineral Resource Estimate

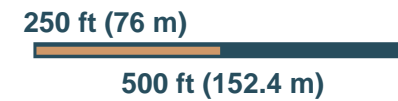
1. *CuT means total copper and T<sub>sol</sub> means total soluble copper as the addition of sequential acid soluble and sequential cyanide soluble copper assays. Tons are reported as short tons.*
2. *Cactus and Stockpile Resource estimates have an effective date of 31<sup>st</sup> August, 2021 and use a copper price of US\$3.15/lb. The assumptions in respect of the Cactus and Stockpile Resource estimates are as stated in the Preliminary Economic Assessment ("PEA") titled "Arizona Sonoran Copper Company, Inc. Cactus Project, Arizona, USA Preliminary Economic Assessment" with an effective date of filed in August 31, 2021; Parks/Salyer Resource estimate has an effective date of 7<sup>th</sup> September, 2022 and uses a copper price of US\$3.75/lb*
3. *Technical and economic parameters defining resource pit shell: mining cost US\$2.45/t; G&A US\$0.55/t, and 44°-46° pit slope angle.*
4. *Technical and economic parameters defining underground resource: mining cost US\$28.93/t, and G&A representing 7% of direct costs.*
5. *Technical and economic parameters defining processing: Heap leach (HL) processing cost including selling US\$1.77/t; HL recovery 83% of CuT; mill processing cost US\$8.50/t.*
6. *For Cactus: Variable cutoff grades were reported depending on material type, potential mining method, and potential processing method. Oxide material within resource pit shell = 0.096% T<sub>sol</sub>; enriched material within resource pit shell = 0.098% T<sub>sol</sub>; primary material within resource pit shell = 0.205% CuT; oxide underground material outside resource pit shell = 0.56% T<sub>sol</sub>; enriched underground material outside resource pit shell = 0.70% T<sub>sol</sub>; primary underground material outside resource pit shell = 0.70% CuT.*
7. *For Parks/Salyer: Variable cutoff grades were reported depending on material type associated potential processing method. Oxide underground material = 0.495% T<sub>sol</sub>; enriched underground material = 0.60% T<sub>sol</sub>; primary underground material = 0.586% CuT.*
8. *Mineral resources, which are not mineral reserves, do not have demonstrated economic viability. The estimate of mineral resources may be materially affected by environmental, permitting, legal, title, sociopolitical, marketing, or other relevant factors.*
9. *The quantity and grade of reported inferred mineral resources in this estimation are uncertain in nature and there is insufficient exploration to define these inferred mineral resources as an indicated or measured mineral resource; it is uncertain if further exploration will result in upgrading them to an indicated or measured classification.*
10. *Total may not add up due to rounding.*

# Cactus East FS Level Infill Drilling Supporting Current Model

Press Release Dated August 30, 2022



- August 30 Press Release
- Assays Pending



# Cactus East Cross Section, Looking Northwest

Press Release Dated August 30, 2022

## ECE-073

**344.0 ft @ 1.07% CuT,**  
0.82% Cu TSol  
Incl. 101.7 ft @ 1.95%  
CuT, 1.89% Cu TSol

## ECE-072

**90.9 ft @ 0.78% CuT,**  
0.74% Cu TSol  
**270.4 ft @ 1.77% CuT,**  
1.66% Cu TSol  
Incl. 100.0 ft @ 3.45%  
CuT, 3.36% Cu TSol

