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Corporate Presentation – October 2022



COPPER

Invest in Sustainability



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



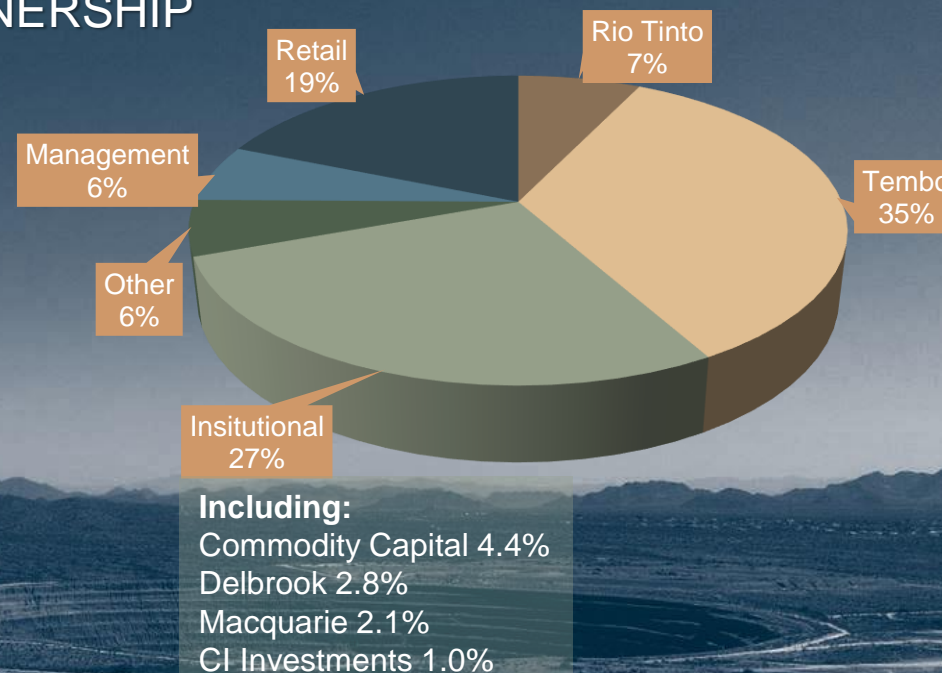
## CAPITAL STRUCTURE

Market Capitalization (M)	C\$135M
Shares Outstanding (M)	88.7
Warrants (M)	6.6
Options (M)	2.9
RSU's (M) <sup>(1)</sup>	0.3
DSU's (M)	0.4
Fully Diluted Share Capital (M)	98.9
Cash as at June 30, 2022	US\$32
Debt	Debt Free

Notes:

(1) RSUs may not be issued in shares or cash

## OWNERSHIP



## ANALYST COVERAGE



# ASCU – Doubled Global Copper Resource with new Parks/Salyer Estimate



## Brownfield Exploration and Development Project in Tier 1 Jurisdiction

- 100% ownership, Arizona-based past producing mine (1974-1984) with in place infrastructure
- **Significant mineral resource<sup>(1)</sup>:**
  - **1.6 Blbs of Indicated Resource**
  - **4.9 Blbs of Inferred Resource**



## Proposed Copper Heap Leach, SXEW Operation<sup>(1)(4)</sup>

- **Cactus Mine PEA with robust economics**
- **1<sup>st</sup> quartile Capital Intensity of \$2.20/lb Cu produced**
- **18-year Life of Mine (LOM), 1B lbs of Cu produced ~56Mlbs per year (28 kstpa)**
- **PEA completed demonstrating robust post-tax project economics**

US\$3.35/lb Cu	
Post-Tax NPV <sub>8</sub> : US\$312M	Post-Tax IRR: 33%

## Experienced Leadership Team; Strong Supportive Sponsors



## Private Landownership = Lower risk permitting process

- **Streamlined State-and-County led permitting framework**
  - ✓ Water permits received
  - ✓ Only construction-related permits remaining
- **No Federal Nexus**



## Building Scale and Growth

- **Exploration Targets on 4km Strike:**
  - Parks/Salyer (2.9 B lbs inferred copper resource)
  - NE Extension (historic drilling)
- **Cactus FS Drilling underway**
- **Primary sulfide processing optimization<sup>(3)</sup>:**
  - Rio Tinto's Nuton™ Technology
  - Primary sulfides are not included in the PEA mine plan



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

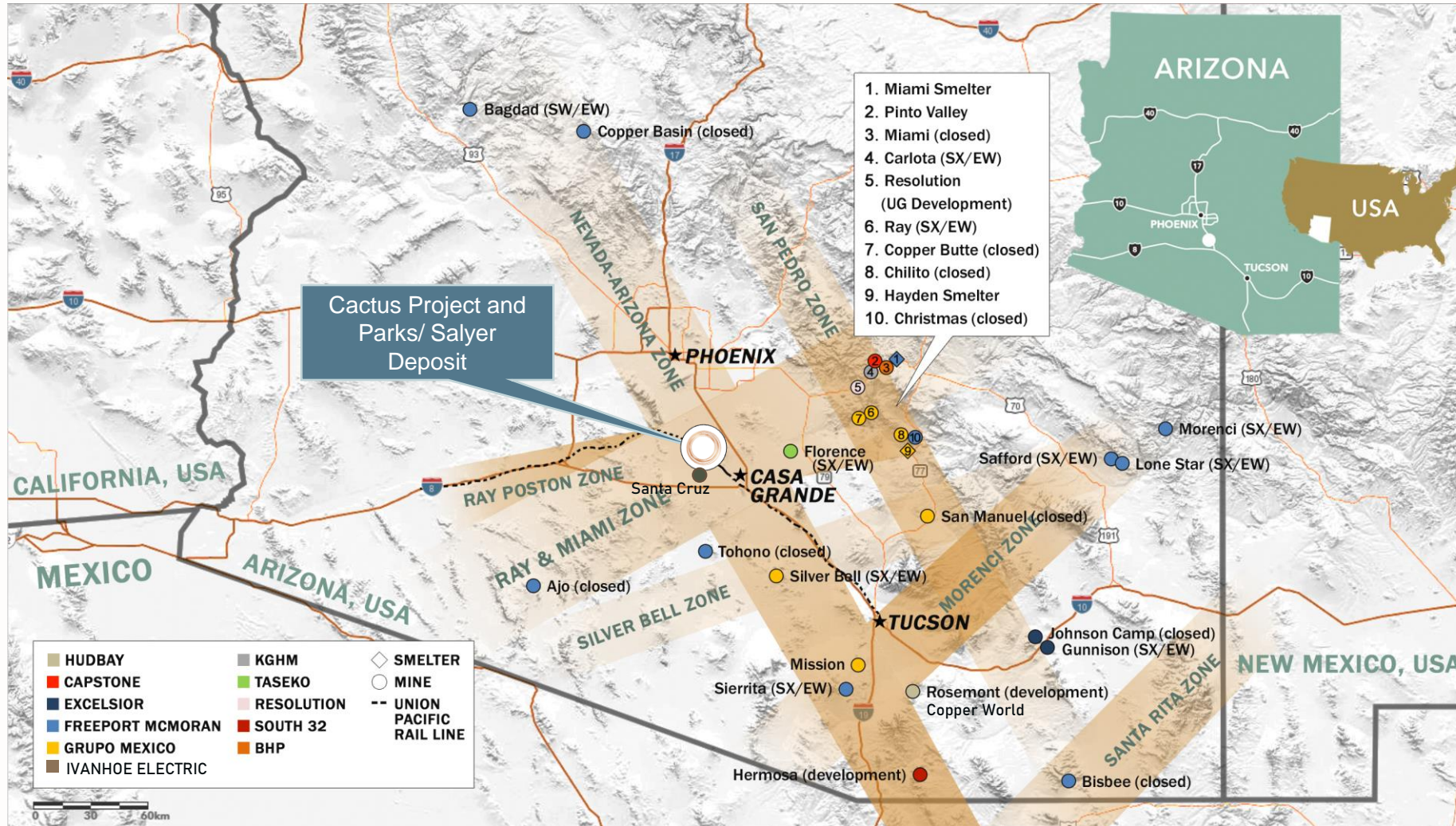


Sources/Notes: (1) Integrated Cactus PEA (2) The Arizona Department of Environmental Quality (ADEQ) AP Permit has been obtained by the Company for the stockpile project and becomes effective upon demonstration of financial capability submitted along with an amendment application for full project coverage. The relevant amendments for full project coverage will be filed by the Company and assessed by the ADEQ in due course (3) Primary resource refers to the primary sulfide material contained within the resource pit-shell (4) ) 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



# Located at the Intersection of Arizona's Three Copper Porphyry Belts

## Accessible Infrastructure and Ready Labour-force



Arizona is the **USA's leading copper-producing state** which accounted for **71%** of domestic output of copper in 2021<sup>(1)</sup>



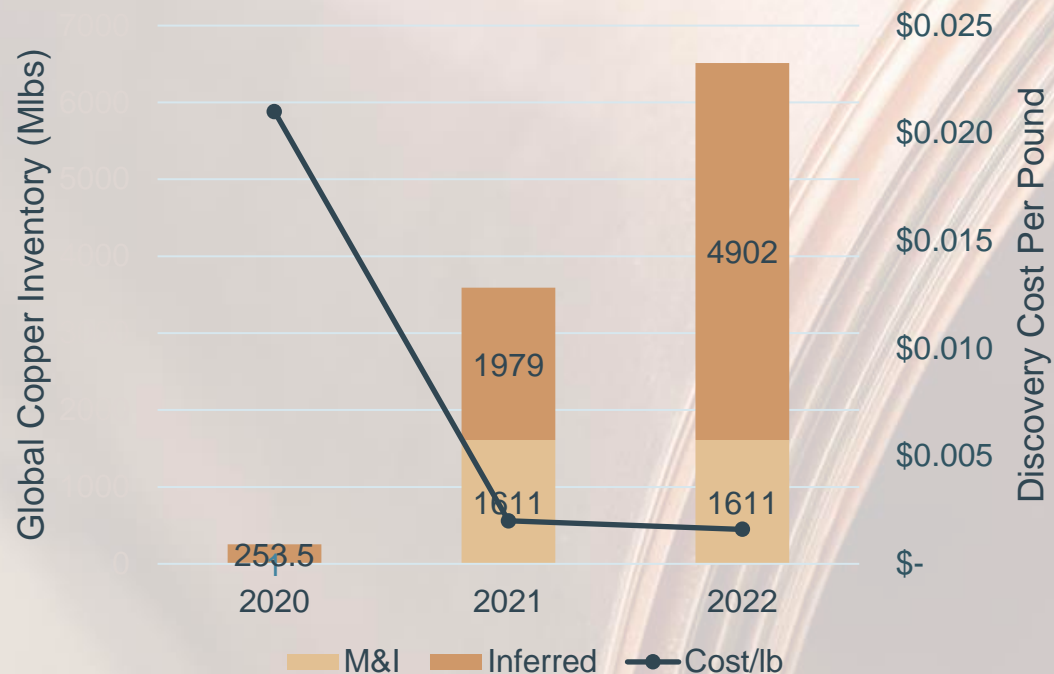
Arizona ranked **No. 5** for the year 2021 in Fraser Institute's Investment Attractiveness Index<sup>(2)</sup>

Sources/Notes: Integrated Cactus PEA (1) USGS Copper Data Sheet- Mineral Commodity Summaries 2022 (2) Fraser Institute Annual Survey of Mining Companies 2021, available at [www.fraserinstitute.org](http://www.fraserinstitute.org)

