

ASCU:TSX  
ASCUF:OTCQX

# Invest in Sustainability

Developing an Arizona Copper Mine to Supply the  
Energy Transition

September 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.

# Developing the Next Copper Mine on Private Land in Arizona

To reach the Net Zero emissions goal, 9.7Mt of new copper supply to be added over the next decade. Meaning US\$23B investment per year will be needed over 30 years to deliver new copper projects to reach zero-carbon targets. – Wood Mackenzie, 2023

## High Quality Project

Low-geopolitical risk

Brownfields porphyry copper project, SX/EW

Water and surface rights

Top tier jurisdiction

## Growth-focused

Base-case economics on Cactus and Parks/Salyer

Exploration upside

Primary sulphide optionality

## Experienced Management

A proven track record of delivering successful mining projects

The team takes an environmental and socially conscious approach to project development

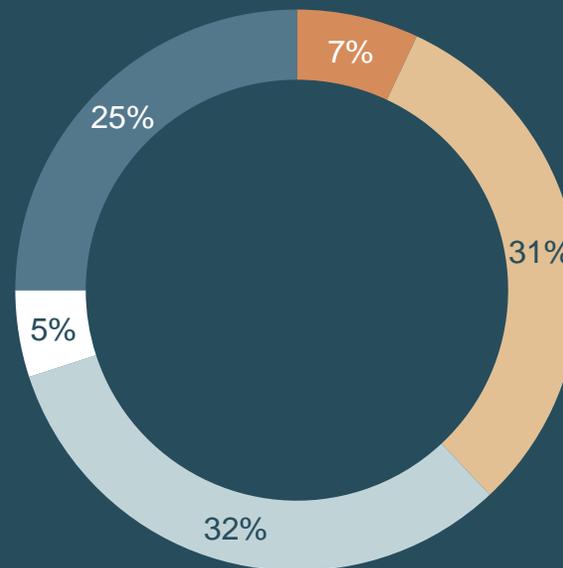
# Capital Structure & Ownership

## CAPITAL STRUCTURE

Market Capitalization	C\$175M
Shares Outstanding (M)	109.0
Warrants (M)	2.5
Options (M)	5.6
RSU's (M) <sup>(1)</sup>	0.2
DSU's (M)	0.5
Fully Diluted Share Capital (M)	117.9
Cash as at Aug 14, 2023	US\$18M
Debt	Debt Free

Notes:  
 (1) RSUs may be issued in shares or cash

## OWNERSHIP



- Rio Tinto
- Tembo
- Institutional
- Management
- Retail

**Including:**  
 Beedie Capital  
 Delbrook  
 Konwave  
 Macquarie  
 Ixios  
 US Global  
 Russell Investment Mgmt  
 Palos Management  
 Empire Life  
 Sentry  
 TBF Global AM  
 Sprott COPJ ETF

## ANALYST COVERAGE



# 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**



**Bernie Loyer**  
SVP Projects

+35 years building and delivering large scale mining projects. Prior positions at **SolGold (Cascabel), Goldcorp (Penasquito and Cerro Negro), Torex Gold (Morelos and Media Luna), BHP (Escondida)** and at **FLSmidth Minerals**.



**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**



**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



**Isabella Bertani, FCPA, FCA**

**DIRECTOR**

FCPA, FCA, +20 years accounting, auditing and advising the public and private sectors for manufacturing, food processing, technology, biotech, mining equipment and engineering consulting. Founder and Chief Strategist at **BERTANI**, senior positions at **Deloitte LLP** and a mid market firm. Former director of the **McMichael Canadian Art Foundation** and **Toronto Parks and Trees Foundation**. Leadership roles with **CPA Canada, International Economic Development Council, Vaughan Chamber of Commerce** and others.



**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** and **Director of Teck**. **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 **Chair of Brio Gold**

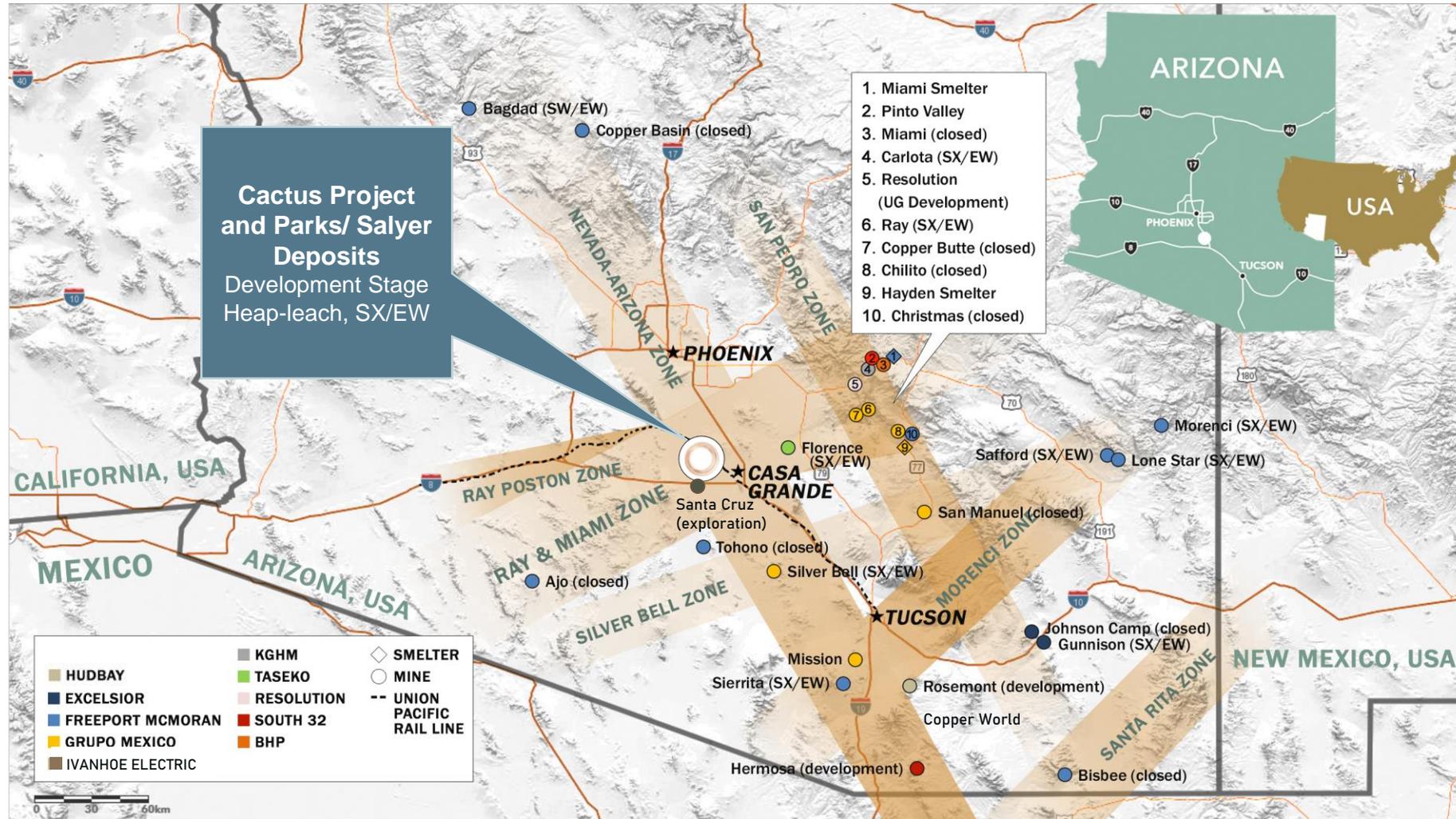


## Location Advantage

5,370 acres on a brownfield's property  
+\$30M in place infrastructure

# Low Geopolitical Risk and Community Support

Centrally located for 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. 7** for the year 2022 in Fraser Institute's Investment Attractiveness Index<sup>(2)</sup>

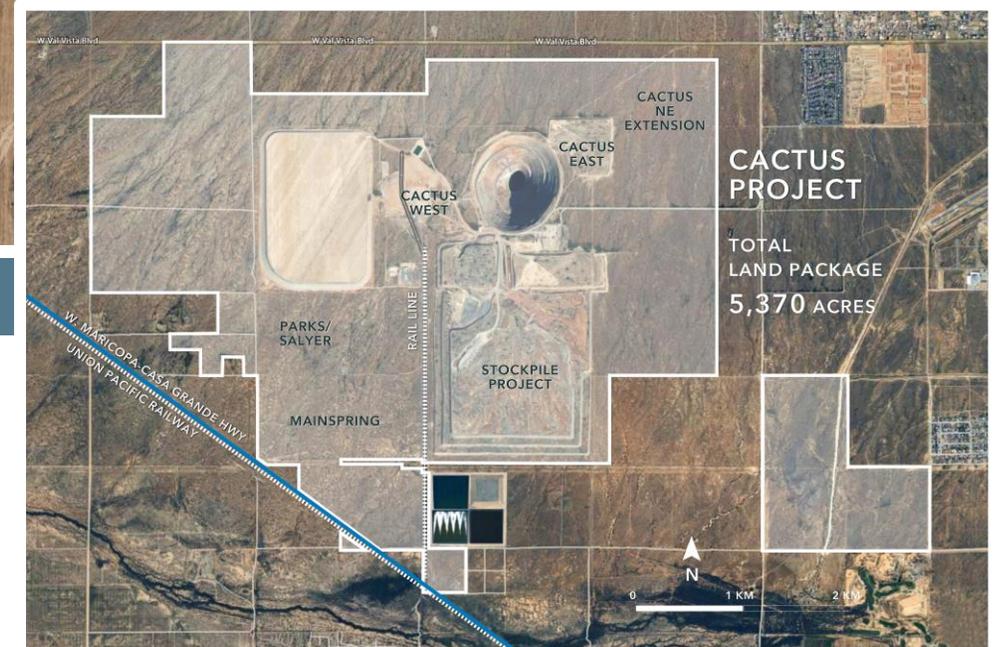
Notes: (1) USGS Copper Data Sheet- Mineral Commodity Summaries 2023 (2) Fraser Institute Annual Survey of Mining Companies 2021, available at [www.fraserinstitute.org](http://www.fraserinstitute.org)