## ECE-069

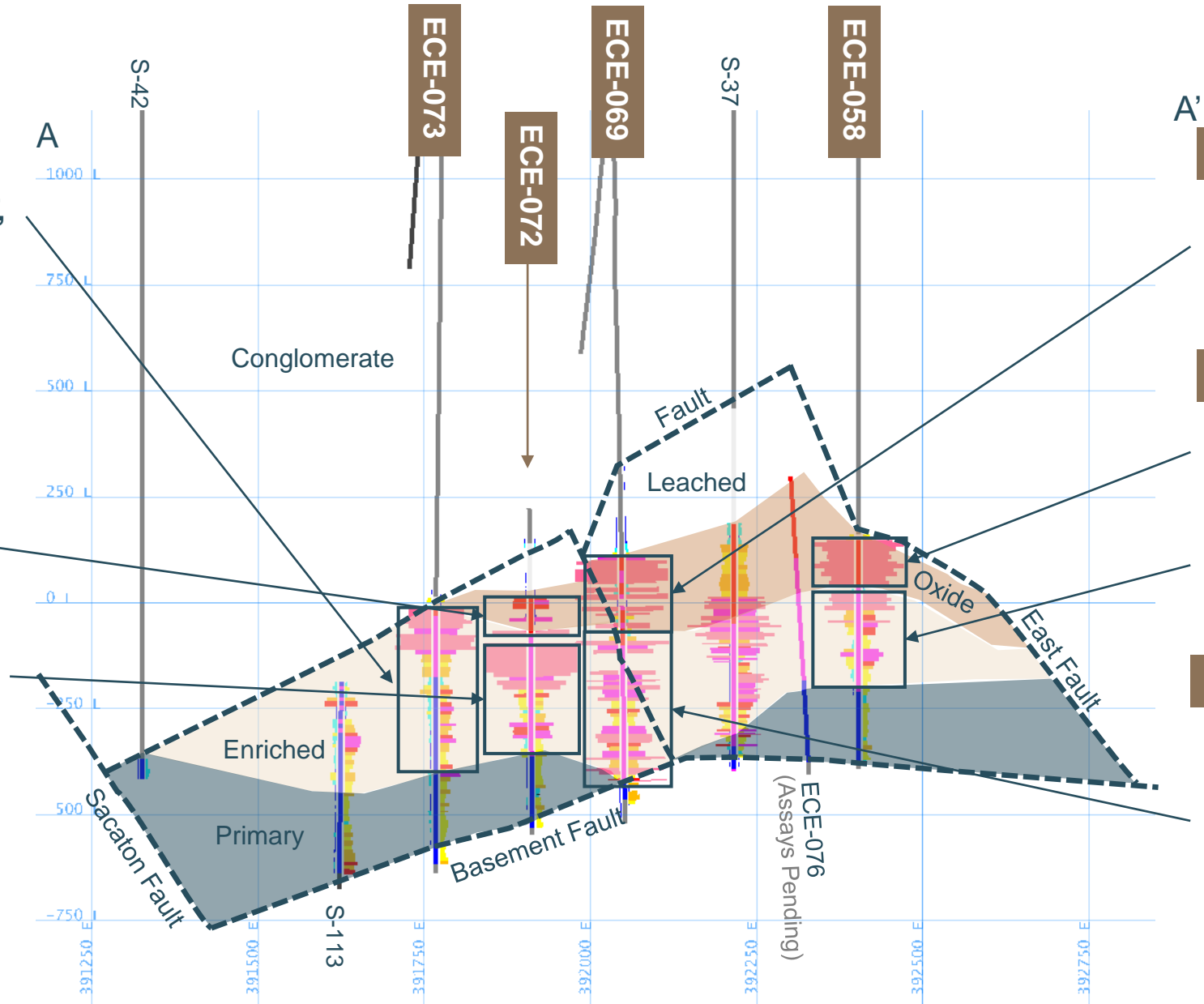
**247.0 ft @ 1.73% CuT,**  
1.63% Cu TSol  
Incl. 90.0 ft @ 2.99%  
CuT, 2.80% Cu TSol

## ECE-058

**120.0 ft @ 2.01% CuT,**  
1.96% Cu TSol  
**210.0 ft @ 1.05% CuT,**  
0.76% TSol  
Incl. 70.0 ft @ 1.56%  
CuT, 1.42% Cu TSol