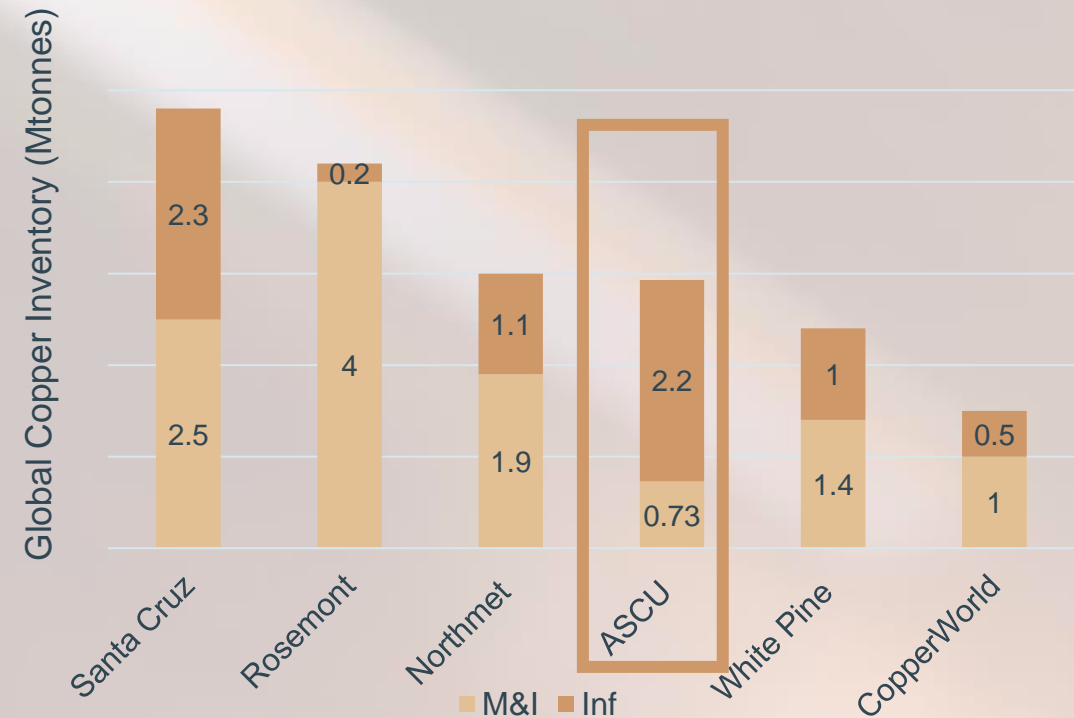


# Growing into a Significant Independent Contributor to US Copper

## Increasing the Mineral Resource Base



## Significant Independent US Copper Projects

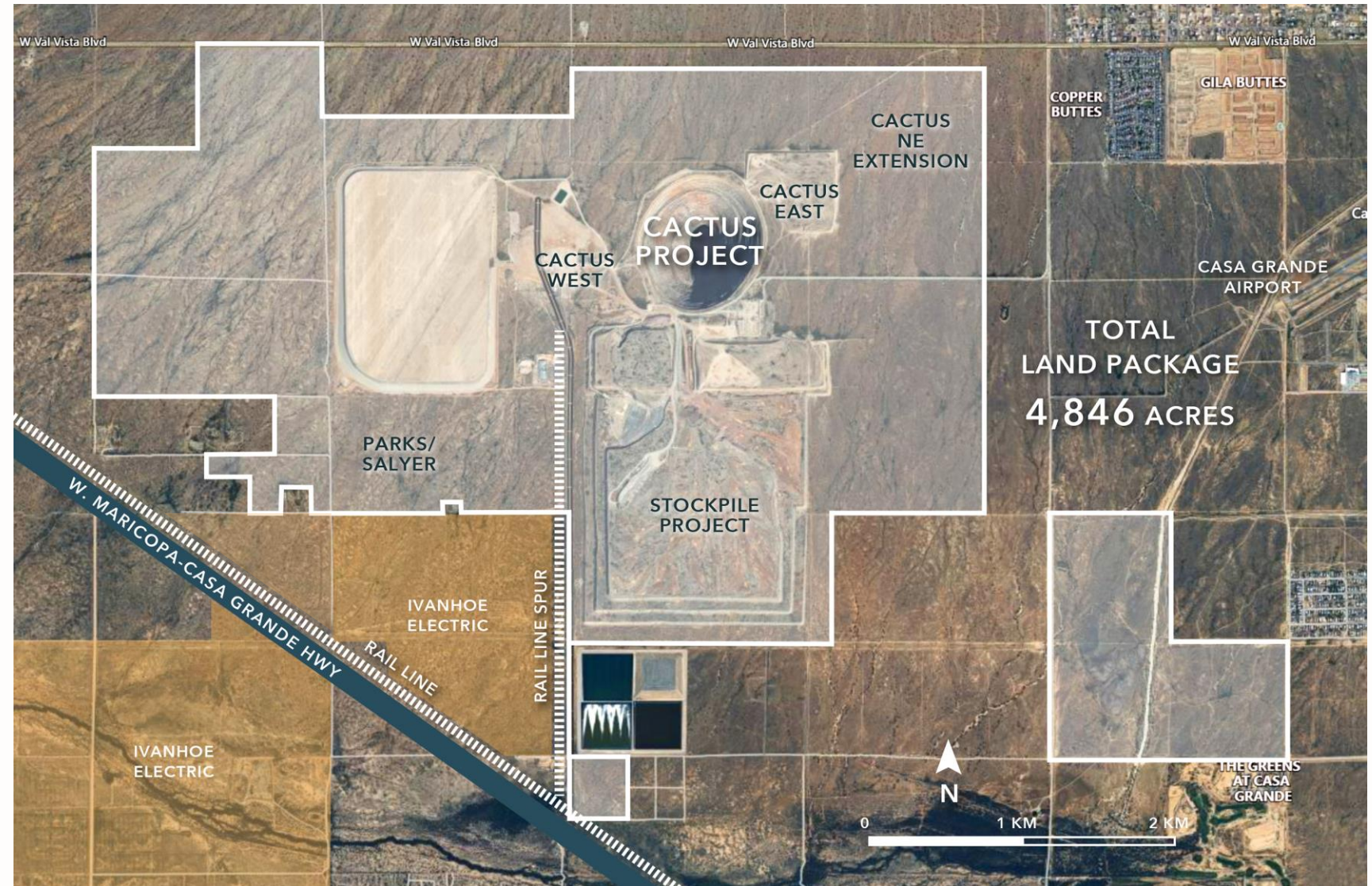
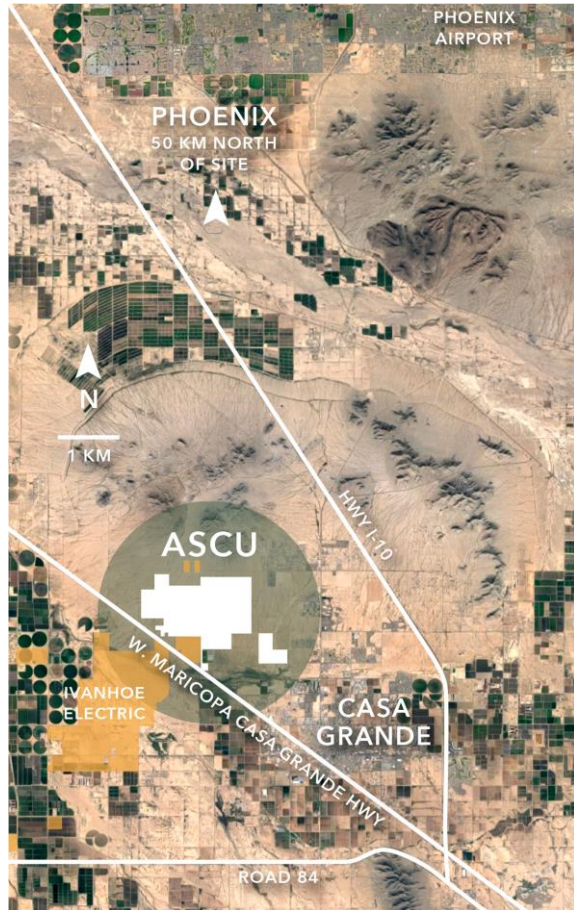


Sources/Notes: See press release dated September 28, 2022 for disclosures related to the Cactus and P/S MRE



# Cactus Site – Infrastructure, permits and a significant resource

## A Low-Risk Development Opportunity in a World Class District





# Key Permits in Place – Streamlined Process with Definitive Timelines

## Derisked Project Development



Permit	Permit Office	Status
✓ Air Quality Permit	Pinal County	Complete (annual renewal)
✓ Arizona Pollution Discharge Elimination System (402) – Cactus	ADEQ	Complete
✓ Arizona Pollution Discharge Elimination System (402) – TruStone	ADEQ	Complete
✓ Water Rights	ADWR	Complete (50 year permit)
✓ Aquifer Protection Permit (for Stockpile Project)	ADEQ	Complete
✓ General Plan Amendment (including development agreement and city zoning change from residential to industrial)	Casa Grande	Complete
✓ Aquifer Protection Permit (Major Amendment)	ADEQ	Complete
Construction and Industrial Permits	Pinal County/Casa Grande	Drafting for initial application
Mined Lands Reclamation Permit (MLRP)	AZ State Mine Inspector	Drafting for initial application
Reclamation Bond	AZ State Mine Inspector	Application post-PFS
Radio Station License, Wireless Communication	FCC	Application post-PFS
Notice of Intent to Clear Land	AZ Department of Agriculture	Required pursuant to a construction decision
Mining Construction Permits	Pinal County	Required pursuant to a construction decision
Above-Ground Tank Storage	ADEQ	Required pursuant to a construction decision
State Notice of Startup/Miner Registration Number	AZ State Mine Inspector/MSHA	Required when starting production



# Multi-Billion Pound Mineral Resource – In a World Class Mining District



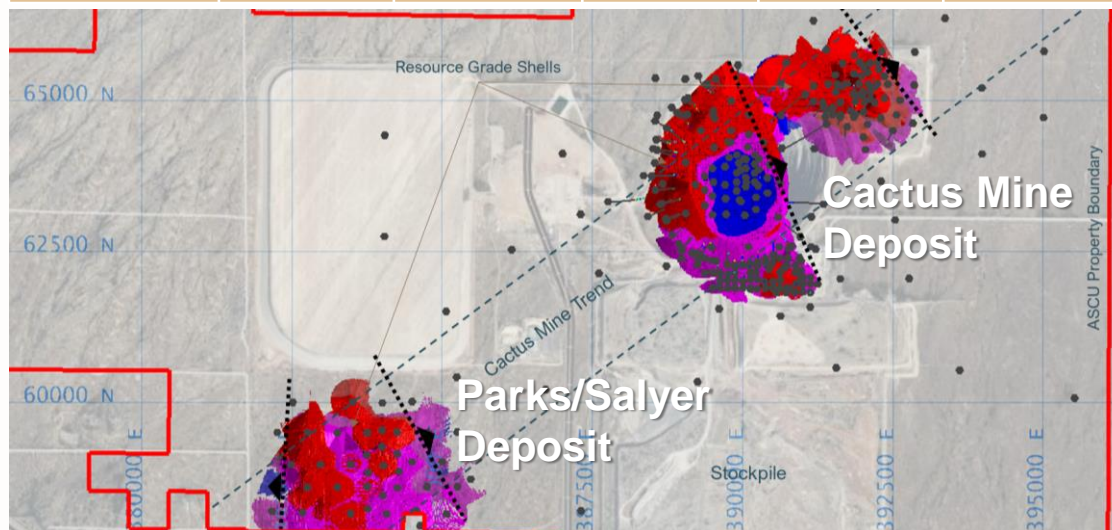
## GLOBAL MINERAL RESOURCE

Indicated Resource– 1,610,700 k lbs

Inferred Resource– 4,894,200 k lbs

### PARKS/SALYER

Category and Type	Tons (kt)	CuT (%)	Tsol (%)	Tsol_lb (klbs)	Contained Tons (kt)
<b>Inferred Resource</b>					
Leachable	115,400	-	1.066	2,460,900	1,230
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>



### CACTUS MINE

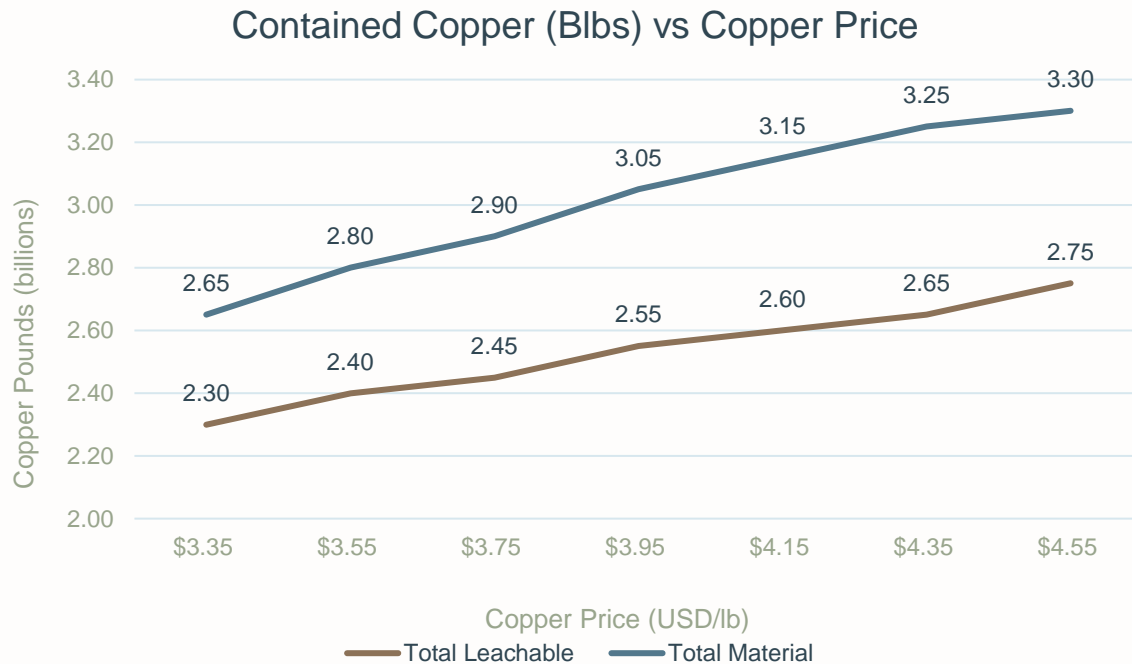
Category and Type	Tons (kt)	CuT (%)	Tsol (%)	Tsol_lb (klbs)	Contained Tons (kt)
<b>Indicated Resource</b>					
Total Leachable	73,900	–	0.723	1,065,200	534
Primary	77,900	0.350	–	545,500	273
<b>Total Indicated</b>	<b>151,800</b>	<b>0.531</b>		<b>1,610,700</b>	<b>806</b>
<b>Inferred Resource</b>					
Total Leachable	117,600	–	0.417	979,300	490
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>879</b>
Stockpile - Leachable	77,400	0.169	0.144	223,500	111

Sources/Notes: (1) Includes Stockpile Project (2) Integrated Cactus PEA Tables 14-18 and 14-19

Sources/Notes: See press release dated September 28, 2022 for disclosures related to the P/S MRE

# Parks/Salyer Sensitivity to the Copper Price

Highly leveraged to the Copper Price



Price	Total Leachable			Total Material		
	TSol (%)	Tonnage (M short ton)	TSol (Cu Blbs)	TCu (%)	Tonnage (M short ton)	TSol (Cu Blbs)
\$3.35	1.13	100.5	2.30	1.08	123.5	2.65
\$3.55	1.10	108.0	2.40	1.05	134.0	2.80
\$3.75	1.07	115.5	2.45	1.01	143.5	2.90
\$3.95	1.04	122.5	2.55	0.99	153.5	3.05
\$4.15	1.01	128.5	2.60	0.96	163.0	3.15
\$4.35	0.99	135.0	2.65	0.93	172.5	3.25
\$4.55	0.97	141.5	2.75	0.91	182.5	3.30

Notes: The sensitivity and upside exposure to a larger tonnage at higher copper prices is demonstrated in the table above.

The reader is cautioned that figures in the following chart should not be misconstrued as Mineral Resources or confused with the Mineral Resource Statement.

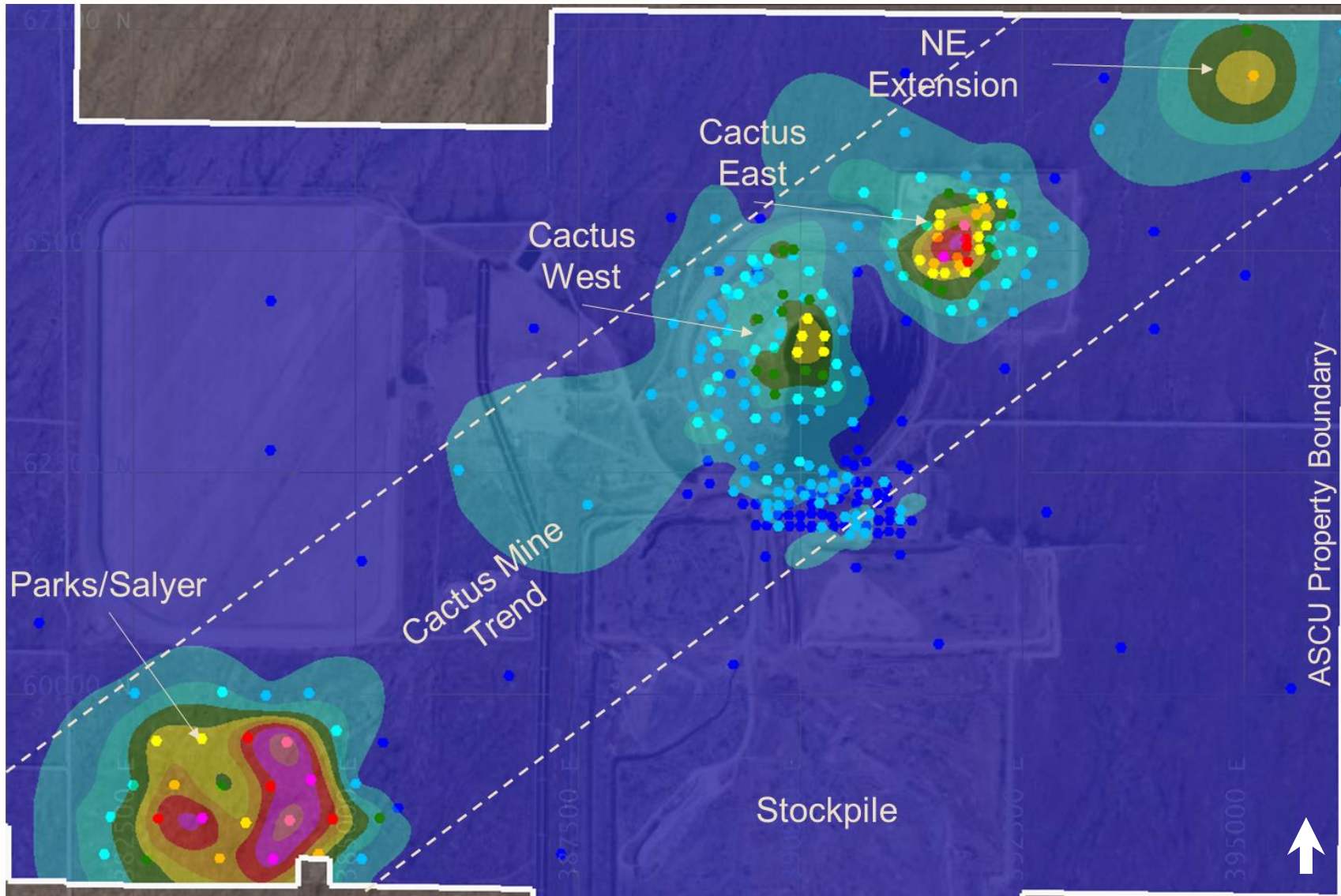
These figures are only presented to show the sensitivity vis a vis copper prices based on the methodology and assumptions stated.