# Brownfield Site – Water rights and Surface Rights



## Infrastructure Valued at +\$30M

- Offices, core shack and ancillary buildings
- Power substation
- Onsite metallurgical testing
- Water wells and water pond permitted
- Permitted water access to the year 2070
- Rail line (to ship concentrate to refinery)
- Stockpile (part of Integrated Cactus PEA)
- Vent raise, shaft and underground workings (has not been upgraded)



# A Clear Path to Development with Major Permits in Place

## COMPLETED PERMITS

Permit		Permit Office
<b>Air Quality Dust Permit</b>		Pinal County
<b>Arizona Pollution Discharge Elimination System (402) (SWPPP)</b>	★	ADEQ
<b>Water Rights</b> Use up to 3,800 acre-ft / yr	★	ADWR
<b>Aquifer Protection Permit</b> For Stockpile Project	★	ADEQ
<b>General Plan Amendment</b> Including development agreement and city zoning change from residential to industrial	★	Casa Grande
<b>Aquifer Protection Permit</b> Major amendment	★	ADEQ
<b>Mined Lands Reclamation Permit (MLRP)</b>	★	Arizona State Mine Inspector
<b>Industrial Air Permit</b>	★	Pinal County

★ Indicates major permit

## OUTSTANDING PERMITS – STREAMLINED PROCESS

Permit	Permit Office	Status
<b>Reclamation Bond</b>	AZ State Mine Inspector	Application post-PFS
<b>Radio Station License, Wireless Communication</b>	FCC	
<b>Notice of Intent to Clear Land</b>	AZ Department of Agriculture	Required pursuant to a construction decision
<b>Mining Construction Permits</b>	Pinal County	
<b>Above-Ground Tank Storage</b>	ADEQ	
<b>State Notice of Startup/Miner Registration Number</b>	AZ State Mine Inspector/MSHA	

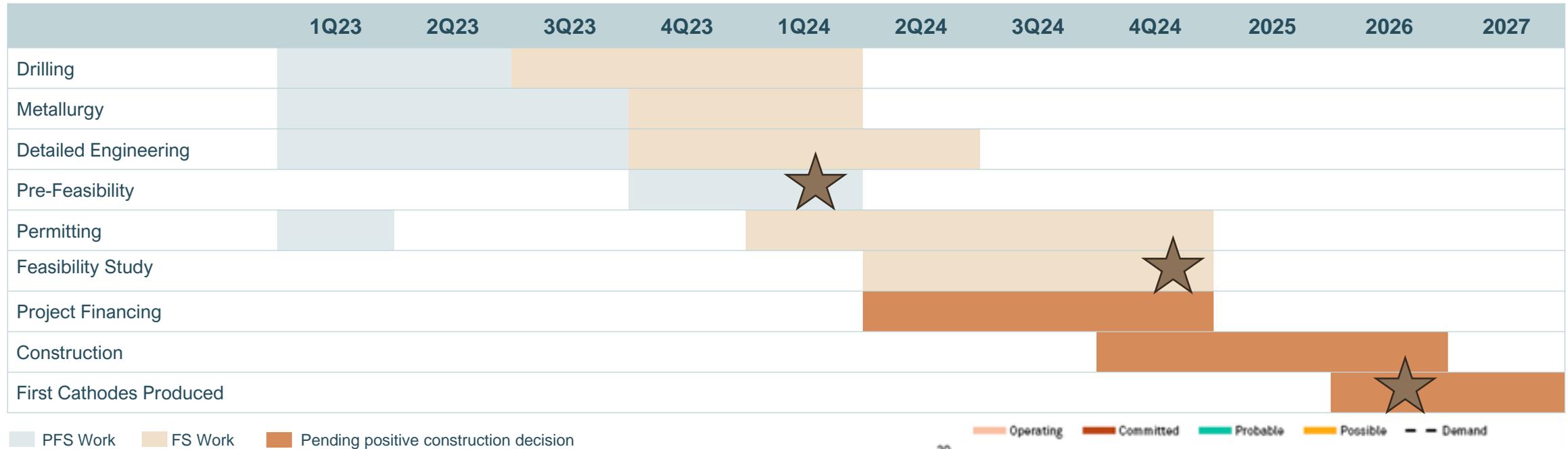
Major permits are now in place, based on the Cactus PEA. Amendments may be required for certain permits based on the upcoming PFS



ECN-128 Oxide

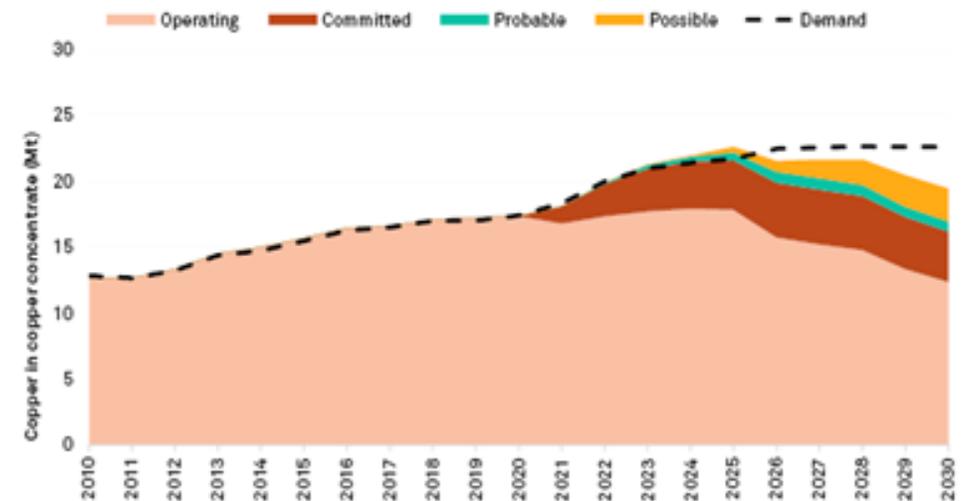
ASCU PFS Base Case

# Targeting First Cathodes in 2026 - Quick Path to Development



## Timing is everything. In 2026:

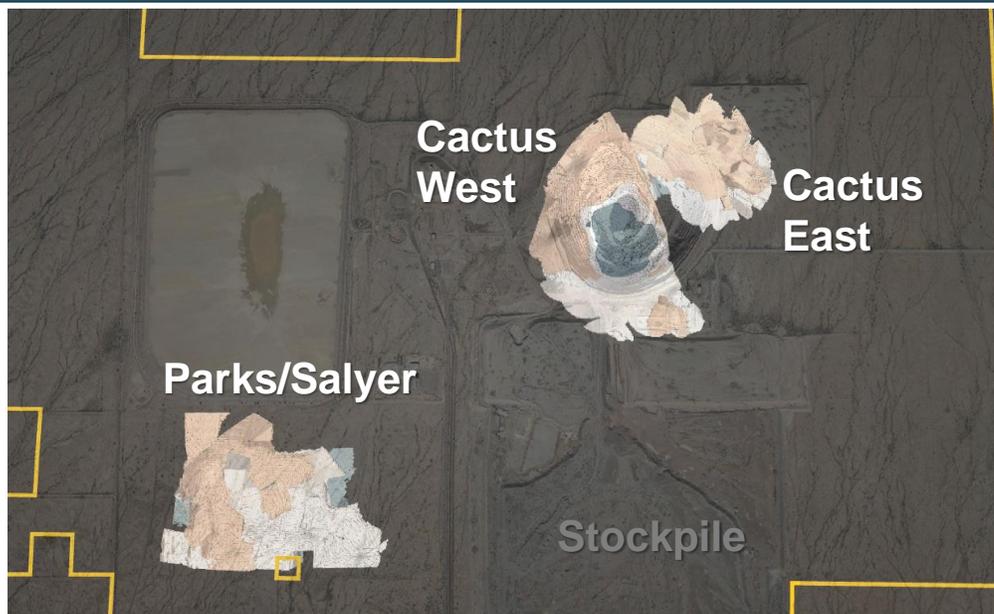
- ASCU anticipates first cathodes (based on positive construction decision)
- Long-term copper price is predicted to exceed \$4.00 / lb
- Copper supply is set to fall into deficit



Source: S&P

# Large Scale Porphyry Copper Mineral Resource Estimate

Close Proximity of Deposits



Porphyry copper deposits  
 Private land, brownfields mine site  
 Water rights (up to 3,800 ac ft./yr) and onsite wells  
 Exploration potential along mine trend

### PFS Expected Q1 2024, programs include:

- Infill to indicated drilling program - *complete*
- Metallurgy – *ongoing*
- Permitting – *next applications will be based on the PFS*