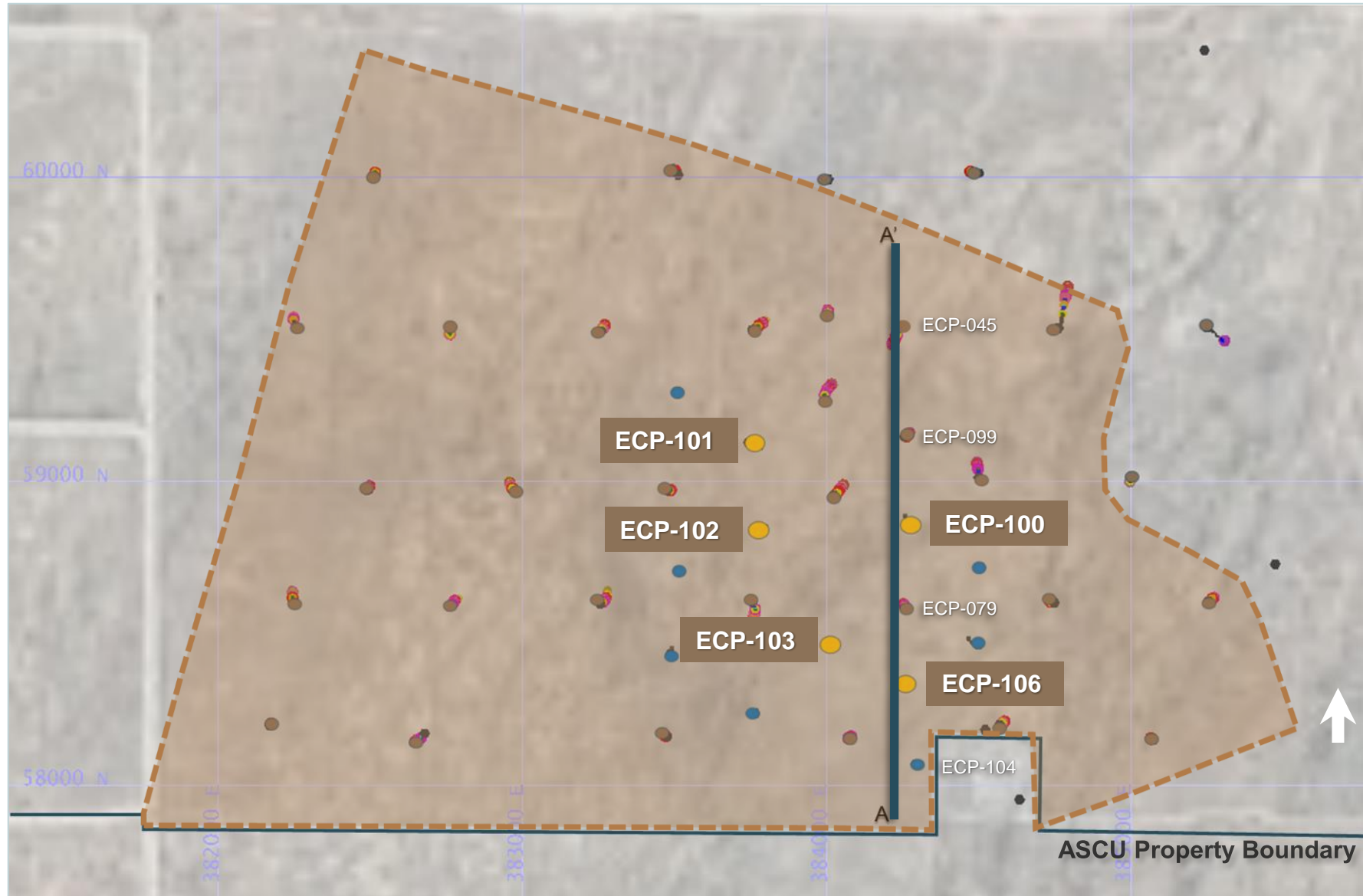
## ECE-069

**388.0 ft @ 1.24% CuT,**  
1.13% Cu TSol  
Incl. 127.0 ft @ 1.91%  
CuT, 1.72% Cu TSol  
And 91.0 ft @ 1.70%  
CuT, 1.61% Cu TSol

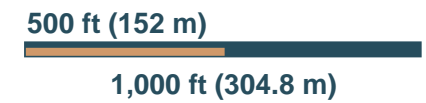


# Parks/Salyer Plan View with Interpreted Mineralized Extents

Press Release Dated November 29, 2022



- Previously Reported
- November 28 Press Release
- Assays Pending
- Interpreted Mineralization Extents