1. Price sensitivity tons and grades were calculated using a consistent methodology to the reporting of the Parks/Salyer inferred resource. New cut-off grades were calculated for each material type (oxide, enriched, and primary) based on the variation in copper price. Tons and grades were rereported for each material type with the appropriate cut-off grade.

2. Cu grade reported for Total Material represents a blend of Cu TSol for oxide and enriched material, and CuT for primary material.



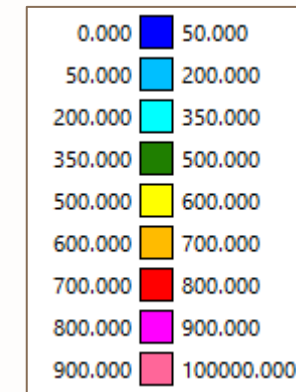
# Parks/Salyer Grade Thickness Plan View



## Grade Thickness (GT) Map

GT = CuT (%) x vertical thickness of mineralization (ft)

Intercepts not drilled to the full extent of the basement fault will under-represent the GT value



1,250 ft (381 m)

2,500 ft (762 m)

# Building Scale and Potential Pipeline for Future Operations

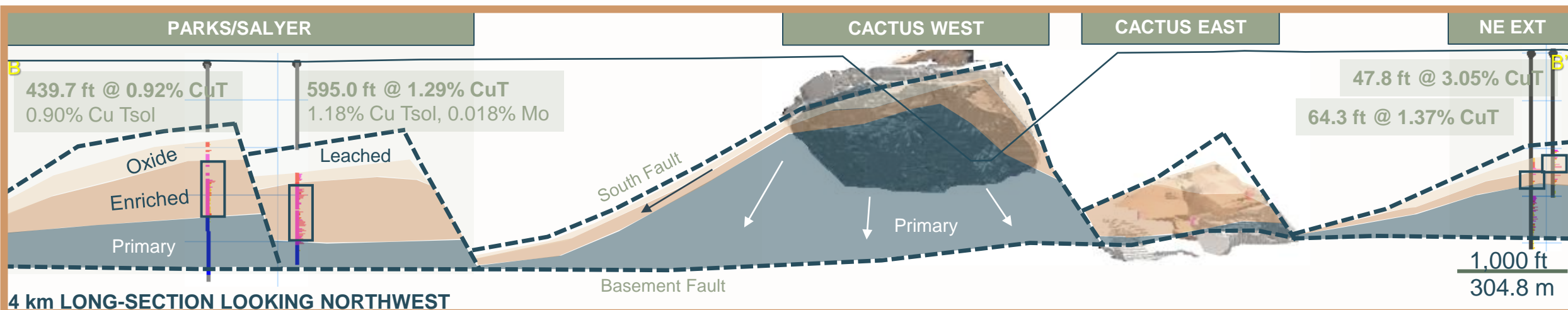
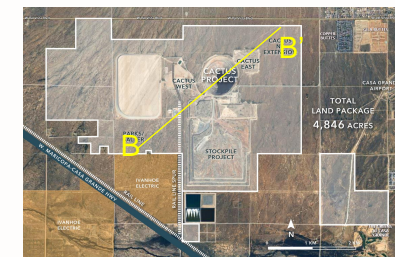


**1 Cactus Mine**  
18 year mine life

**2 Parks/Salyer Deposit**  
Rescoping Cactus to optimize a larger scale operation

**3 Primary Resources**  
Nuton™ testwork provides optionality for substantial primary resource

**4 Cactus NE Ext**



Cactus Resource shell is extracted from the VRify software in a 3D rendering

## PARKS/SALYER RESOURCE ESTIMATE (inferred)

<b>Leachable</b>	Inf – 115M st @ 1.066% Cu Tsol	2.5B lbs Cu
<b>Primary</b>	Inf - 28M st @ 0.804% Tcu	0.45B lbs Cu

See PR dated Feb 10, 2022 for disclosures related to the Exploration Target

Nuton™ Test Work Targeting  
Primary Sulfides and Chalcopryite

## CACTUS MINERAL RESOURCE ESTIMATE

<b>Leachable</b>	Ind - 74M st @ 0.723% Cu Tsol Inf - 117M st @ 0.417% Cu Tsol	1.07B lbs Cu 0.98B lbs Cu
<b>Primary</b>	Ind - 78M st @ 0.35% CuT. Inf - 111M st @ 0.35% CuT	0.55B lbs Cu 0.78B lbs Cu

Cactus Mine PEA with an effective date of August 31, 2021



# Drilling Programs De-risk Future Technical Studies

## PARKS/SALYER

250 ft centres (indicated category)

- 105,000 ft (24,384 m)
- Drilling to be complete by year-end

## CACTUS

125 ft centres (measured category)

- 60,000 ft (18,288 m) - infill drilling
- 12,000 ft (3,650 m) - planned expansion
- Drilling to resume later in the year



# LEACHABLE MATERIAL: Positive Ongoing Metallurgical Testing (Bottle Roll / Column Leach)



01

**Simple heap-leach/SXEW process considered** for 1.3 billion pounds of leachable copper (LOM)  
**2 years of met test work continues**

02

**Oxide material** rapid extraction potential within 2 months (column testing)  
• Up to 3-month leach cycle has been considered

03

**Enriched material** indicates longer leaching cycles (column testing) from two years of data  
• Enriched columns with sulfides and higher copper grades, are net acid producing; showing reduced acid consumption

## AVERAGE METALLURGICAL PERFORMANCE CRITERIA

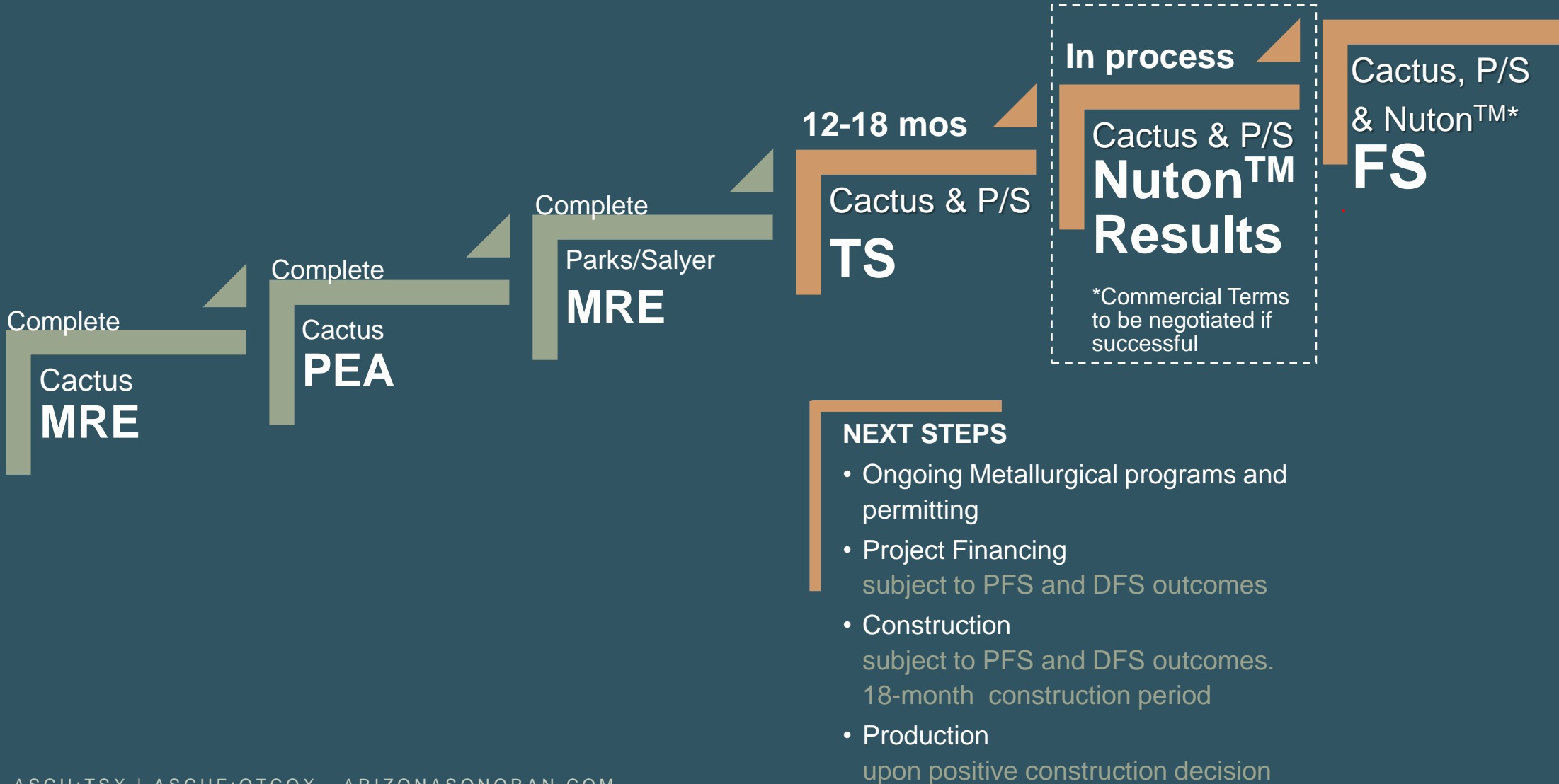
	Preliminary Column Tests (PEA)				Updated Column Tests			
Resource Component	Net Copper Recovery (%CuAS)	Net Copper Recovery (%CuCN)	Gross Acid Consumption (lb/ton)	Net Acid Consumption (lb/ton)	Net Copper Recovery (% CuAS)	Net Copper Recovery (% CuCN)	Gross Acid Consumption (lb/ton)	Net Acid Consumption (lb/ton)
<b>Stockpile</b>								
<b>Oxide</b>	90%	40%	22	18	<b>90%</b>	<b>40%</b>	<b>22</b>	<b>16 (-)</b>
<b>Open Pit &amp; Underground</b>								
<b>Oxide</b>	90%	72%	22	18	<b>92% (+)</b>	<b>73% (+)</b>	<b>22</b>	<b>16 (-)</b>
<b>Enriched</b>	90%	72%	22	1	<b>92% (+)</b>	<b>73% (+)</b>	<b>22</b>	<b>0 (-)</b>

Updated metallurgy, see press release dated February 23, 2022



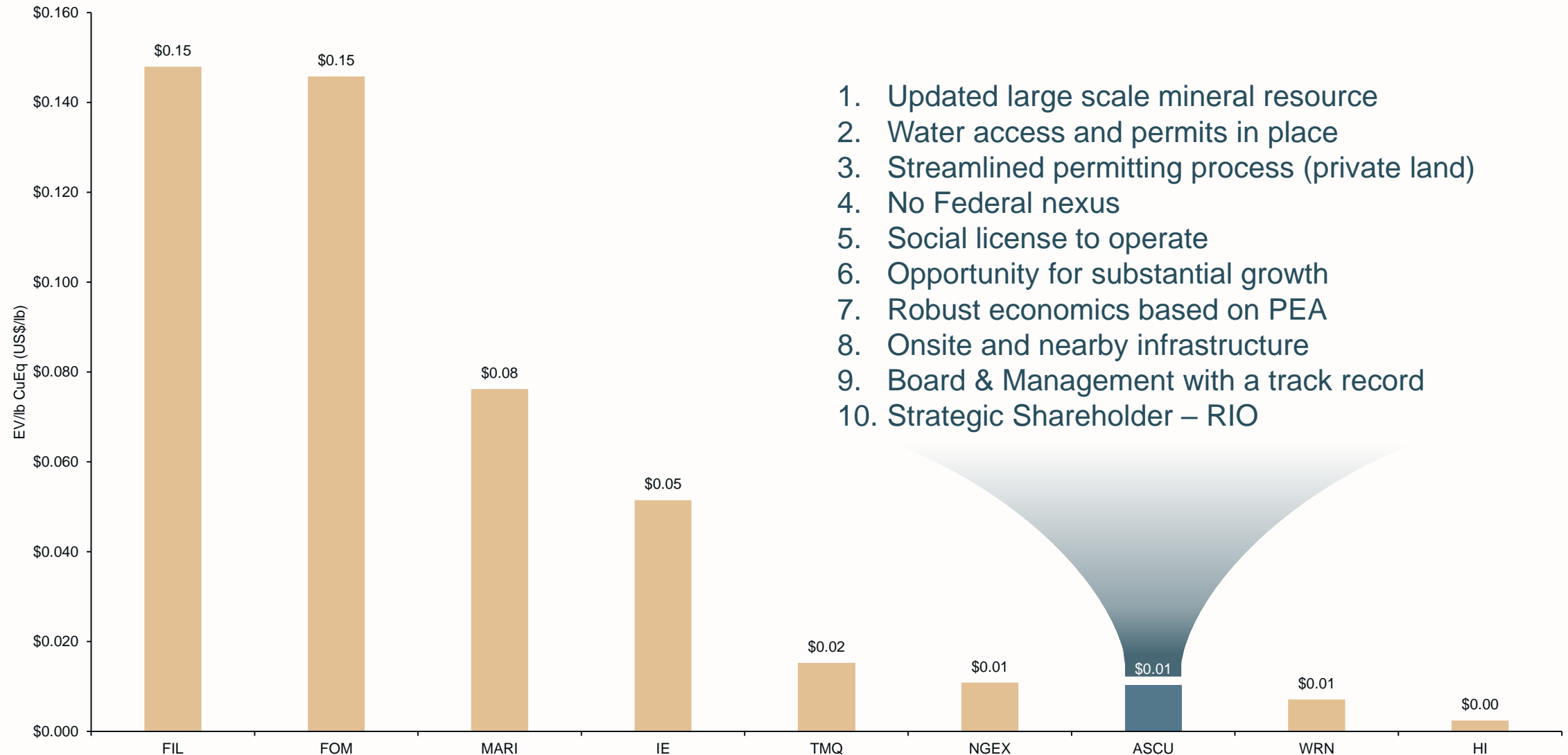
# Project Timeline

Brownfield site offers fast track development



# Value Proposition: 10 Reasons How ASCU Outpaces its Peers

## Low-Risk Copper Developer in Top Tier Jurisdiction














1. Updated large scale mineral resource
2. Water access and permits in place
3. Streamlined permitting process (private land)
4. No Federal nexus
5. Social license to operate
6. Opportunity for substantial growth
7. Robust economics based on PEA
8. Onsite and nearby infrastructure
9. Board & Management with a track record
10. Strategic Shareholder – RIO