FS infill to measured drilling has begun

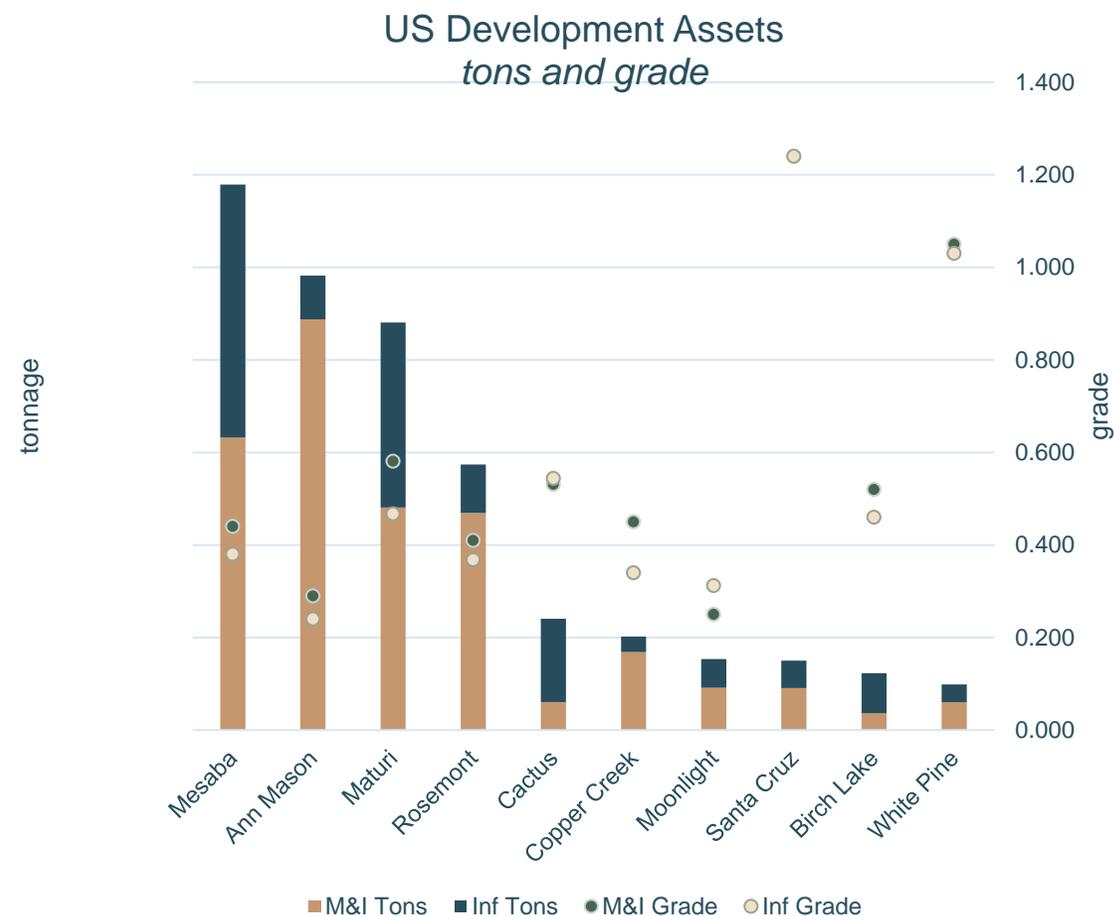
## OXIDE AND ENRICHED MINERAL RESOURCE

Total Leachable Resource		Parks/Salyer		Underground (CE)		Stockpile		Open Pit (CW)	
Indicated	1.1 B lbs	<i>Updating for PFS (expecting high conversion)</i>		146,200 Klbs 7.7 Mtons	<b>0.954% Cu TSol</b>	<i>Updating for PFS</i>		919,700 Klbs 66.2 Mtons	<b>0.696% Cu TSol</b>
Inferred	3.6 B lbs	2,460,900 Klbs 115.4 Mtons	<b>1.066% Cu TSol</b>	315,700 Klbs 17.9 Mtons	<b>0.881% Cu TSol</b>	223,500 klbs 77.4 Mtons	<b>0.144% Cu TSol</b>	672,100 Klbs 99.7 Mtons	<b>0.334% Cu TSol</b>

# Few Quality Development Assets in the USA

- ASCU shows well among independent developers and assets owned by major miners
  - MRE grade of 0.53% TCu (M&I) exceeds most current Cu deposits in the US
  - Cactus West – OP layback
  - Cactus East and Parks/Salyer – UG deposits mineralization begins at a depth of approximately 300 m (1,000 ft)

Project	Company	M&I tons	Inf tons
Mesaba	Teck Resources Limited	1,580,600,000	1,366,300,000
Ann Mason	Hudbay Minerals Inc.	2,219,000,000	237,000,000
Maturi	Antofagasta plc	1,202,800,000	998,900,000
Rosemont	Hudbay Minerals Inc.	1,173,000,000	262,000,000
<b>Cactus</b>	<b>Arizona Sonoran Copper Company</b>	<b>151,800,000</b>	<b>449,900,000</b>
Copper Creek	Faraday Copper Corp.	421,900,000	83,600,000
Moonlight	US Copper Corp.	228,610,554	155,400,746
Santa Cruz	Ivanhoe Electric Inc.	226,715,000	148,998,000
Birch Lake	Antofagasta plc	90,400,000	217,000,000
White Pine	Highland Copper Company	150,700,000	96,400,000



Source: S&P, Removal of Pebble, Resolution and Upper Kobuk Mineral Projects

# Emerging Copper Developer in the USA via Heap Leach & SXEW

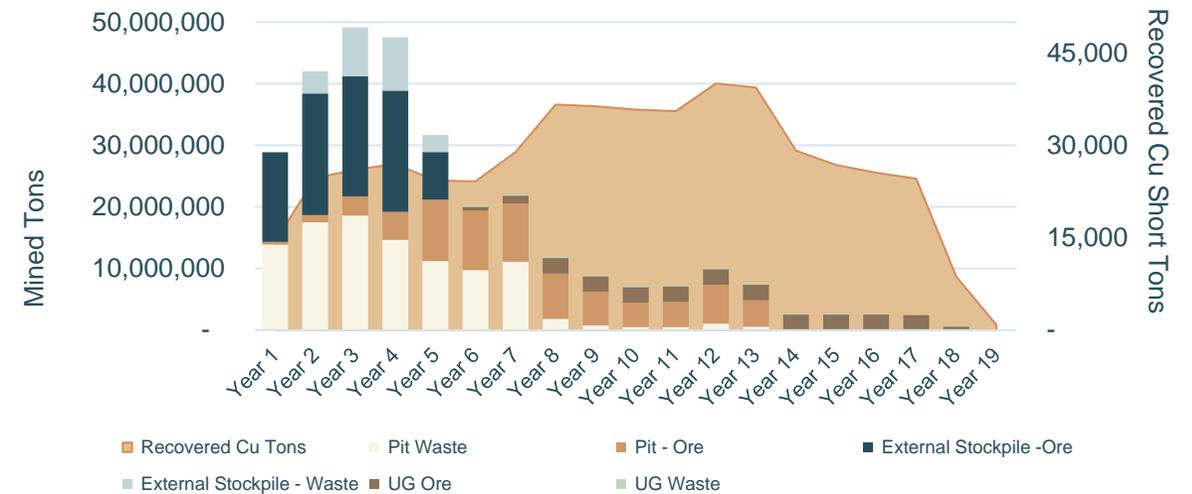
PEA Base Case + Parks/Salyer Oxide and Enriched Material

## 2021 PEA BASE CASE PROJECT METRICS<sup>(1)(2)</sup> 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) (see production schedule, right)
<b>Operating Costs</b>	<ul style="list-style-type: none"> <li>• US\$9.06/t</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>

Step-up PFS layers in Parks/Salyer over the Cactus PEA: Targeting 45-50 ktpa over approximately 30 years

### CACTUS PEA PRODUCTION SCHEDULE<sup>(1)(2)</sup>

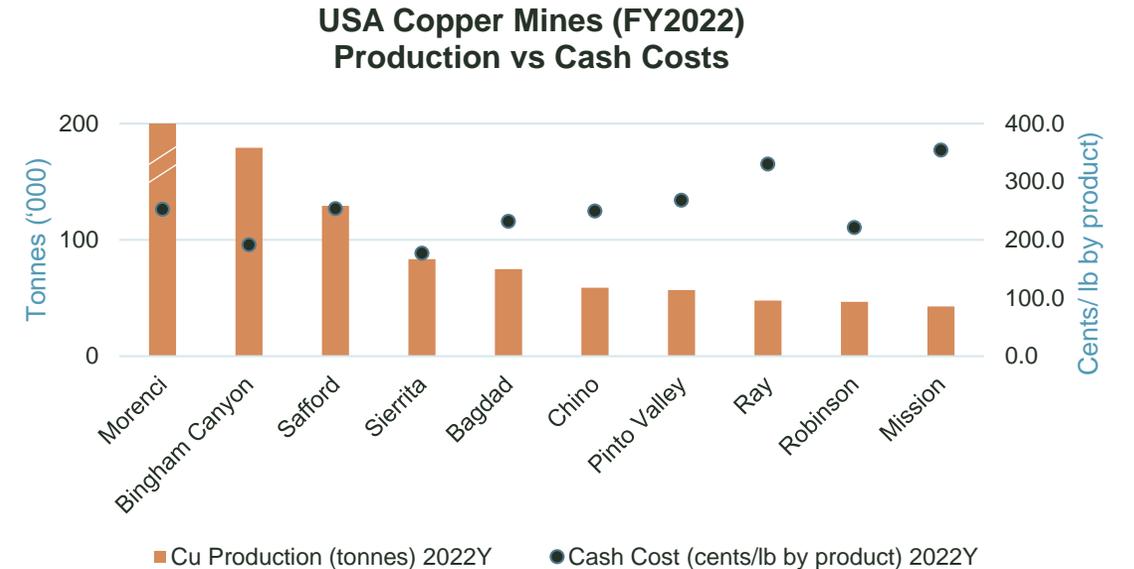
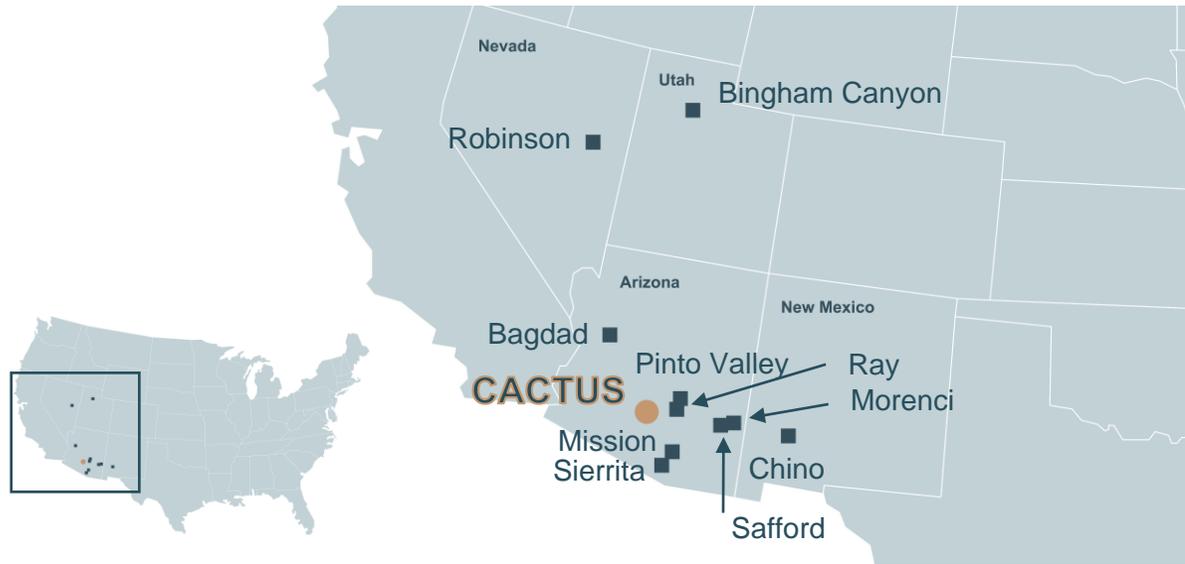