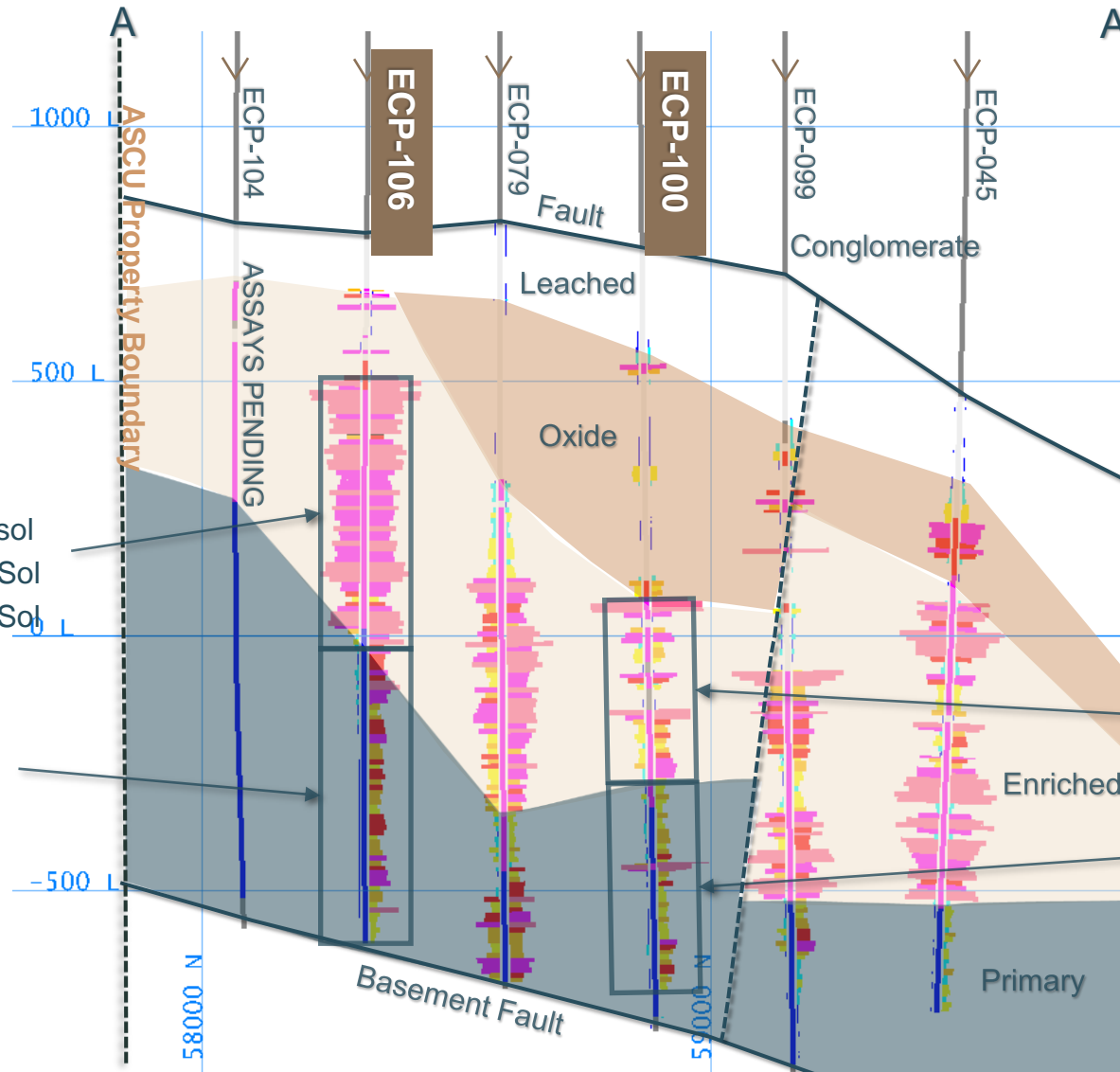
# Parks/Salyer Cross Section – Looking West

Press Release Dated November 29, 2022

## ECP-106

**645.0 ft @ 1.58% CuT, 1.25% Cu Tsol**  
Incl. 65.0 ft @ 2.54% CuT, 2.25% Cu Tsol  
And 50.0 ft @ 1.92% CuT, 1.85% Cu Tsol  
And 40.0 ft @ 2.09% CuT, 2.03% Cu Tsol

**471.6 ft @ 0.73% CuT, 0.041% Mo**  
Incl. 47.0 ft @ 0.95% CuT, 0.011% Mo  
And 60.0 ft @ 0.98% CuT, 0.211% Mo



## ECP-079

**479 ft @ 1.32% CuT, 0.90% TSol, 0.017% Mo (enriched)**  
**225 ft @ 0.96% CuT, 0.63% TSol, 0.039% Mo (primary)**

## ECP-099

**552.0 ft @ 1.10% CuT, 0.85% TSol, 0.030% Mo (enriched)**

## ECP-045

**595 ft @ 1.29% CuT, 1.18% Cu Tsol, 0.018% Mo (enriched)**

## ECP-100

**369.0 ft @ 0.96% CuT, 0.74% Cu TSol**  
Incl. 39.6 ft @ 2.90% CuT, 2.85% Cu TSol  
And 19.8 ft @ 2.11% CuT, 1.59% Cu TSol

**405.7 ft @ 0.68% CuT, 0.018% Mo**  
Incl. 16.7ft @ 2.39% CuT, 0.012% Mo



# ECP-097 Oxide Mineralization

Press Release Dated November 2, 2022



**1.71% TCu**  
**1.70% TCu Sol**  
**0.027% Mo**

**10 ft Interval**  
**1,324 – 1,334 ft**  
**(3.0 m, 403.5 – 406.6 m)**

**WITHIN:**  
**0.68% TCu**  
**0.65% Cu Tsol**  
**0.018% Mo**

**294.4 ft interval**  
**1,071.0 – 1,365.4 ft**  
**(89.7 m, 326.4 – 416.2 m)**

# Rediscovering the World-Class Santa Cruz Copper Porphyry System

Drilling the same porphyry copper system, starting at Santa Cruz and extending northeast over P/S and beyond the Cactus Mine Project.

ASCU – active drilling (3 rigs)

IE – active drilling (6 rigs)

Ivanhoe Electric Mineral Resource Estimate

- Indic - 226 Mt of 1.24% CuT, 0.82% Cu TSol
- Inf – 149 Mt of 1.24% CuT, 0.82% CuTSol
- (0.39% cut-off - \$3.70/lb Cu)

Source : Ivanhoe Electric Technical Report