Source: Company Filings, Capital IQ, September 26, 2022



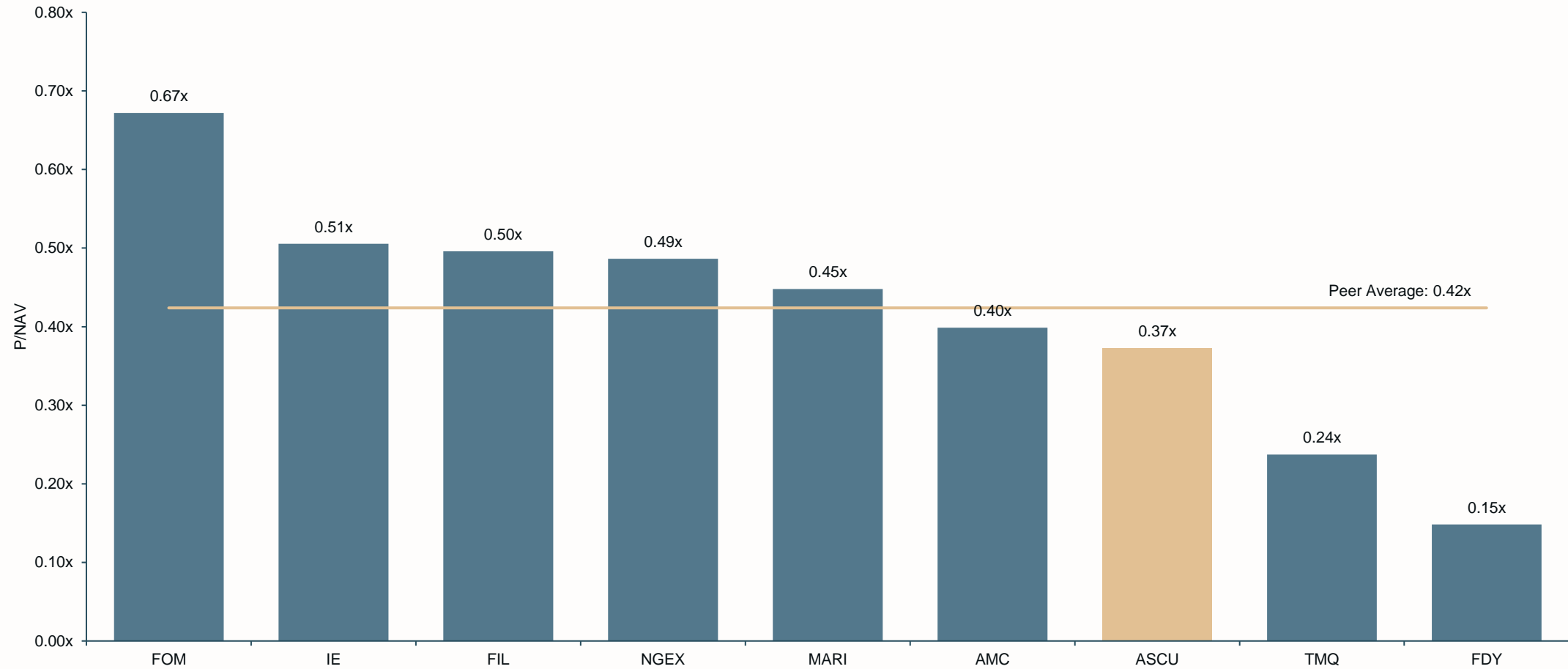
# Benchmarking ASCU to Copper Developers



	 ARIZONA SONORAN	 Ivanhoe ELECTRIC	 FORAN MINING CORPORATION	 FILO MINING	 marimaca COPPER CORP.		 NGEX MINERALS	 western COPPER AND GOLD	 TRILOGY METALS INC.	 HIGHLAND Copper Company Inc.	 FARADAY COPPER
Market Capitalization (US\$M)	\$112M	\$1.0B	\$452M	\$1.5B	\$201M	\$393M	\$245M	\$187M	\$96M	\$42M	\$42M
Asset Name	Cactus / Parks Salyer	Santa Cruz / Tintic	McIlvenna Bay	Filo del Sol	Marimaca	Kay	Los Helados	Casino	Arctic	Copperwood	Cu Creek / Contact Cu
Economic Study Level	PEA	Resource	FS	PFS	PEA	Historic	Resource	FS	FS	FS	Historic
Development Type (Greenfields or Brownfields)	Brownfields	Greenfields	Brownfields	Greenfields	Greenfields	Brownfields	Greenfields	Greenfields	Greenfields	Greenfields	Greenfields
Jurisdiction	Arizona	Arizona / Utah	Saskatchewan	Argentina	Chile	Arizona	Chile	Yukon	Alaska	Michigan	Arizona
Fraser Institute Policy Perception Index (Rating Out of 100)	85	85 / 91	91	77	69	85	69	80	85	72	85
Measured & Indicated Attributable Resource (Mlbs CuEq)	1,611	5,618	2,096	6,019	1,536	-	14,609	14,830	2,629	5,259	4,126
Inferred Attributable Resource (Mlbs CuEq)	4,894	4,991	337	2,116	787	-	4,658	6,605	2,792	3,723	673
Mine Life (Years)	18	-	18	13	12	-	-	27	12	10	-
Annual Attributable LOM Production (Mlbs CuEq Payable)	56	-	65	274	79	-	-	329	135	74	-
LOM C1 Cash Cost (US\$/lb CuEq)	\$1.55	-	\$1.79	\$1.23	\$1.22	-	-	\$1.00	\$1.46	\$1.74	-
Capital Intensity (US\$/lb CuEq)	\$2.20	-	\$4.47	\$4.62	\$3.61	-	-	\$10.45	\$6.69	\$3.69	-
Headline After-Tax IRR (%)	33%	-	22%	23%	34%	-	-	18%	27%	18%	-
Headline After-Tax NPV (US\$M)	\$312	-	\$370	\$1,280	\$524	-	-	\$2,334	\$1,135	\$117	-
Economic Study Long-Term Copper Price (US\$/lb Cu)	\$3.35 / \$3.75	\$3.70	\$3.50	\$3.00	\$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 September 6, 2022.

# Copper Development Peers (P/NAV)



Source: Company Filings, Haywood Securities, Capital IQ, September 26, 2022



# Key Investment Highlights



- Our Core Values Are Supported by an ESG Framework
- Copper Market Fundamentals Are Strong
- Mature Capital Structure
- Experienced Leadership Team and Board with a Proven Track Record
- Brownfield, Scalable Development Project in Tier 1 Jurisdiction
- Large scale mineral resource
- Robust Project Economics
- Low Risk Development with State-and-County Led Permitting Framework
- Mergers and Acquisitions Potential Longer Term Within Arizona

Notes: 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



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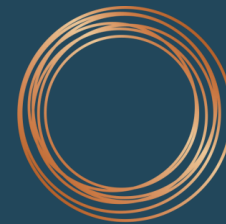
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President, CEO & Director

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**ARIZONA SONORAN**  
C O P P E R   C O M P A N Y





# Appendix

# 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**



# Management Team with Proven Track Record



**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 Wester 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



Toronto  
Corporate  
Office



Arizona  
Corporate  
Office/Site

## STRONG SPONSOR SUPPORT

**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

**RioTinto**

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

# 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)

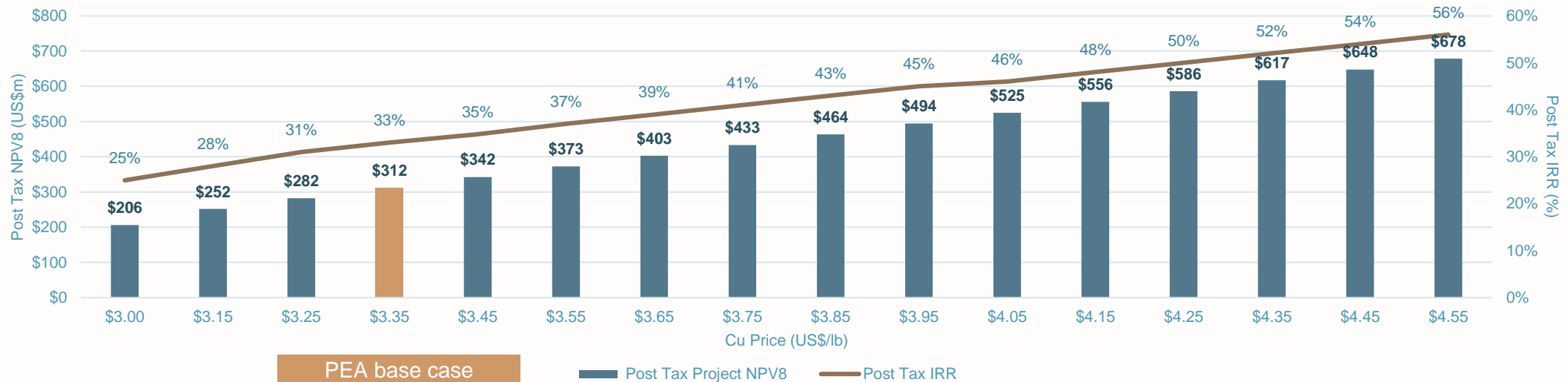


# Robust PEA Base Case Project Economics



KEY PROJECT METRICS <sup>(1)(2)</sup>	
	Over LOM
Mine Life	~1B lbs of Cu over 18 years
Average Production	28 ktpa (56Mlbs); Peaks at 40 ktpa (80Mlbs)
Operating Costs <ul style="list-style-type: none"> <li>Avg OPEX over LOM (US\$/t milled)</li> <li>Avg C1 Cost over LOM (US\$/lb)</li> <li>Avg AISC over LOM (US\$/lb)</li> </ul>	<ul style="list-style-type: none"> <li>US\$9.06/ton</li> <li>US\$1.55/lb</li> <li>US\$1.88/lb (incl. royalty)</li> </ul>
Capex	Initial Construction Capex: US\$124M Sustaining Capex over LOM: US\$340M
Free Cash Flow (Post tax Undiscounted)(US\$/lb Cu)	US\$960M

## NPV AND IRR SENSITIVITIES<sup>(1)(2)</sup>



# Rediscovering the World-Class Santa Cruz Copper Porphyry System



Drilling the same porphyry copper system, starting at Santa Cruz and extending northeast to Sacaton Northeast

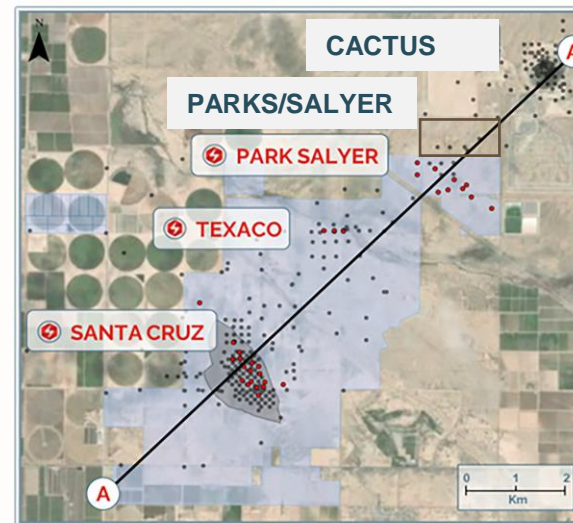
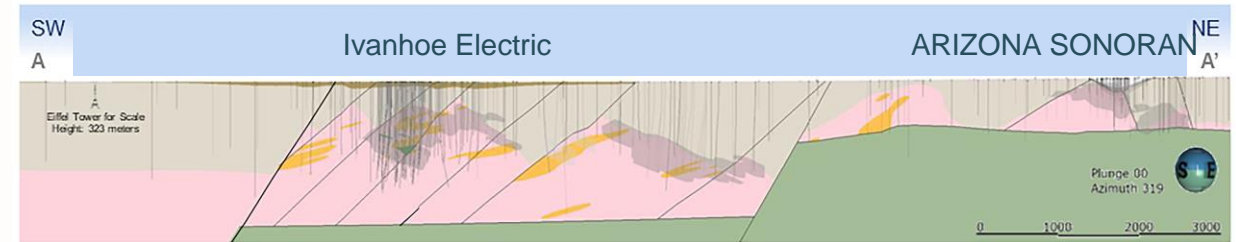
IE and ASCU land position connected at Parks/Salyer

ASCU – active drilling (3 rigs)

IE – active drilling (6 rigs)

## Ivanhoe Electric Mineral Resource Estimate

- Indic - 274 Mt of 0.93%
- Inf - 248 Mt of 0.91%
- (0.39% cut-off - \$3.70/lb Cu)



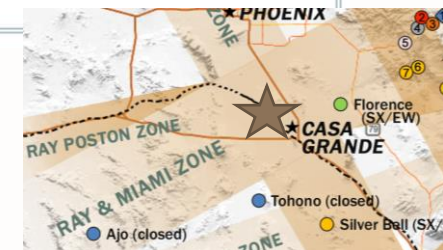
### LEGEND

#### Geology

- Alluvium
- Tertiary Sediments
- Granodiorite Porphyry
- Diabase Dykes
- Oracle Granite
- Pinal Schist
- Major Faults (basin and range)
- Ivanhoe Electric – Santa Cruz Project
- December 2021 Mineral Resource Estimate
- Drillhole Collar
- Drillhole Trace
- Ivanhoe Electric Drillhole Collar

B-B': Slide 27 Long Section

Source : Ivanhoe Electric Technical Report





# Cactus Site – Brownfield Advantage with Ready Access to Infrastructure



Historic data, core shack, maps etc.