Sources/Notes: t or tons = Short Tons. (1) Integrated Cactus PEA, Table 1-6, 1-7 (2) The Integrated Cactus PEA is preliminary in nature, it includes inferred mineral resources that are considered too speculative geologically to have economic considerations applied to them that would enable them to be categorised as mineral reserves and there is no certainty that the preliminary economic assessment will be realized. Mineralized Material Sources: Stockpile, Cactus East, Cactus West, Parks/Salyer

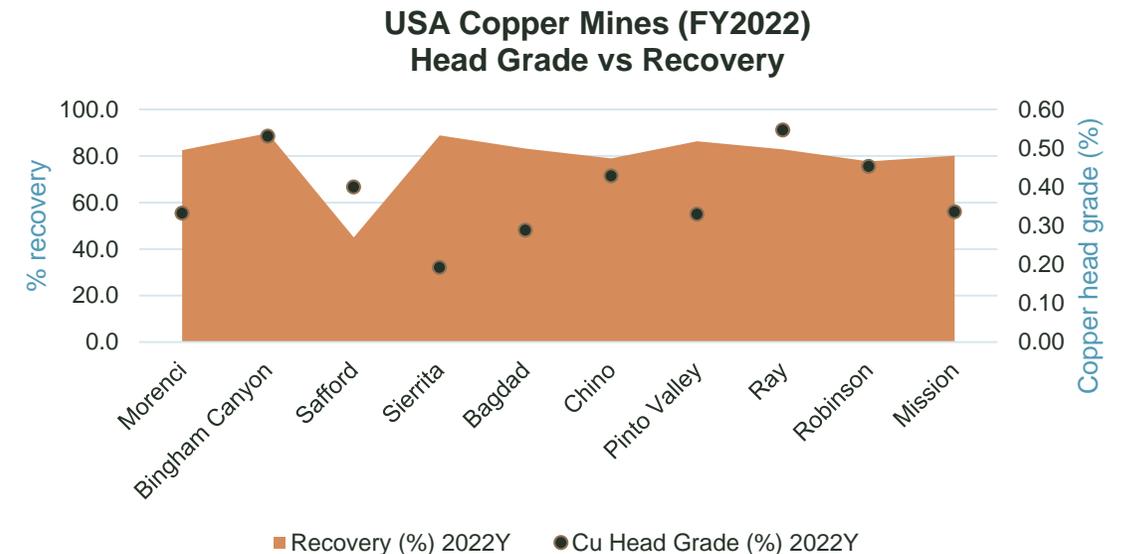
**Low capital intensity project: \$2.20/lb**

US\$CAPEX/LOM average Cu production – per the Cactus PEA

# Top 10 USA Copper Mines



	Mine	County and State	Owner	Operation
1	Morenci	Greenlee, Arizona	Freeport-McMoRan (72%), Sumitomo Group (28%)	Open Pit
2	Bingham Canyon	Salt Lake, Utah	Rio Tinto	Long Hole Stopping, Open Pit, Sublevel Stopping
3	Safford	Graham, Arizona	Freeport-McMoRan	Open Pit
4	Sierrita	Pima, Arizona	Freeport-McMoRan	Open Pit
5	Bagdad	Yavapai, Arizona	Freeport-McMoRan	Open Pit
6	Chino	Grant, New Mexico	Freeport-McMoRan	Open Pit
7	Pinto Valley	Gila, Arizona	Capstone Copper.	Dump, Open Pit, Tailings
8	Ray	Pinal, Arizona	Grupo México	Open Pit
9	Robinson	White Pine, Nevada	KGHM Polska Miedz	Open Pit
10	Mission Complex	Pima, Arizona	Grupo México	Open Pit, Underground



Source: S&P Copper Production in 2022, ranked by tonnes produced. Morenci produced 401kt in 2022.

# Onsite Metallurgical Program in TruStone Facility



## METALLURGICAL RECOVERIES

Parks/Salyer	80% enriched
Cactus East	76% enriched   90% oxide
Cactus West	78% enriched   88% oxide
Stockpile	92% oxide

*\*see PR dated May 2, 2023 for details and disclosures*



Native Copper

# Beyond the Base Case

# Primary Sulphide Optionality – Preliminary Results Successful

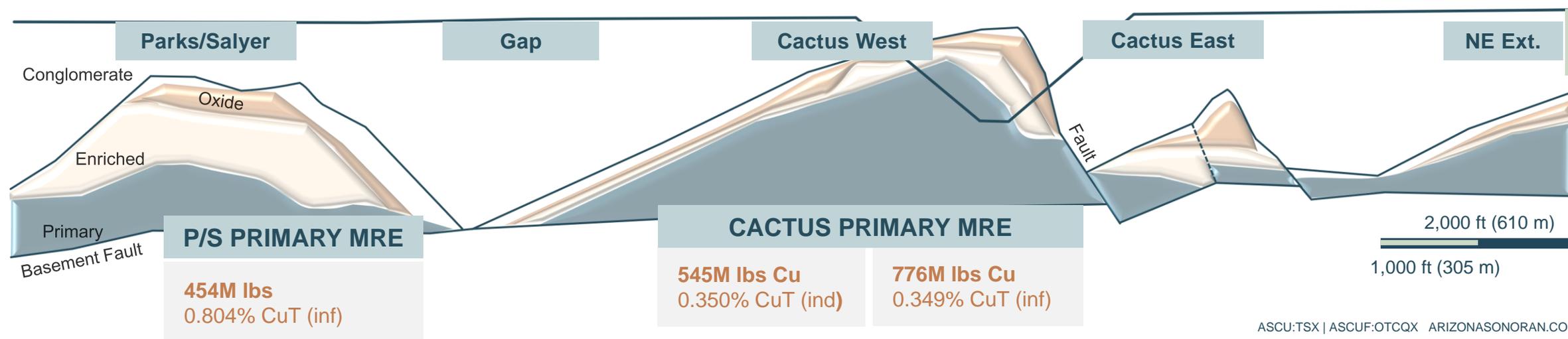
Partnership with Rio Tinto's Nuton™ technologies, testing the leachability of the primary sulphides

- Initial computer modelling: 72% Cu extraction
- Columns after 75-150 days: 61%-81% preliminary extraction rates
- Phase 2 under negotiation to advance testing parameters
  - May include commercial terms
  - Additional rigorous column tests
  - Infill and expansion drilling around Cactus West

## ABOUT NUTON™

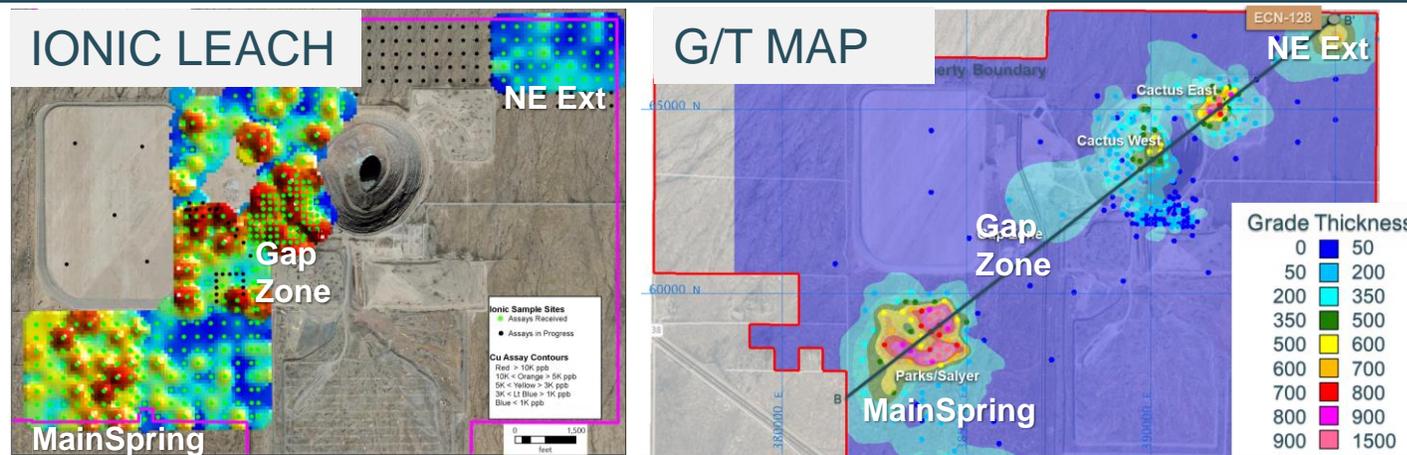
- Nuton™ is a proprietary suite of copper leach technologies
- Potential to unlock low-grade copper sulphide resources, copper bearing waste and tailings, and achieve higher copper recoveries on oxide and transitional material
- Exothermic, bioleach heap leach flowsheet
- Potential to deliver leading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

## Primary sulphides comprise 25% of the total resource

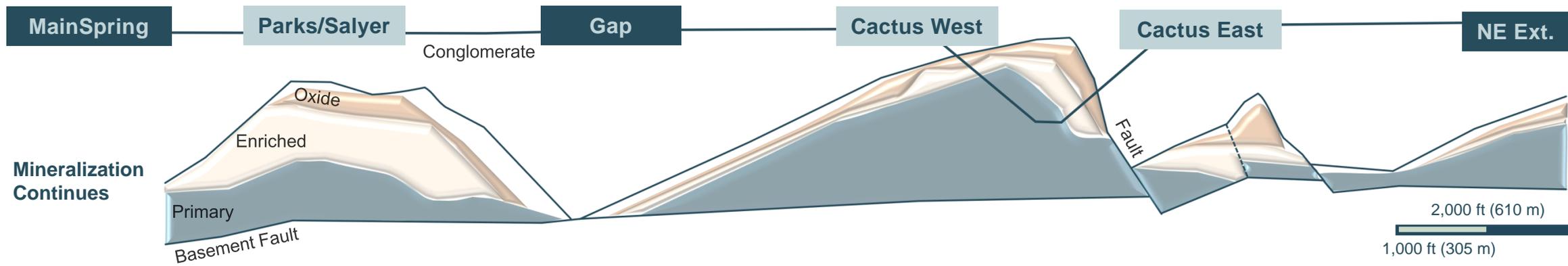


# Scalability via Exploration – Gap Zone and NE Extension

- Layering geophysics and drilling results show compelling drill targets along the 4 km porphyry copper mine trend:
- Gap Zone:
  - Priority target, outlined by ionic leach and magnetics
  - Historic condemnation drilling exists
- NE Extension:
  - ECN-128 confirmed mineralization, similar to P/S and CE, 1 km NE of CE
  - Historic drilling intercepted 3% Cu
- MainSpring:
  - Southern extension of the Parks/Salyer deposit