Vent raise and u/g development to historic orebody

Shaft to 1,800 ft. level (20 ft. diameter, cement-lined)  
worthy of further investigation for UG mining

Open pit access to near surface remnant ore

Power substation

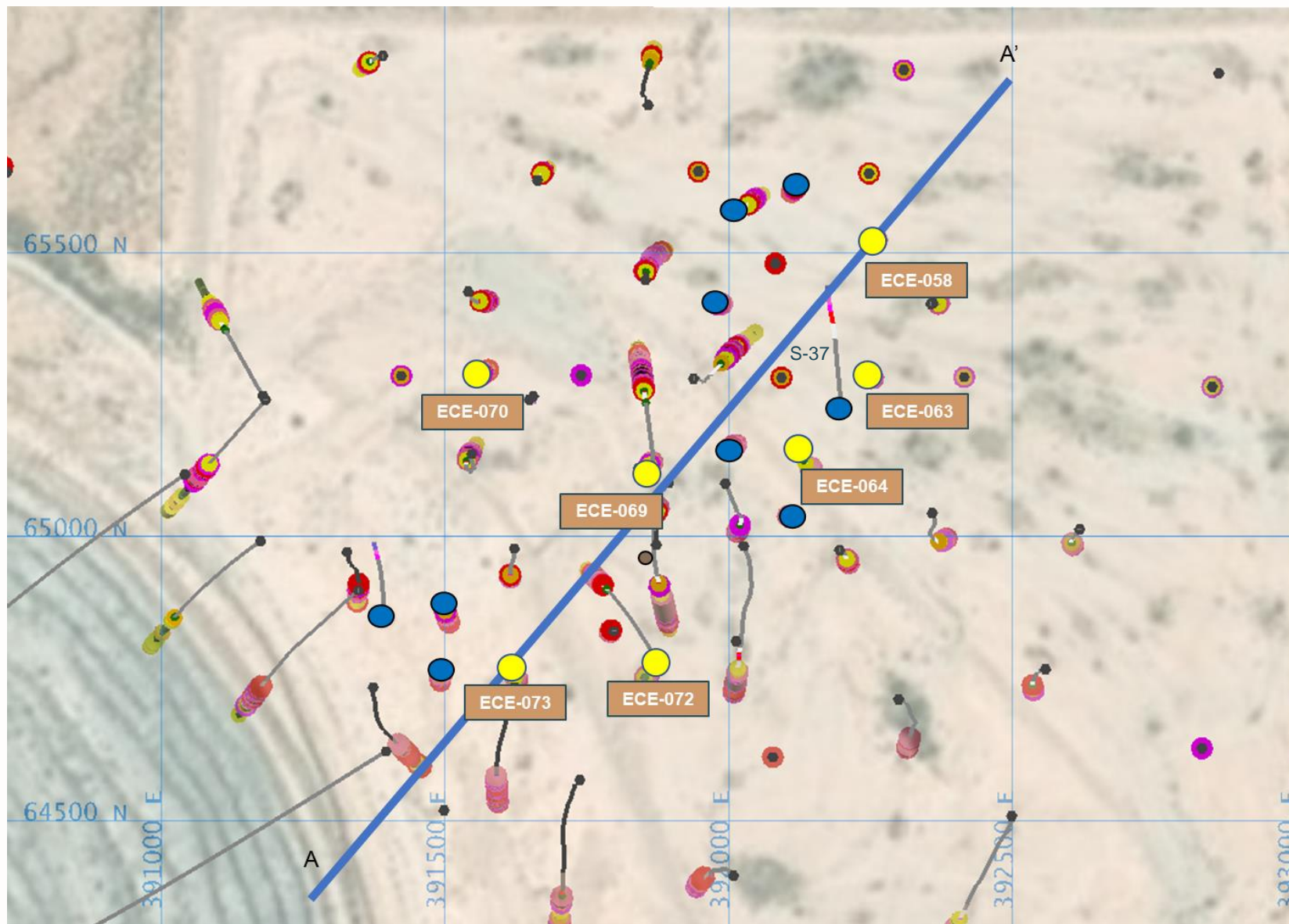
Rail spur (to ship concentrate to refinery)

Stockpile (part of Integrated Cactus PEA)

Water wells (to supply water to the mine)



# Cactus East FS Level Infill Drilling Supporting Current Model



- August 30 Press Release
- Assays Pending

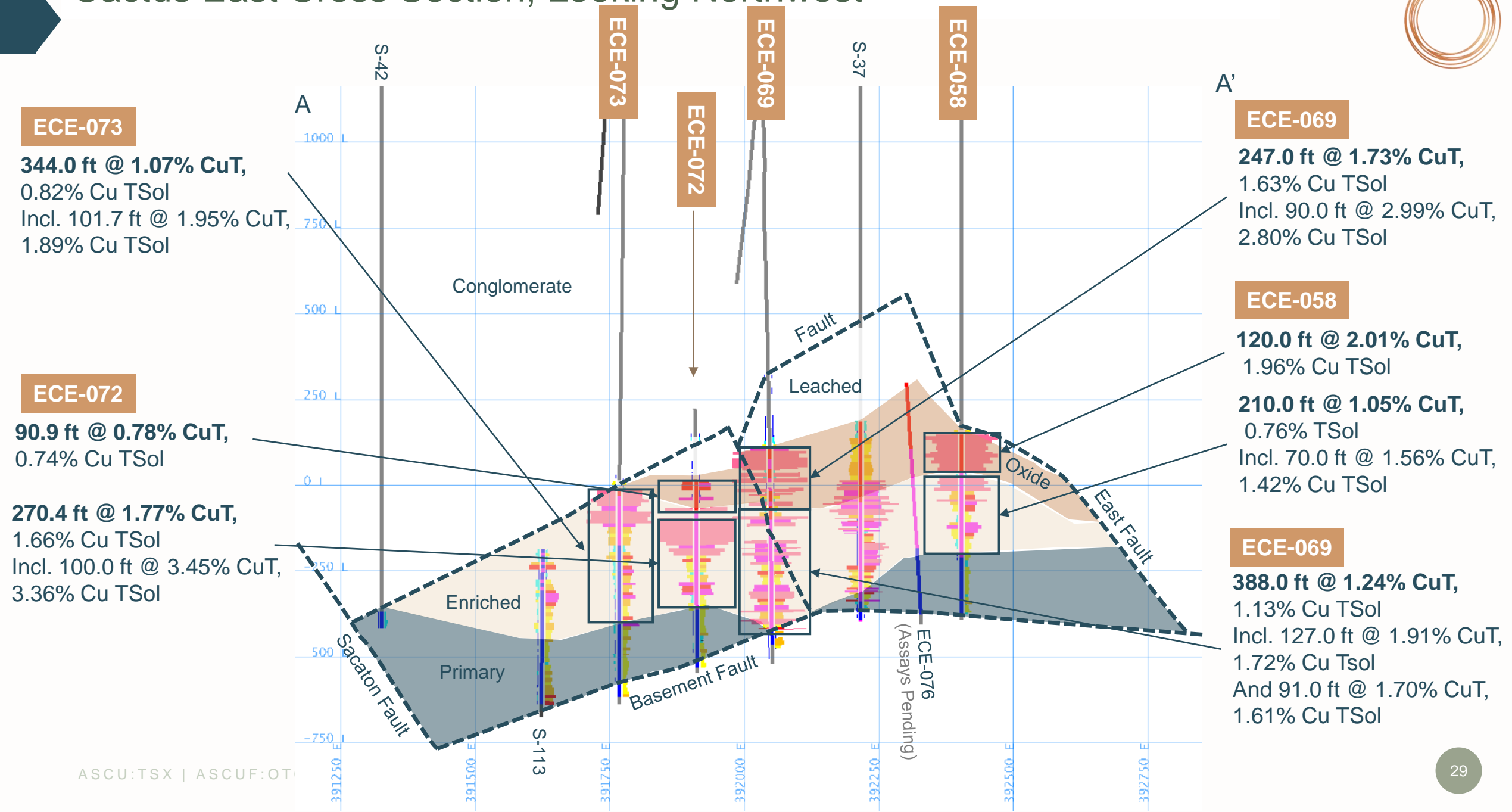
250 ft (76 m)

500 ft (152.4 m)

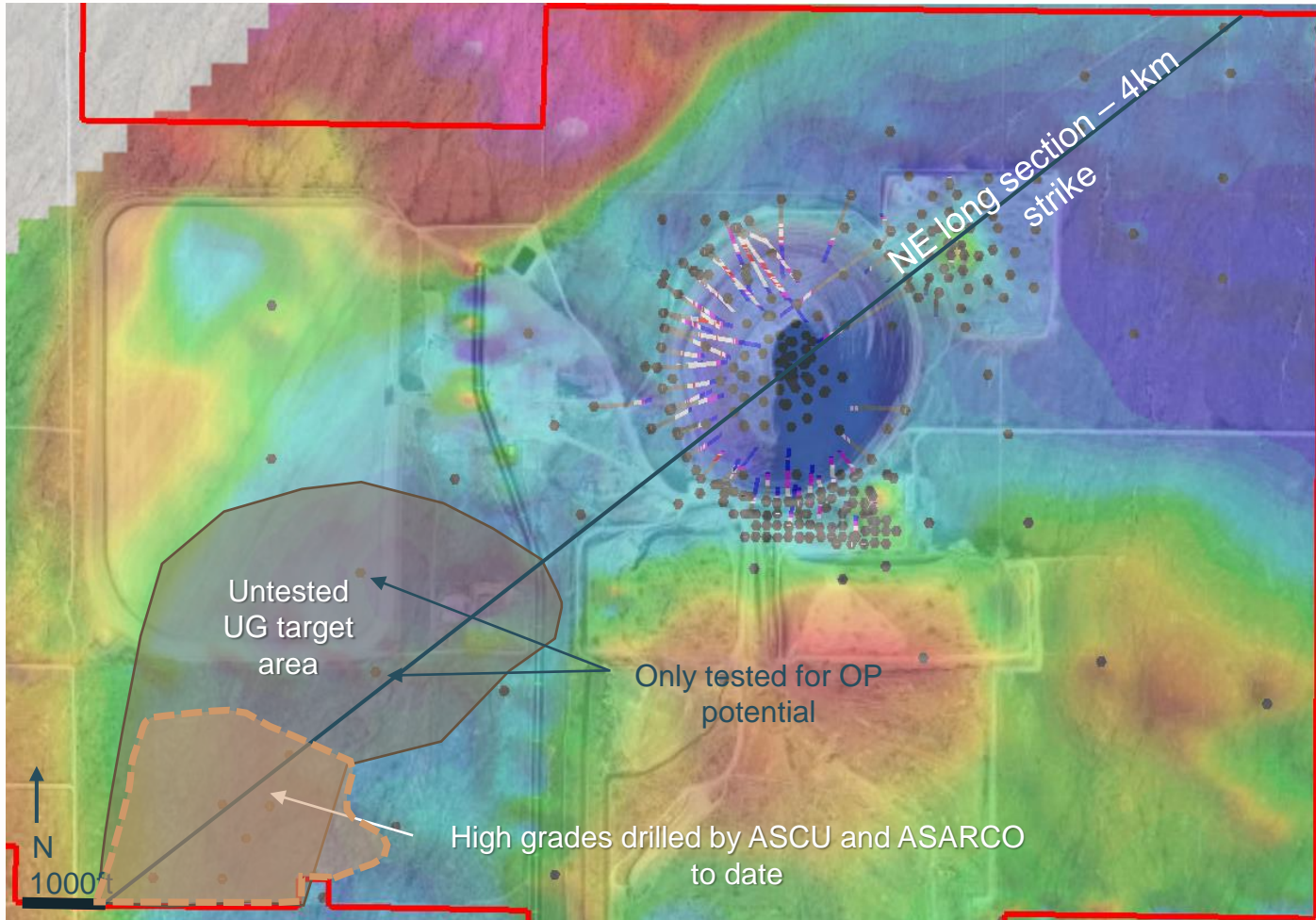


# Cactus East Cross Section, Looking Northwest

Press Release dated August 30, 2022



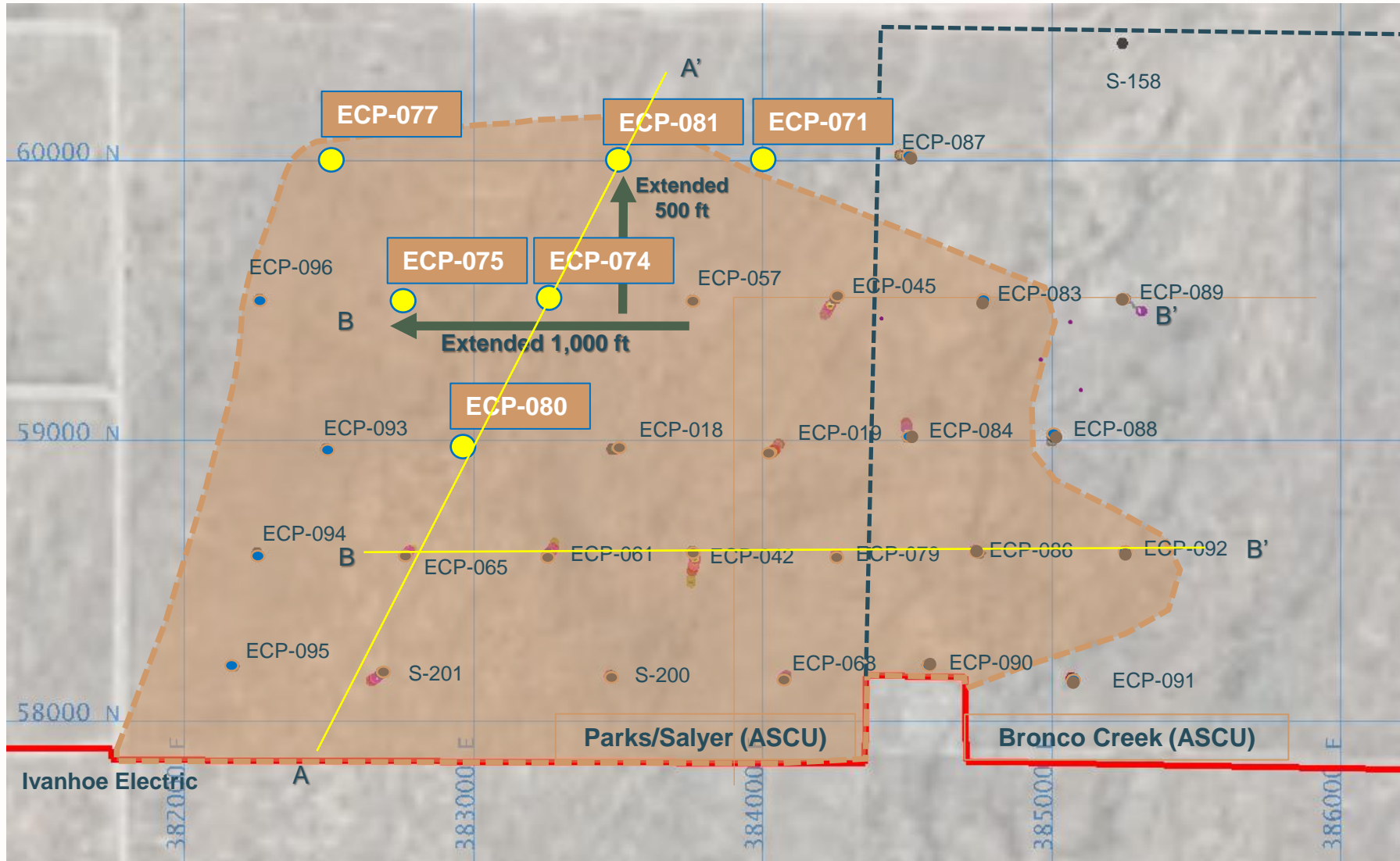
# Parks/Salyer: Potential UG Deposit for Cactus Expansion



- 24 hole exploration drill program completed  
*500 ft centres may be used to calculate an inferred copper resource*
- New 105,000 ft (32,000 m) infill drilling program underway  
*250 ft centres may be used to update potential resources to the indicated category*
- Target area represents an area much greater than Cactus East
- Target area supported by magnetics, regional drilling results, and ionic leach sampling limited to ASCU owned property
- Expanded Ionic Leach survey ongoing



# Parks/Salyer Plan View – Large Porphyry Copper Footprint

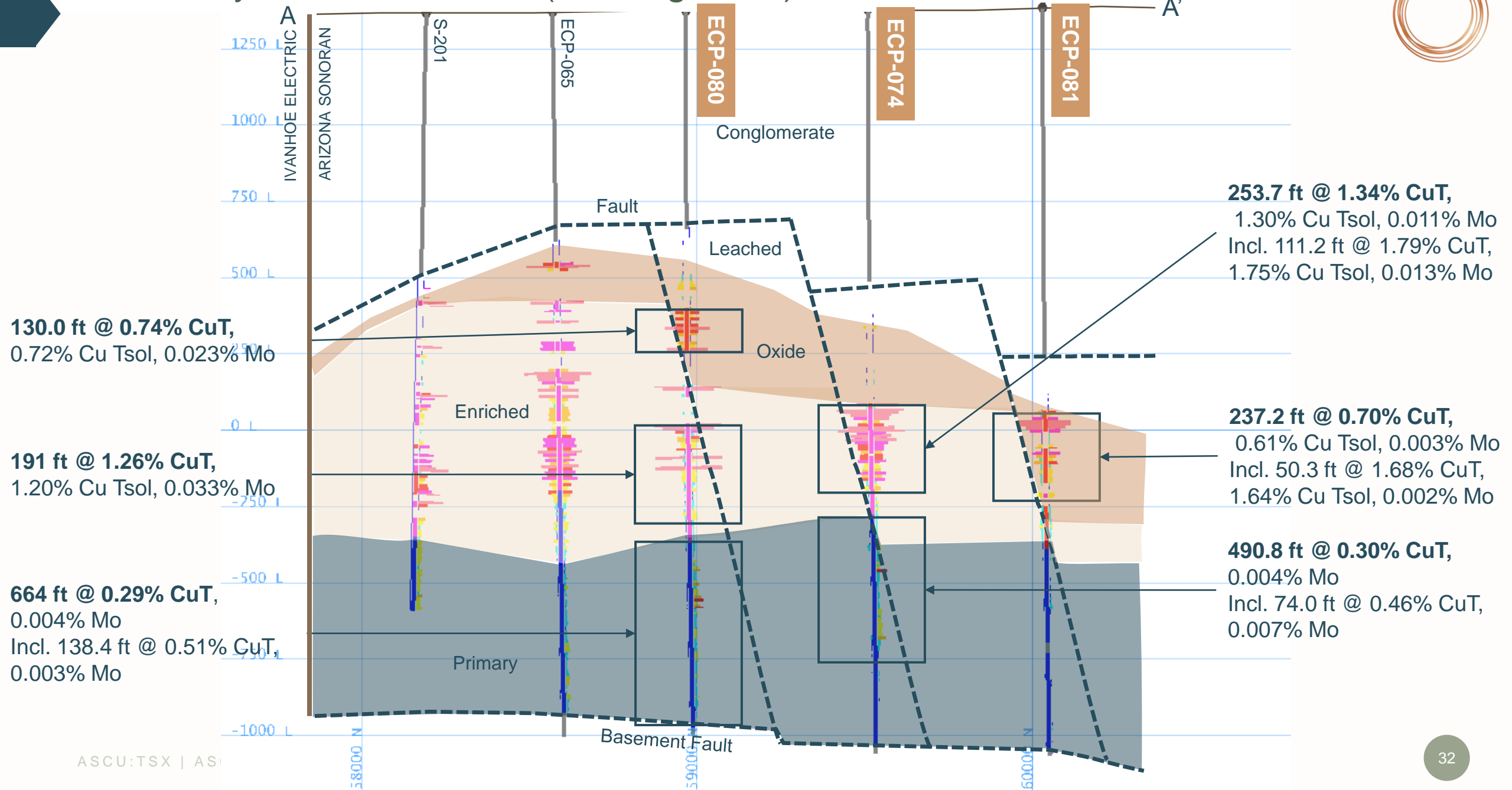


- Previously Reported
- August 23 Press Release
- Assays Pending
- Interpreted Mineralization Extents
- Cross Section Lines (A / B)

500 ft (152.4 m)  
1,000 ft (304.8 m)

# Parks/Salyer Cross Section (Looking West)

Press Release dated August 23, 2022





# Parks/Salyer East West Cross Section, Looking North



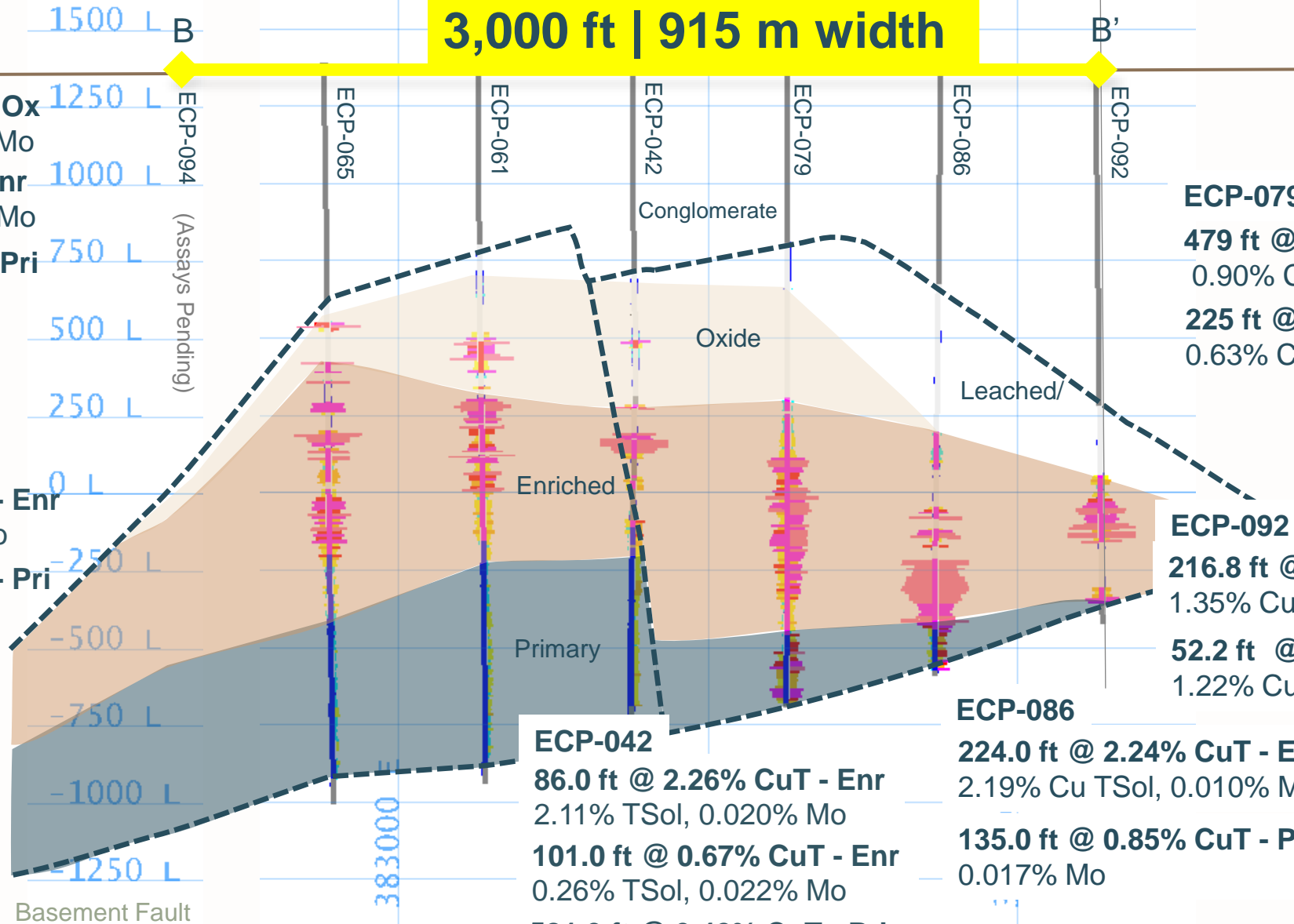
3,000 ft | 915 m width

ECP-061

131.6 ft @ 1.17% CuT - Ox  
1.06% Cu TsoL, 0.004% Mo  
474 ft @ 0.89% CuT - Enr  
0.83% Cu TsoL, 0.026% Mo  
690.3 ft @ 0.33% CuT - Pri  
0.011% Mo

ECP-065

439.7 ft @ 0.92% CuT - Enr  
0.90% TSol, 0.033% Mo  
687.7 ft @ 0.23% CuT - Pri  
0.005% Mo



ECP-079

479 ft @ 1.32% CuT - Enr  
0.90% Cu TsoL, 0.017% Mo  
225 ft @ 0.96% CuT - Pri  
0.63% Cu TsoL, 0.039% Mo

ECP-092

216.8 ft @ 1.41% CuT - Enr  
1.35% Cu TSol, 0.005% Mo  
52.2 ft @ 1.30% CuT - Enr  
1.22% Cu TSol, 0.010% Mo

ECP-086

224.0 ft @ 2.24% CuT - Enr  
2.19% Cu TSol, 0.010% Mo  
135.0 ft @ 0.85% CuT - Pri  
0.017% Mo

ECP-042

86.0 ft @ 2.26% CuT - Enr  
2.11% TSol, 0.020% Mo  
101.0 ft @ 0.67% CuT - Enr  
0.26% TSol, 0.022% Mo  
581.3 ft @ 0.42% CuT - Pri  
0.027% Mo

# The Cactus Project: A Low-Risk Growth Opportunity



## RECENTLY COMPLETED

### DE-RISKING

- Strategic Investor (Rio Tinto)
- No debt
- Permitting
- Infill drilling

### LIQUIDITY

- \$32 million cash (June 30, 22)
- Access to the US markets through OTCQX listing (ASCUF)

### SCALE

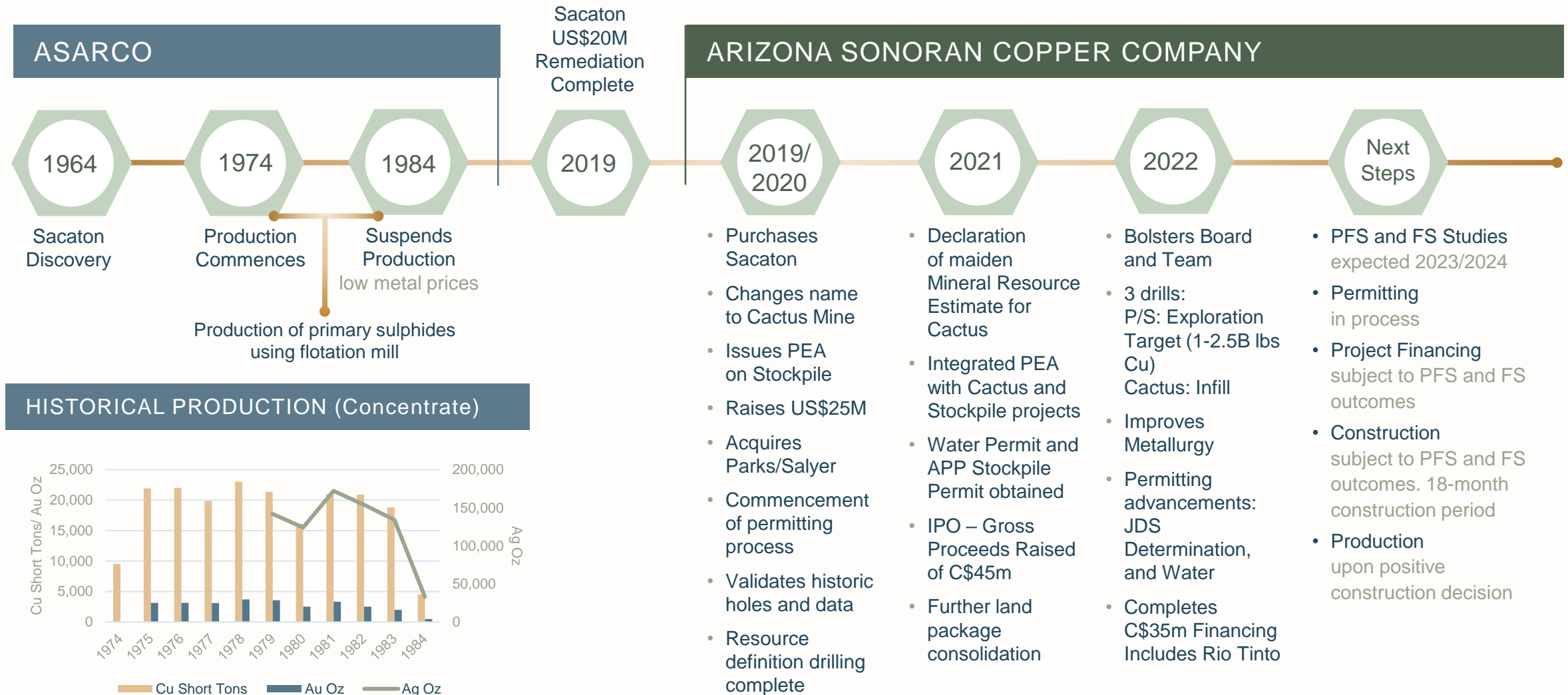
- Parks/Salyer  
(1-2.3B lbs leachable potential)
- Rio Tinto and Nuton  
Testing Leachability of Primary Material

## UPCOMING

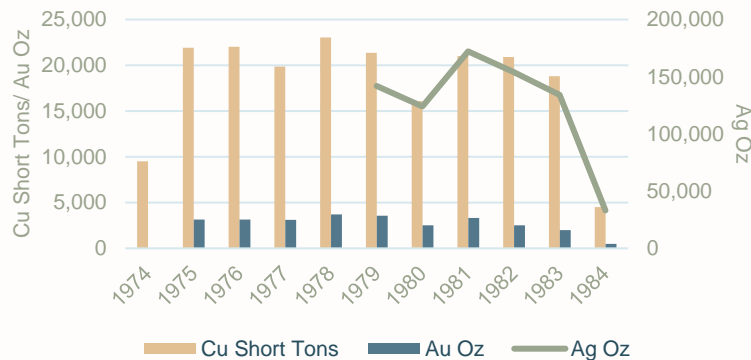
- **Drilling**  
Cactus drilling (FS)  
Parks/Salyer drilling (Expl.)
- **Technical Studies**  
Cactus PFS  
Parks/Salyer Mineral Resource  
FS following completion of PFS
- **ESG / Net Zero Path**
- **Permitting**  
Further permitting will be informed by the PFS inputs
- **Nuton™ Metallurgical Testing**
- **Project Financing**  
Subject to PFS and FS outcomes
- **Construction**  
subject to Project Financing  
18-month construction period
- **Production**  
upon positive construction decision