**ECN-128 CONTINUOUS MINERALIZATION:**  
 997.4 ft @ 0.46% CuT, 0.20% Cu TsoI, 0.007% Mo  
 118.1 ft @ 0.97% CuT, 0.94% Cu TsoI (oxide)  
 151.4 ft @ 0.46% CuT, 0.38% Cu TSoI (enriched)  
 653.4 ft @ 0.40% CuT, 0.008% Mo (primary)





# Peer Benchmarking

# Path to Value Creation

## Pre-Feasibility

### Arizona Sonoran Copper Company

PFS expected in 1Q 2024  
 FS expected in 2H 2024  
 Mostly permitted  
 Project financing expected 2H 2024  
 Construction to 2H2024\*  
 First Cathodes 2026 \*

*\*Pending positive construction decision*



## Construction

### Foran Mining

Financing and permits in hand, in construction



\$172 M Market Cap  
 \$312 M NPV<sub>8</sub> (after-tax)  
 18 yr, 1.2 Blbs LOM PEA released Aug 2021  
 28,000 tpa

## Operations



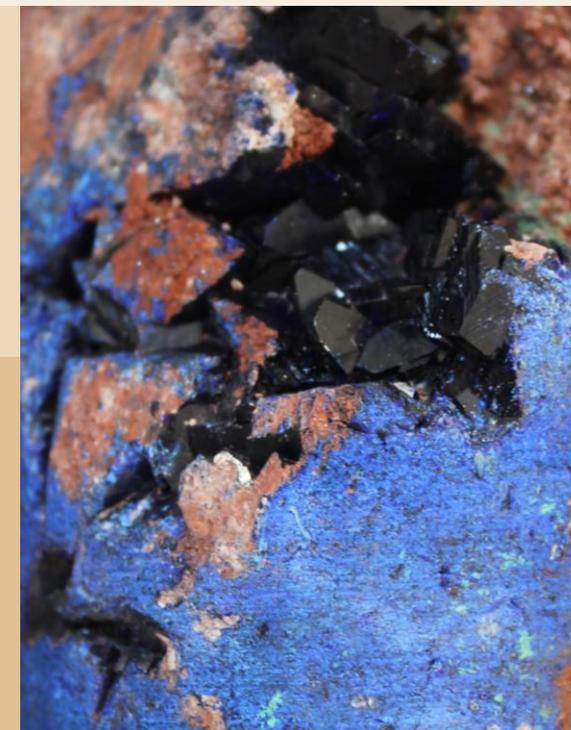
## ERO Copper

In operations  
 270% Share Price Increase

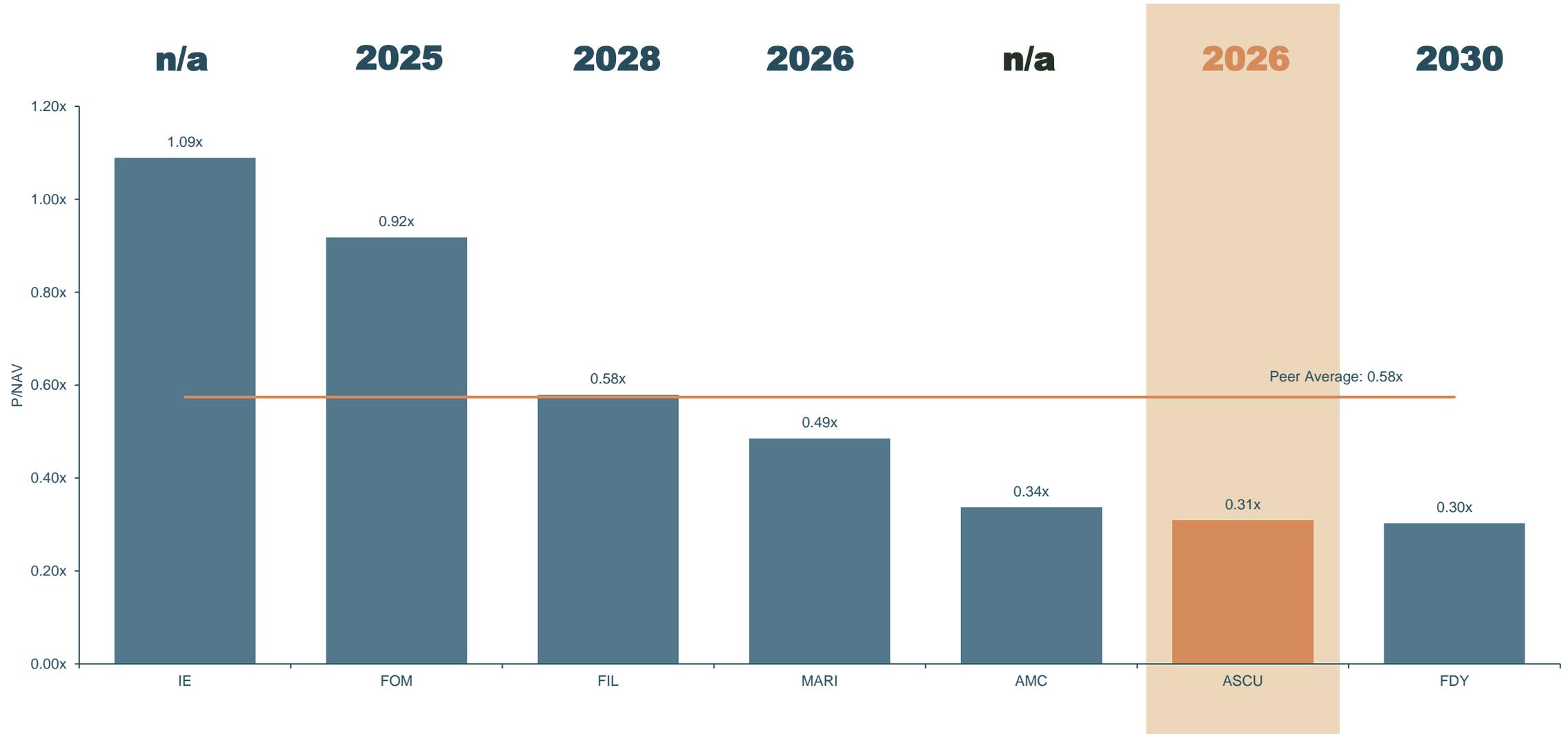
\$2,608 M Market Cap  
 \$966 M NPV\*  
 20 yr, 556 Mlbs LOM  
 62,000 tpa; 40,000 oz/y

*\*Analyst estimate, pre-resource update*

\$1,086 M Market Cap  
 \$466 M NPV<sub>7</sub> (after-tax)  
 18 yr, 1.2 Blbs LOM  
 29,500 tpa

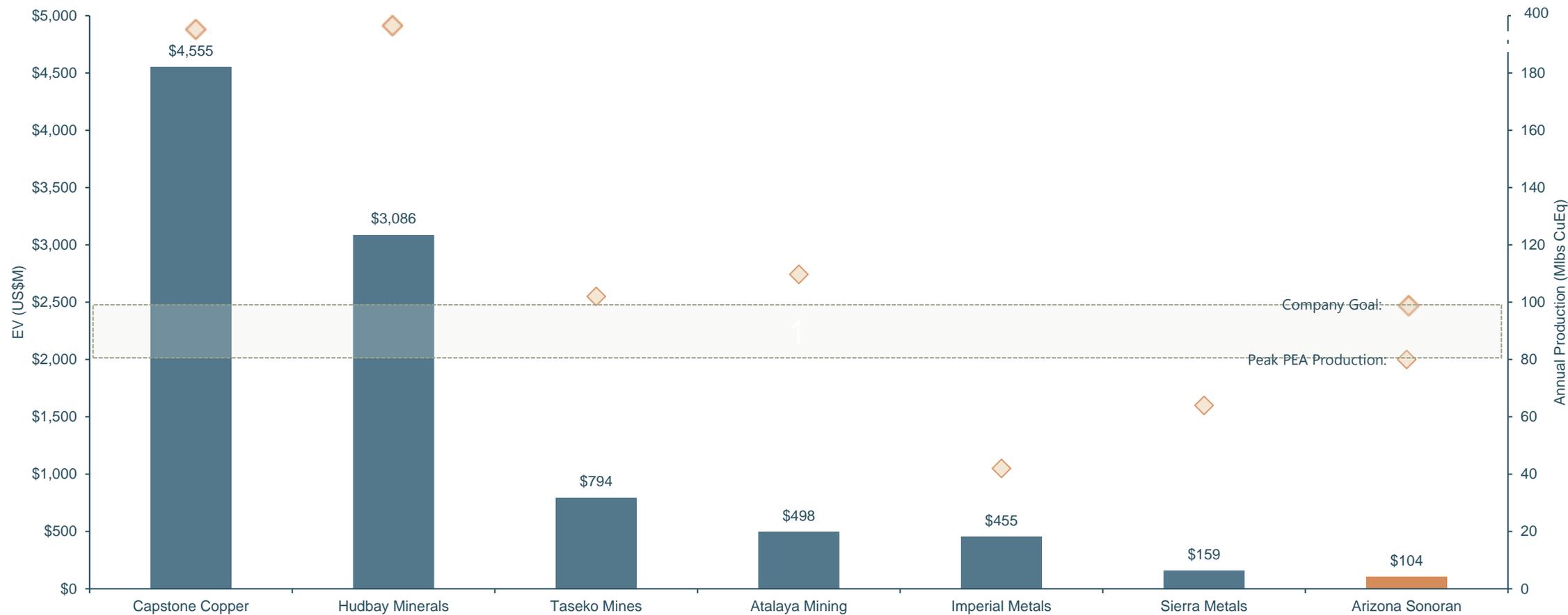


# Copper Development Peers (P/NAV)



Source: Company Filings, Capital IQ, August 31, 2023

# Junior Copper Producer Benchmarking (Enterprise Value and Production)



Source: Company Filings, Capital IQ – August 31, 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

# Benchmarking ASCU to Copper Developers

Similar future production profile to ASCU with a P/NAV of 0.34x

P/NAV: 1.16x

Acquired at a 23% premium<sup>(2)</sup>

	 ARIZONA SONORAN COPPER COMPANY	 FILO MINING	 Ivanhoe ELECTRIC	 FORAN MINING CORPORATION	 marimaca COPPER CORP.	 KAY COPPER	 FARADAY COPPER	 ERO COPPER	 COPPER MOUNTAIN MINING CORPORATION
Market Capitalization (C\$M)	\$172	\$2,780	\$2,196	\$1,086	\$379	\$319	\$128	\$2,763	\$590 <sup>(2)</sup>
Asset Name	Cactus / Parks Salyer	Filo del Sol	Santa Cruz / Tintic	McIlvenna Bay	Marimaca	Kay	Cu Creek / Contact Cu	Caraiba	Copper Mountain
Economic Study Level	PEA	PFS	PEA	FS	PEA	Historic	Historic	Production	Production
Development Type (Greenfields or Brownfields)	Brownfields	Greenfields	Greenfields	Brownfields	Greenfields	Brownfields	Greenfields	n/a	n/a
Jurisdiction	Arizona	Argentina	Arizona / Utah	Sask.	Chile	Arizona	Arizona	Brazil	BC
Fraser Institute Policy Perception Index (Rating Out of 100)	85	77	85 / 91	91	69	85	85	48	76
Measured & Indicated Attributable Resource (Mlbs CuEq)	1,611	6,161	6,197	2,096	1,984	-	4,456	2,868	7,296
Inferred Attributable Resource (Mlbs CuEq)	4,894	2,552	4,073	337	312	-	669	1,063	2,599
Mine Life (Years)	18	13	20	18	12	-	32	16	31
Annual Attributable LOM Production (Mlbs CuEq Payable)	62	340	175	65	79	-	264	102 <sup>(1)</sup>	64 <sup>(1)</sup>
LOM C1 Cash Cost (US\$/lb CuEq)	\$1.55	\$1.54	1.36	\$1.79	\$1.22	-	\$1.67	\$1.36 <sup>(1)</sup>	\$3.88 <sup>(1)</sup>
Capital Intensity (US\$/lb CuEq)	\$2.20	\$5.30	\$6.55	\$4.47	\$3.61	-	\$3.02	n/a	n/a
Headline After-Tax IRR (%)	33%	20%	23%	22%	34%	-	16%	n/a	n/a
Headline After-Tax NPV (US\$M)	\$312	\$1,310	\$1,317	\$370	\$524	-	\$713	663.7	\$1,245
Economic Study Long-Term Copper Price (US\$/lb Cu)	\$3.35	\$3.65	\$3.80	\$3.50	\$3.15	-	\$3.80	\$3.00	\$3.60

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 July 26, 2023

(1) Figures are 2022 actuals (2) Hudbay acquired Copper Mountain at an exchange ratio of 0.381 Hudbay shares per Copper Mountain share, representing a US\$439M equity value and a 23% premium based on the April 12, 2023, closing price

ASCU:TSX | ASCUF:OTCQX ARIZONASONORAN.COM

# Key Investment Highlights

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**

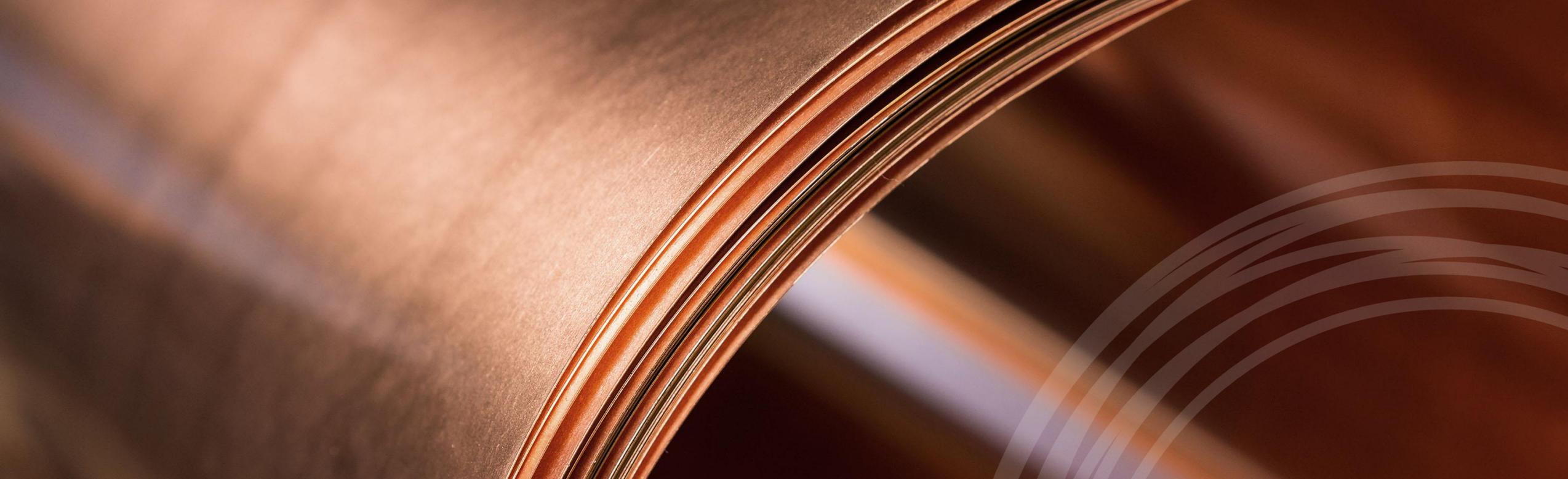


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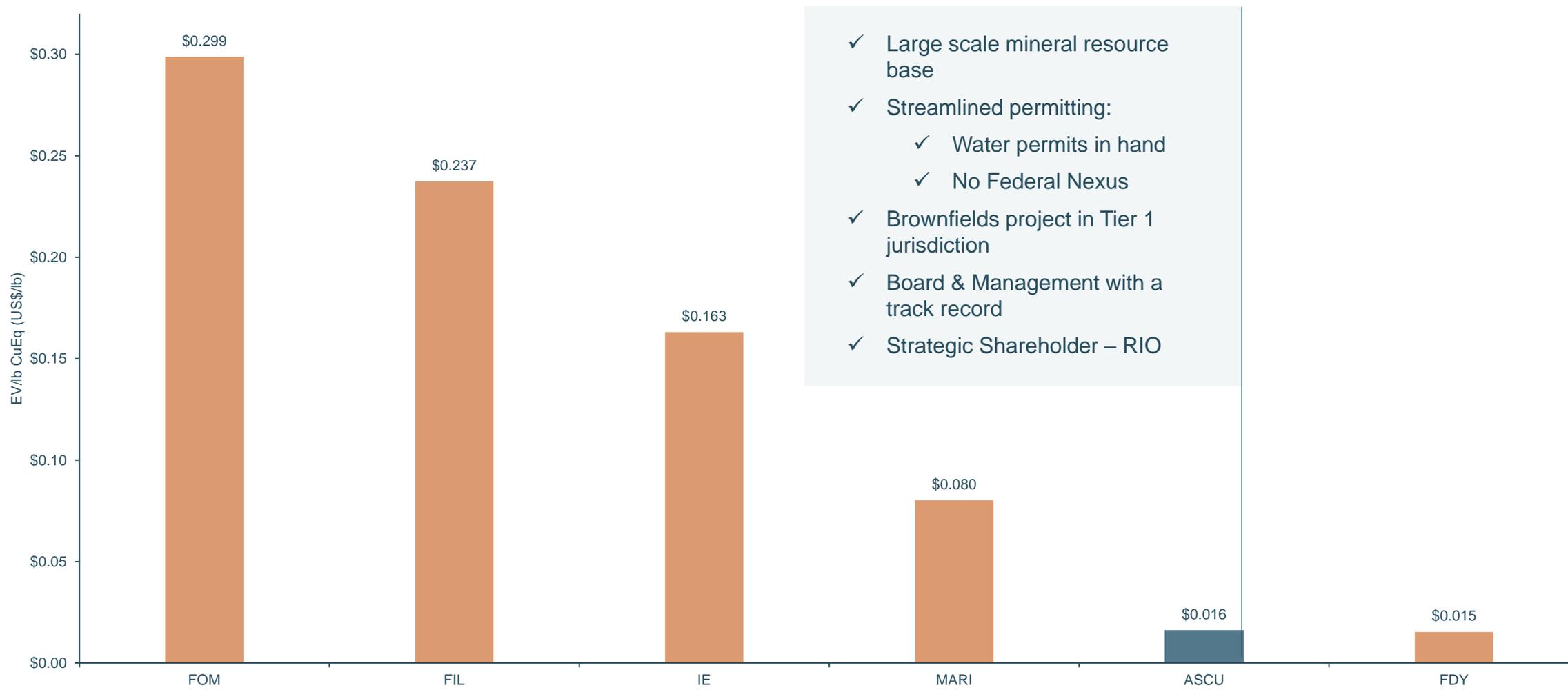
[www.arizonasonoran.com](http://www.arizonasonoran.com) | [www.cactusmine.com](http://www.cactusmine.com)



# Appendix

# Value Proposition: Benchmarking to Copper Developers

Low-Risk Copper Developer in Top Tier Jurisdiction



Source: Company Filings, Capital IQ. August 31, 2023

# Positive Metallurgical Programs – Recovery Rates by Mineral Type

**Cactus**

**Cactus Programs complete with favourable leach cycles**

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

**P/S**

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

- 20 ft columns online (Stockpile, P/S, Cactus)
- Preliminary results indicate acid generating enriched material with high recoveries