# The Cactus Mine Project's Path to Restarting Operations


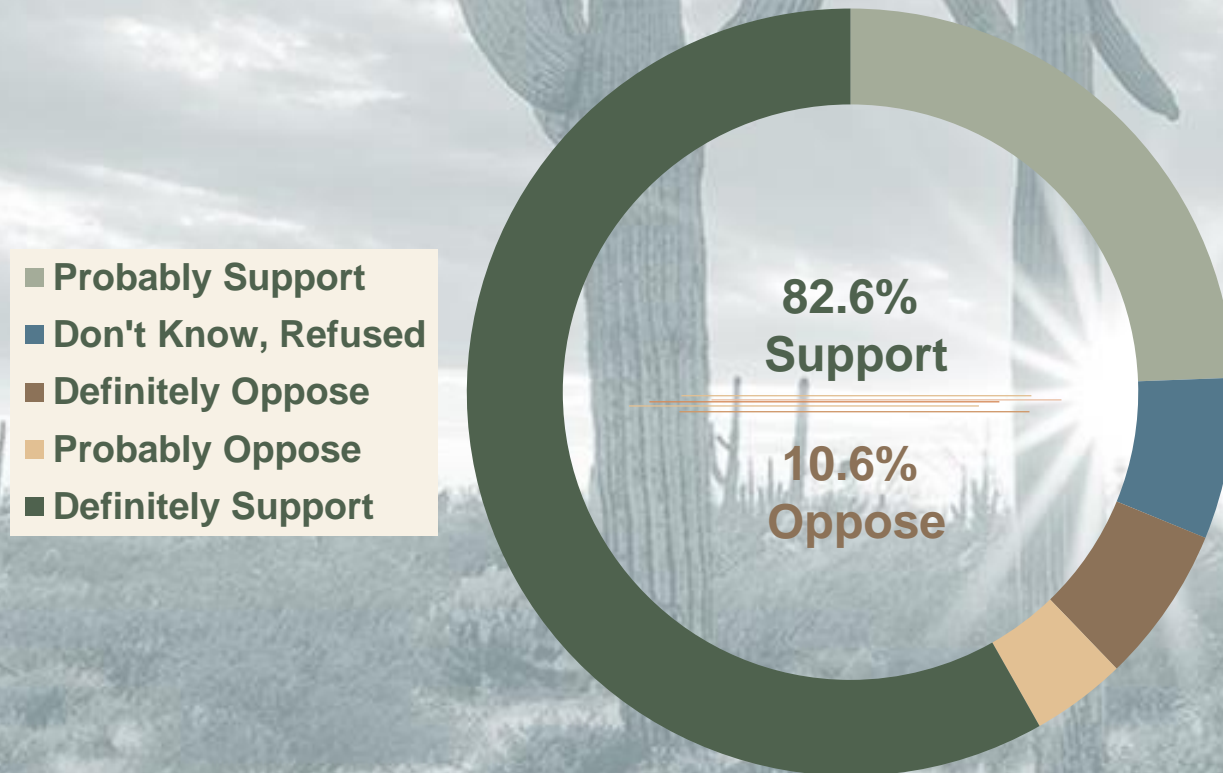


## HISTORICAL PRODUCTION (Concentrate)



## 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

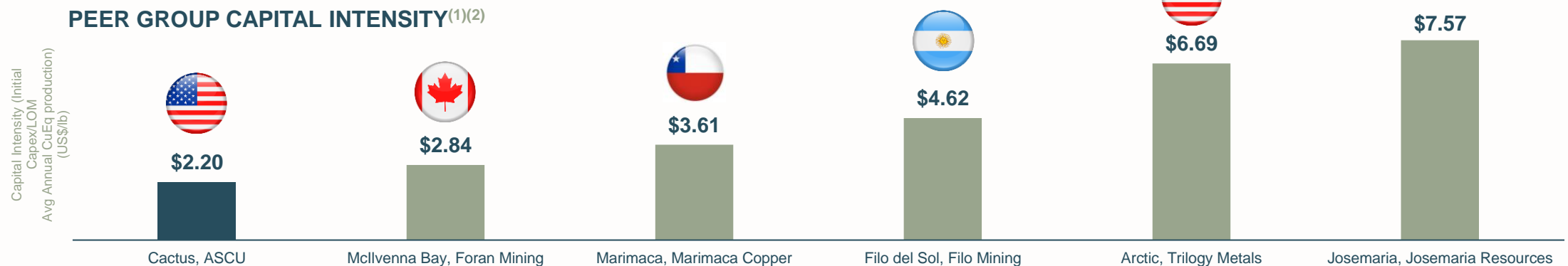


Between the PEA and the upcoming Prefeasibility study, ASCU has been conducting updates and trade-off studies related to:

- assessing sulfuric acid costs and opportunities
- copper prices and the statement of initial probable reserves
- mine plan and methods and optimized operations.

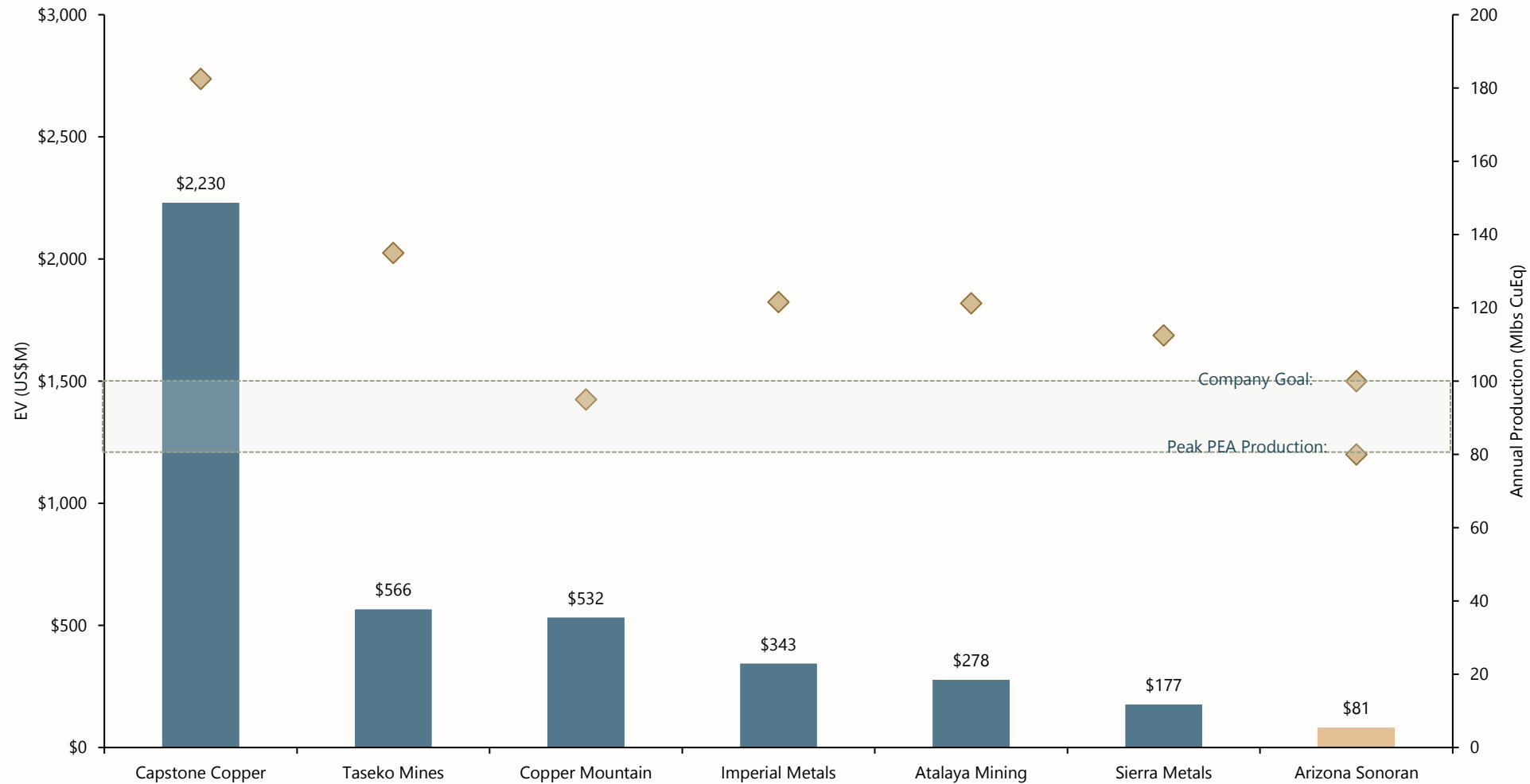
PEA CONSTRUCTION CAPEX BREAKDOWN (US\$M)			
Direct & Indirect Cost Components	Leach Pads, Ponds & Pipelines	SXEW Facility	Total Capital Cost
Directs Subtotal	\$18.4	\$45.9	\$64.3
Indirects Subtotal	\$3.1	\$19.1	\$22.2
Contingency	\$3.0	\$9.0	\$12.0
Total Process Construction Cost (22 ktpa)(Initial)	\$24.5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

- 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, Mcllvenna Bay Project, Foran Mining (Pre-feasibility Study for the Mcllvenna 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); Arctic 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

# Junior Copper Producer Benchmarking (Enterprise Value and Production)



Source: Company Filings, Capital IQ – September 6, 2022

(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



# Detailed Leachable-Only Mineral Resource Estimate

## Grades Significantly Increase Underground



LEACHABLE MINERAL RESOURCE									
Indicated Resource: 1,065,900 Klbs									
Inferred Resource: 1,211,300 Klbs									
Open Pit & Stockpile					Underground				
Material Type	Tons (kt)	CuT (%)	Tsol (%)	Tsol_lb (klbs)	Material Type	Tons (kt)	CuT (%)	Tsol (%)	Tsol_lb (klbs)
Indicated Resource					Indicated Resource				
Oxide	27,000	–	0.512	275,900	Oxide	4,400	–	0.844	74,200
Enriched	39,200	–	0.822	643,800	Enriched	3,300	–	1.101	72,000
<b>Total Leachable</b>	<b>66,200</b>	–	<b>0.696</b>	<b>919,700</b>	<b>Total Leachable</b>	<b>7,700</b>	–	<b>0.954</b>	<b>146,200</b>
Inferred Resource					Inferred Resource				
Oxide	51,600	–	0.268	282,000	Oxide	10,900	–	0.718	157,200
Enriched	48,100	–	0.405	390,100	Enriched	7,000	–	1.136	158,500
<b>Total Leachable</b>	<b>99,700</b>	–	<b>0.334</b>	<b>672,100</b>	<b>Total Leachable</b>	<b>17,900</b>	–	<b>0.881</b>	<b>315,700</b>
<b>Stockpile – Total Inferred Resource</b>	<b>77,400</b>	<b>0.169</b>	<b>0.144</b>	<b>223,500</b>					

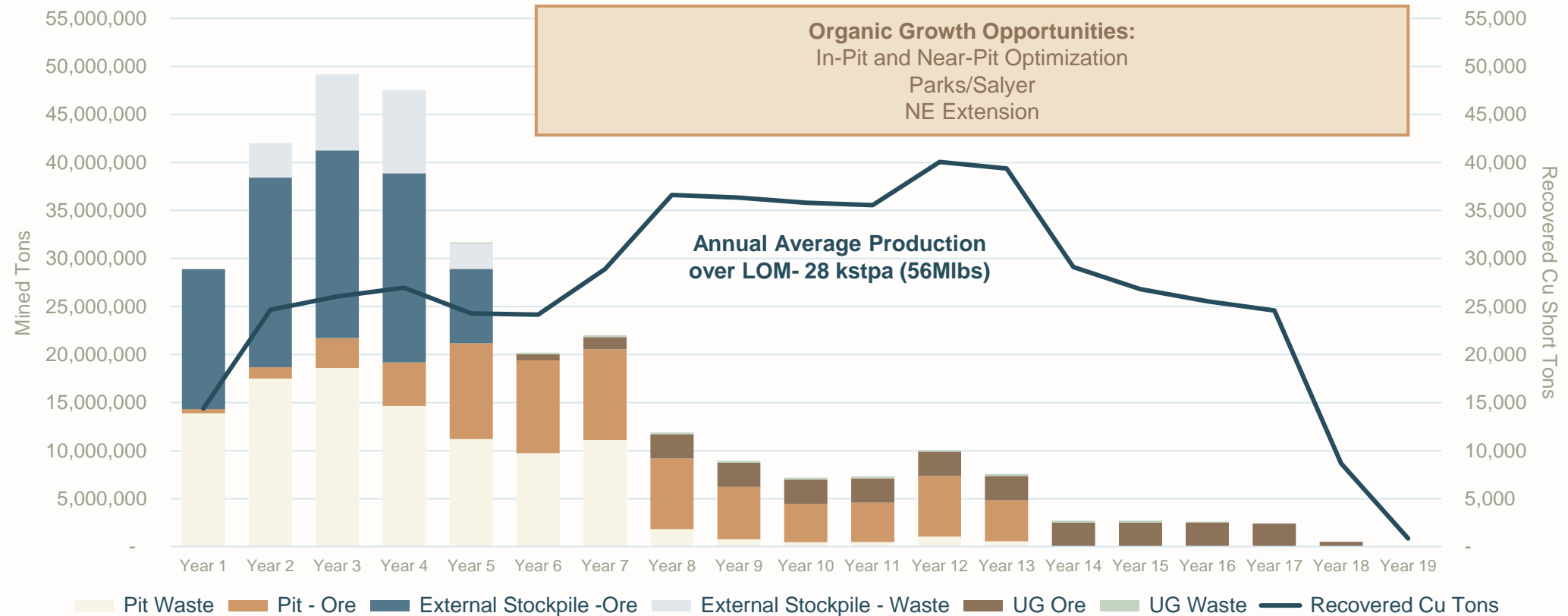
Sources/Notes: Integrated Cactus PEA, Tables 14-16 and 14-17

- UG high-grade contributing to economics
- Maiden Reserves expected with PFS - 70-80% conversion expected
- Almost 50% of current Resources comprise of Indicated Resources
- 72,000 ft Feasibility level drilling program to resume in late 2022
- Organic upside potential exists in-pit and on 4 km mine trend

# 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

# PRIMARY MATERIAL: Strategic Investment with Rio Tinto and Nuton™



## PARTNERSHIP

The aim of the partnership is to unlock the value of primary, chalcopyrite-dominated, sulphide material via deployment of Rio Tinto's Nuton™ technologies and further add to the long-term, large-scale future profile of the Project.