**Nuton**

**Rio Tinto’s Nuton division well underway testing primary sulphides**

- Life of mine optimized target of 80% extraction

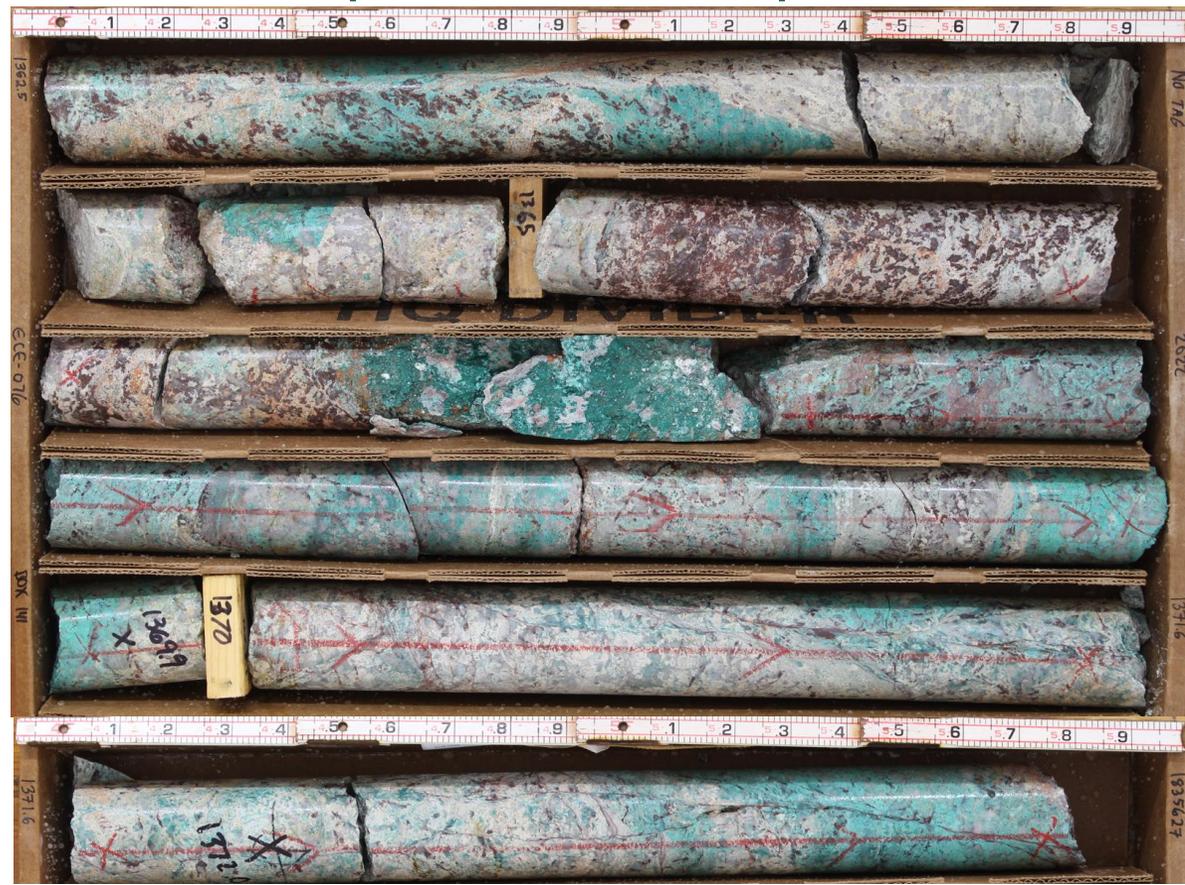
*Updated metallurgy, see press releases dated February 23, 2022 and May 2, 2023 and June 5, 2023. See slide 20 for details on Nuton  
 ASCU Recovery rates assume blended CuAS and CuCN recovery rate*

Mineral Resource Estimate and ASCU led Recovery Rates						
Category	Oxide			Enriched		
	Mineral Resource		Recovery Rates	Mineral Resource		Recovery Rates
<b>Parks/Salyer (Proposed Underground)</b>						
Inferred	14,100 kt	0.83% Cu TsoI	n/a	101,200 kt	1.10% Cu TSoI	80%
<b>Cactus East - Underground</b>						
Indicated	4,400 kt	0.84% Cu TsoI	90%	3,300 kt	1.10% Cu TsoI	76%
Inferred	10,900 kt	0.72% Cu TsoI		7,000 kt	1.14% Cu TsoI	
<b>Cactus West - Open Pit</b>						
Indicated	27,000 kt	0.51% Cu TsoI	88%	39,200 kt	0.41% Cu TsoI	78%
Inferred	51,600 kt	0.27% Cu TsoI		48,100 kt	0.82% Cu TsoI	
<b>Stockpile - Rehandling</b>						
Inferred	77,400 kt	0.14% Cu TSoI	90%	n/a		

# Infill to Measured: ECE-076 - Oxide, Chrysocolla and Malachite in Granite

Results Support mine plan

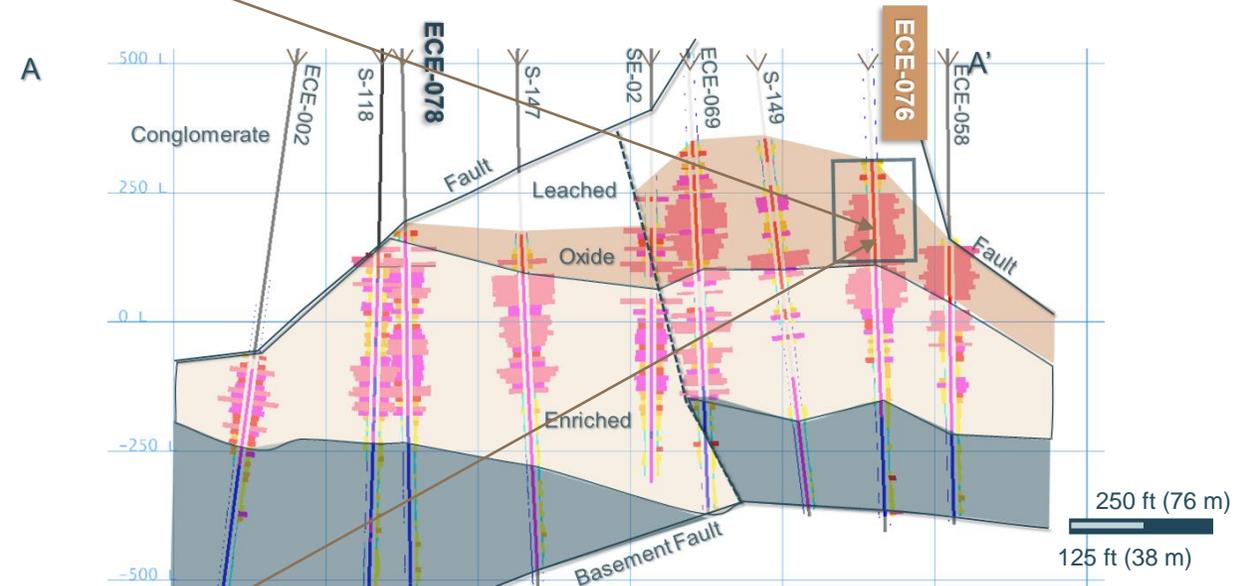
**3.08% CuT | 2.93% Cu Tsol | 0.019% Mo**



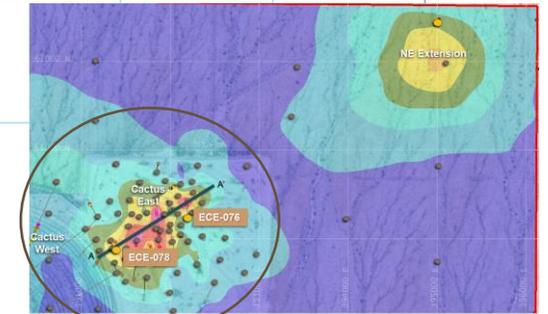
10.0 ft (3.0 m) Interval from 1,362.0 ft – 1,372.0 ft (415.1 m – 418.2 m)

**High grade interval within a 211 ft (64 m) intersect, at a depth of 1,204 ft (367 m)**

**1.75% CuT | 1.65% Cu Tsol | 0.012% Mo**

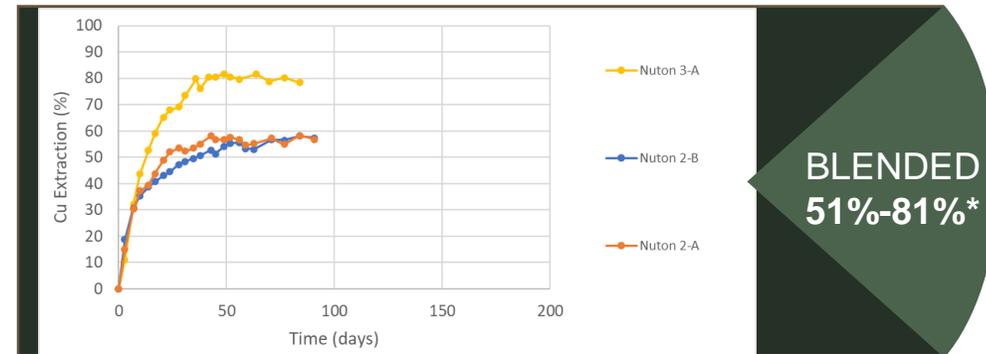
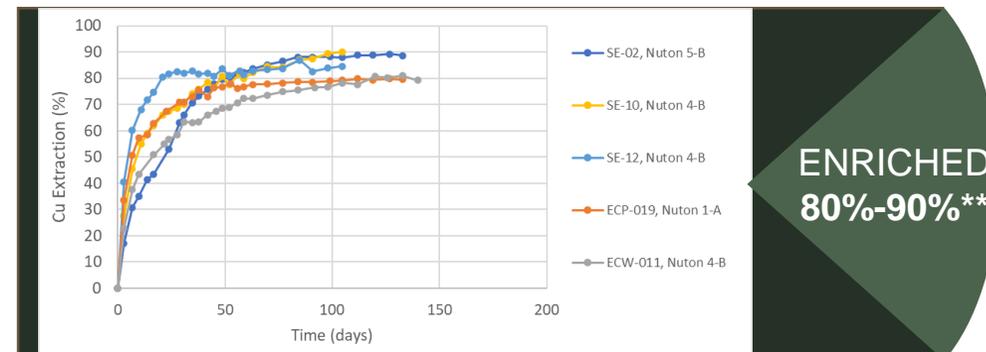
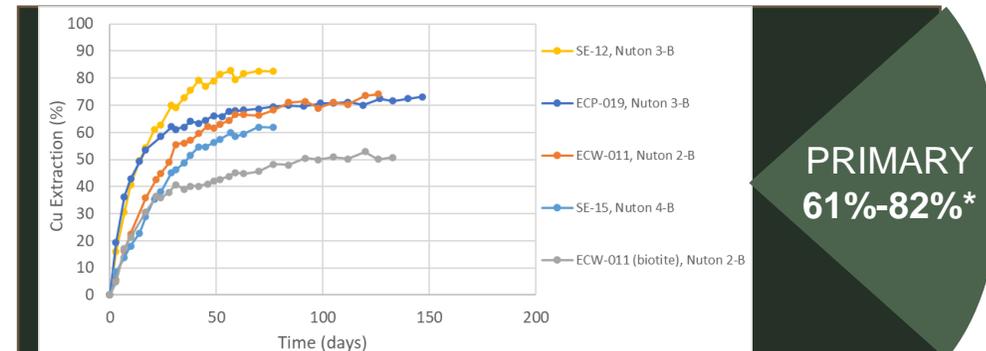


CE Cross section, looking WNW



# Nuton Copper Extraction Column Data vs ASCU Data

	ASCU				NUTON™	
	Programs updated Feb 2022 and May 2023				Preliminary Column Data	
Mineral Resource Location	Net Copper Extraction (% Cu AS)	Net Copper Extraction (% CuCN)	Blended Extraction (%)	Net Acid Consumption (kg/tonne)	Extraction (%)	Net Acid Consumption (kg/tonne)
<b>Oxides</b>						
Stockpile	90% <sup>1</sup>	40% <sup>1</sup>	81%	8	n/a	
Cactus West	92% <sup>1</sup>	73% <sup>1</sup>	88%	8		
Cactus East	92% <sup>1</sup>	73% <sup>1</sup>	90%	8		
Parks Salyer						
<b>Enriched (Secondary Sulphide)</b>						
Cactus West	92% <sup>1</sup>	73% <sup>1</sup>	78%	(-) <sup>5</sup>	80% - 90%	2.2
Cactus East	92% <sup>1</sup>	73% <sup>1</sup>	76%	(-) <sup>5</sup>	80% - 90%	2.2
Parks Salyer			80%	(-) <sup>5</sup>	80%	2.2
<b>Primary Sulphides</b>						
Flotation (ASCU)/ Leaching (Nuton)			86% <sup>2</sup>	(-) <sup>5</sup>	61% - 82% <sup>3</sup>	3.4
<b>Blended (Primary and Secondary Sulphide)</b>						
Flotation (ASCU)/ Leaching (Nuton)			91% <sup>2</sup>	(-) <sup>5</sup>	51% - 81% <sup>4</sup>	3.4



See PR dated June 5, 2023 for additional disclosure

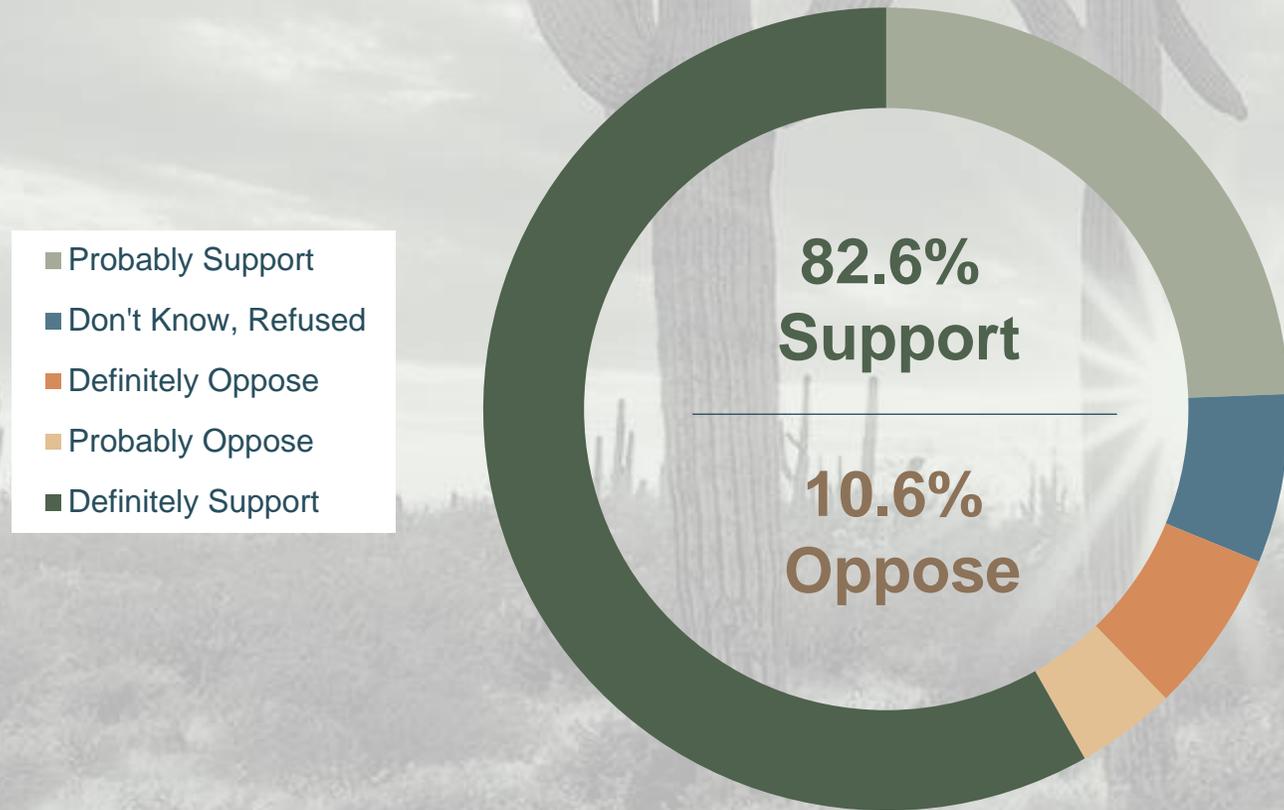
# Our ESG Framework – Setting the Pace for Net Zero Carbon Emissions



- 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)

# 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

# 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



# 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



Source: (1) Integrated Cactus PEA 2021 for ASCU – Table 21-2; Copper Creek Project, Faraday Copper (Copper Creek Project PEA, Arizona, USA; Report Date: May 3, 2023); Mcllvna Bay Project, Foran Mining (FS for the Mcllvna Bay Project, Saskatchewan, Canada; Report Date: April 14 2022); Marimaca Project, Marimaca Copper (PEA for the Marimaca Project, Antofagasta, II Region, Chile; Report Date 4 August 2020); Filo del Sol, Filo Mining (Updated PFS for the Filo del Sol Project, San Juan Province, Argentina; Report Date: February 28, 2023); Arctic Project, Trilogy Metals (FS for the Arctic Project, Alaska, USA; Report Date: January 20, 2023); and Josemaria Copper-Gold Project, Josemaria Resources (FS 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 PEA will be realised

# Reactivating a Brownfields Property Using New Technologies

## ASARCO

Production of primary sulphides using flotation mill



Sacaton Discovery 1964  
 Production Commences 1974  
 Suspends Production 1984  
**low metal prices**

Sacaton US\$20M Remediation Complete 2019

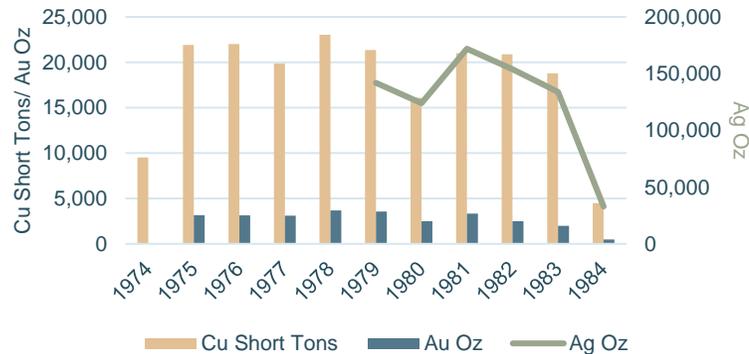
## ARIZONA SONORAN COPPER COMPANY

Heap leach and SXEW operation considered



- Purchases Sacaton
- Changes name to Cactus Mine
- Issues PEA on Stockpile
- Raises US\$25M
- Acquires Parks/Salyer
- Commencement of permitting process
- Validates historic holes and data
- Resource definition drilling complete
- Declaration of maiden Mineral Resource Estimate for Cactus
- Integrated PEA with Cactus and Stockpile projects
- Water Permit and APP Stockpile Permit obtained
- IPO and C\$45m financing
- Land package consolidation
- Builds board and team
- OTC Listing
- Infill and exploration drilling at Cactus and P/S
- Improves Metallurgy
- Confirmation no Federal Nexus Water
- C\$35m Financing Includes Rio Tinto
- Declares 2.9B lb maiden resource at P/S
- Launches Metallurgical program
- Expands operations and development team
- Infill drilling: indicated program complete; measured program underway
- C\$32.5m Financing
- MLRP and Industrial Air Permit received
- Improves metallurgy - ASCU
- Positive preliminary Nuton results – Rio Tinto
- Building owner/operator team
- PFS and FS Studies **expected 2024**
- Permitting **Based on PFS mine plan**
- Testing with Rio Tinto's Nuton Technologies **in process**
- Project Financing **subject to PFS and FS outcomes**
- Construction **subject to PFS and FS outcomes. 18–24-month construction period (per 2021 PEA)**
- Production **upon positive construction decision**

## HISTORICAL PRODUCTION (CONCENTRATE)



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 TsoI 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% TsoI; enriched material within resource pit shell = 0.098% TsoI; primary material within resource pit shell = 0.205% CuT; oxide underground material outside resource pit shell = 0.56% TsoI; enriched underground material outside resource pit shell = 0.70% TsoI; 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% TsoI; enriched underground material = 0.60% TsoI; 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.*

# Rediscovering the World-Class Santa Cruz Copper Porphyry System

Santa Cruz porphyry copper system extends 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

Source : Ivanhoe Electric Technical Report

- 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)