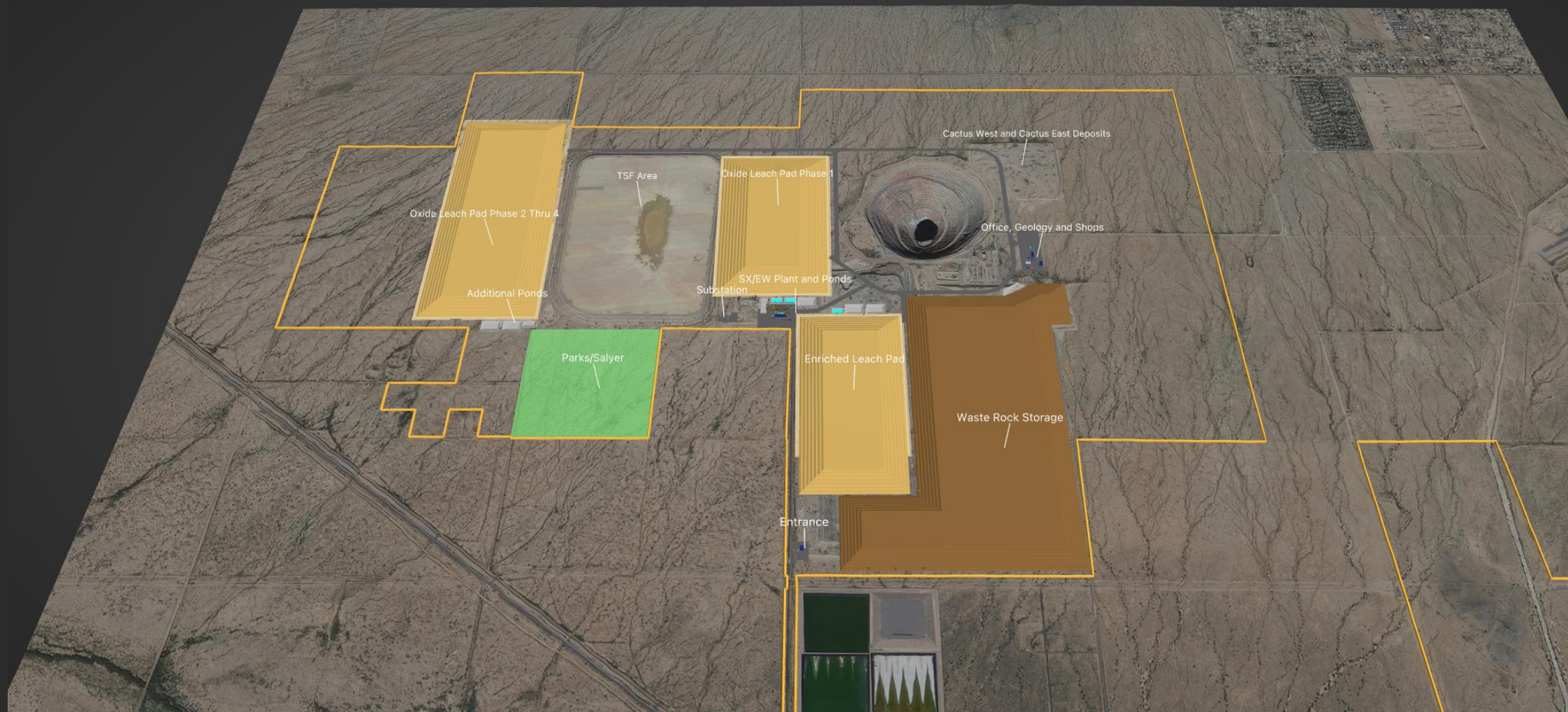
Rio Tinto and ASCU will work collaboratively to continue ongoing viability testing and studies of the technologies, including the evaluation of deployment at the Cactus Mine Project.

## ABOUT NUTON™

Nuton™ is an innovative new venture that aims to help grow Rio Tinto's copper business. At the core of Nuton™ is a portfolio of proprietary copper leach related technologies and capability – a product of almost 30 years of research and development. The Nuton™ technology offers the potential to economically unlock known low-grade copper sulphide resources, copper bearing waste and tailings, and achieve higher copper recoveries on oxide and transitional material, allowing for a significantly increased copper production outcome. One of the key differentiators of Nuton™ is the potential to deliver leading environmental performance, including more efficient water usage, lower carbon emissions, and the ability to reclaim mine sites by reprocessing mine waste.

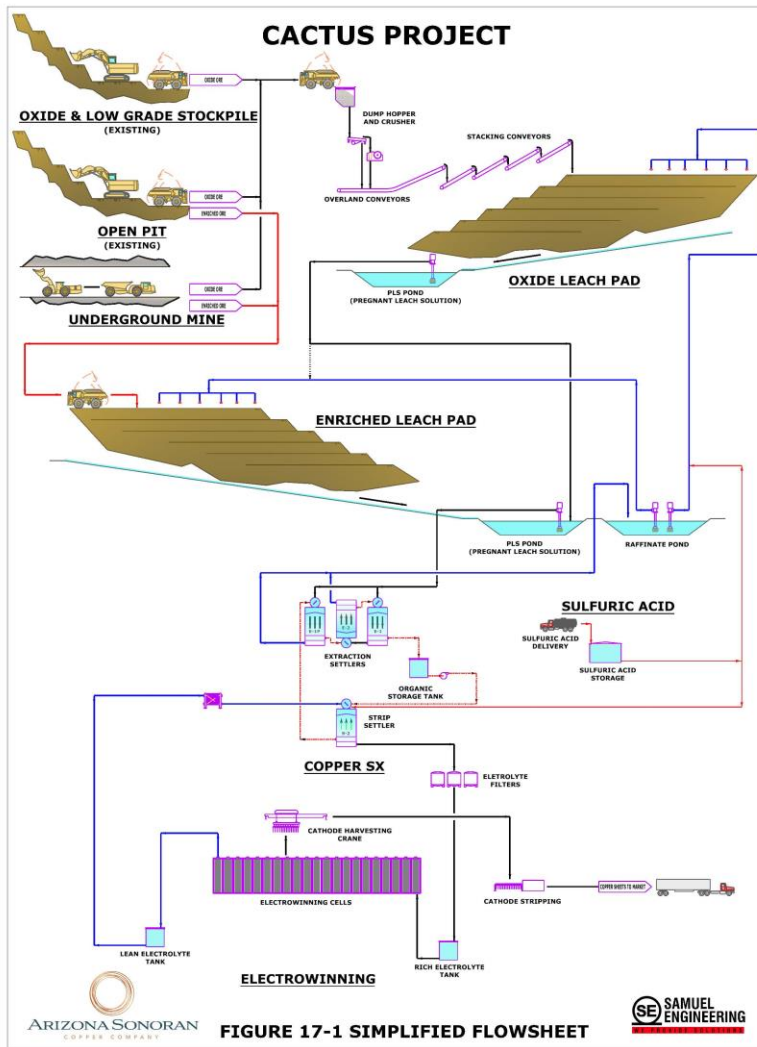


# General Site Arrangement



Sources/Notes: 3D rendering of Figure 16-10 of Integrated Cactus PEA

# Simple Heap Leach & SXEW Flowsheet



- Leach material mined from the Stockpile Project and new mining operations will be placed in 20 ft (6 m) lifts on lined heap leach pads
- The initial oxide materials pad is 8.5 million ft<sup>2</sup> (790 thousand m<sup>2</sup>) to hold approximately 40 Mt of leach material (2-3 years of mined material)
- An additional leach pad to accommodate enriched material is planned in Year 2 to hold approximately 6 Mt sufficient for 5-6 years of material feed
- Placement of materials on the leach pads will be by truck dump and push methods, pending PFS tradeoff
- Surfaces will be ripped, cross ripped to a depth of 6 ft (2 m) to minimize surface compaction and surface permeability degradation
- The height of the leach material on the pad will eventually reach 200 ft (61 m) in overall height
- The planned leaching sequence is as below

## AVERAGE LEACH CYCLE TIMES BY MATERIAL TYPE

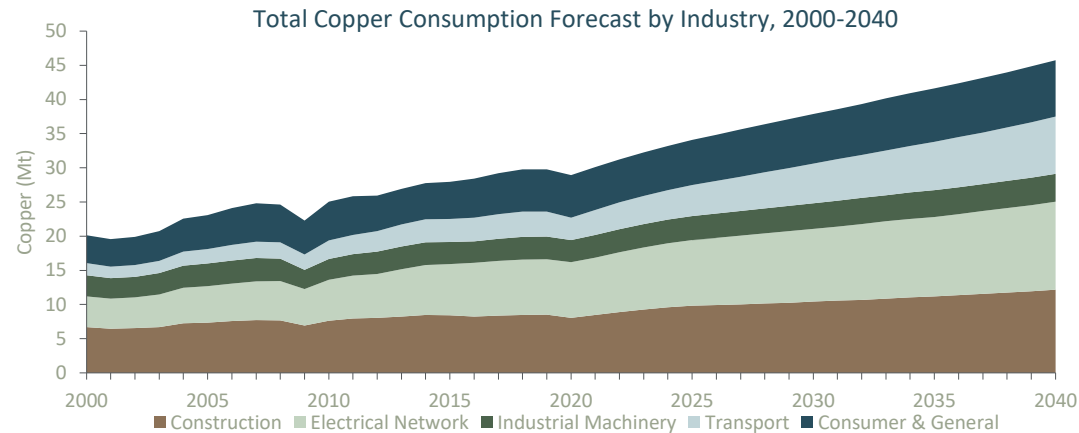
Leach Cycle Component	Oxide Leach Pads (days)	Enriched Leach Pads (days)
Pad Loading	14	14
Surface Preparation/Piping	7	7
Active Solution Application	90	180
Drain Down & Decommissioning	9	9
Minimum Total Cycle Time	120	210

Sources/Notes: Integrated Cactus PEA, Table 17-2 and Figure 17-1

# Strong Copper Market Fundamentals

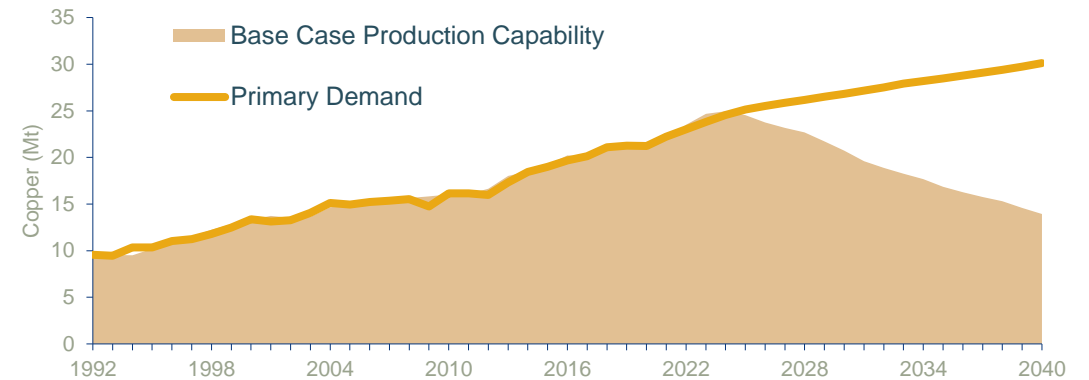


## Consistent Rising Demand from Key Sectors



Source: Wood Mackenzie

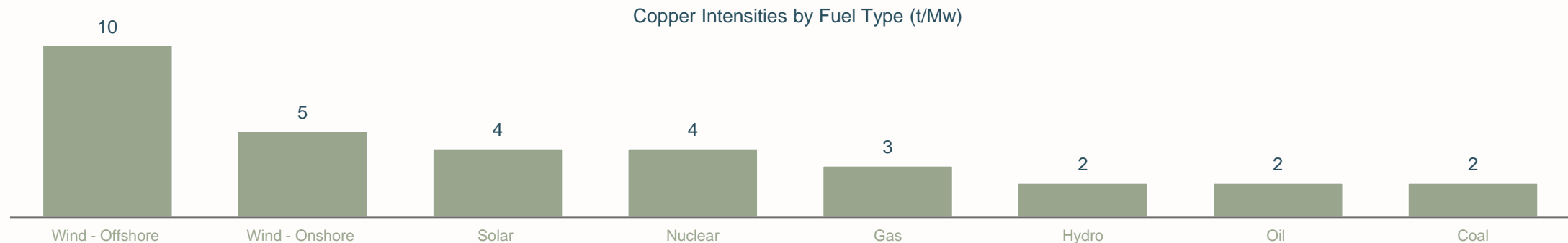
## Supply Constraints To Meeting Primary Demand in Medium Term



Source: Wood Mackenzie

## Renewable Energy Future

Transition to a renewable energy future provides stable support for long term copper demand



Source: Wood Mackenzie, Copper 2021 update to 2040, June 2021



# Growing Mineral Resource Base



**DOUBLED THE GLOBAL  
LEACHABLE INVENTORY**

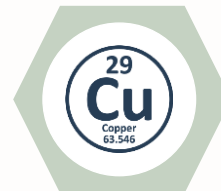


## District-scale on 4 km mine trend

- Parks/Salyer Deposit
- Cactus Deposit
- NE Extension opportunity



- **Copper porphyry system:** oxide cap, enriched below and primary at the base
- **Simple metallurgy at Cactus:**
  - Recoveries of 90% Oxides and 72% Enriched
  - P/S metallurgical testing underway



## MINERAL RESOURCES

- **Leachable Resource:** Makes up the PEA and upcoming technical study
- **Primary Resource:** Partnership with Rio Tinto's Nuton Technology testing leachability of primary material

## GLOBAL MINERAL RESOURCE

Indicated Resource— 1,610,700 k lbs

Inferred Resource— 4,894,200 k lbs

Category	Mineralization	Tons (kt)	CuT (%)	Tsol (%)	Tsol_lb (klbs)	Contained Cu Tons (kt)
INDICATED	Total Leachable	73,900	—	<b>0.723</b>	<b>1,065,200</b>	<b>534</b>
	Primary	77,900	0.350	—	545,500	273
INFERRED	Total Leachable	449,900	-	0.544	4,894,200	2,447
	Primary	139,600	0.441	—	1,230,400	616

Sources/Notes: (1) Includes Stockpile Project (2) Integrated Cactus PEA Tables 14-18 and 14-19; See PR dated Sept 28, 2022 for P/S discussion



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

Total Resources					
INDICATED					
Total Leachable	73,900		0.723	1,065,200	534
Total Indicated	151,800	0.531		1,610,700	806
INFERRED					
Total Leachable	310,400		0.59	3,663,700	1,832
Total Inferred	449,900	0.544		4,894,200	2,447

# Notes to the Mineral Resource Estimate



## *Notes to the Mineral Resource Estimates*

1. CuT means total copper and TSol 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% TSol; enriched material within resource pit shell = 0.098% TSol; primary material within resource pit shell = 0.205% CuT; oxide underground material outside resource pit shell = 0.56% TSol; enriched underground material outside resource pit shell = 0.70% TSol; 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% TSol; enriched underground material = 0.60% TSol; 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.