

## Arizona Sonoran Updates on Metallurgical Improvements at the Cactus Mine Project

Casa Grande, AZ and Toronto, ON, February 23, 2022 – Arizona Sonoran Copper Company Inc. (TSX:ASCU) (“ASCU” or the “Company”), an emerging US-based copper developer and near-term producer, today announces interim results from its ongoing metallurgical testing programs, in the form of sequential assaying, bottle roll testing and column testing for the mineral resources at the Cactus Mine, that demonstrates improved overall recoveries of ~1% total soluble copper (“CuSol”) and a decreased net acid consumption of ~2 lb per ton of material. The Cactus Mine project envisages a heap leach oxide and enriched sulfide (chalcocite/covellite dominant) recoveries and a solvent extraction/electrowinning (SX/EW) plant for producing LME Grade A Copper Cathodes.

**TABLE 1: Updated Metallurgical Recoveries and Net Acid Consumption**

Resource Component	Preliminary Column Tests (PEA)				Updated Column Tests			
	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>								
Oxide	90%	40%	22	18	90%	40%	22	16 (-)
<b>Open Pit &amp; Underground</b>								
Oxide	90%	72%	22	18	92% (+)	73% (+)	22	16 (-)
Enriched	90%	72%	22	1	92% (+)	73% (+)	22	0 (-)

**Ian McMullan, Arizona Sonoran COO stated,** “Within mineral resource, and from the PEA, we have identified an initial 1 billion pound copper soluble leachable material. These results, now track over 2 years of metallurgical observations and provide us with additional clarity and confidence towards future copper oxide and enriched leaching opportunities. The results further de-risk the technical assumptions used in the Cactus PEA as we move towards increasing levels of confidence for inputs into the PFS due later this year.”

A copper heap leach column testing program to delineate the metallurgical performance characteristics of the existing stockpile and remaining unmined copper resources at the Cactus mine has been ongoing since 2020. Results have been progressively reported in PEA, commensurate with Canadian National Instrument NI 43-101 reporting requirements. The PEA has an effective date of August 31, 2021 and is authored by Stantec Consulting Services (“Stantec”).

Copper recovery is estimated for acid soluble copper (“CuAS”) and cyanide soluble copper (“CuCN”) content as determined by a standard sequential copper assaying methodology developed at the Skyline Laboratory facility in Tucson, Arizona. The CuCN assay fraction is classified as enriched secondary copper sulfide mineralization (e.g. chalcocite, covellite, digenite). The combined CuAS + CuCN content of the materials represents potentially soluble copper that is recoverable using heap leaching techniques (“CuSol”). Projected copper recovery estimates previously reported have been derived based on this leachable copper content and continues to be validated in the ongoing Prefeasibility Study (“PFS”) testing program.

Primary copper in mineralization that is not readily acid or cyanide copper soluble per the assay methods (e.g. native copper, chalcopyrite, bornite) reports in the total copper assay (“CuT”). Copper assayed that does not report in the soluble copper assay methodologies is not expected to provide meaningful recoverable copper contributions with the commercial methodologies anticipated.

### **Oxide Materials**

#### Recoveries

- No material changes to the Stockpile recoveries vs the PEA, thus leaching and recoveries expected to be similar;
- Opportunity to increase heap lift heights, resulting from comparable 20-foot-tall and 10-foot-tall column results; and
- An economic opportunity to crush and/or blast larger material in the oxide ROM feed will be evaluated in conjunction with the ongoing PFS work;

#### Net Acid Consumption

- 12% reduction of net acid consumption to 16 lbs per ton, based on the current mine plan tonnages, grades and expected copper recovery.



### **Enriched Materials**

#### Recoveries

- Improved CuSol recoveries by 3% over the PEA basis to 75% for a two-year leach cycle.

#### Net Acid Consumption

- Consumption is expected to be negligible or generating up to 2 lbs of acid per ton leached at PEA average grades, representing a small reduction from the 2021 PEA basis.
- As envisioned with the PEA basis, the separate enriched leaching pad will benefit the bioleaching scheme. Tails assaying and size fractional recovery data is still pending for the enriched materials tested. There may also be an economic incentive to crush and agglomerate the higher-grade materials, which will be reviewed.

### **Quality Assurance / Quality Control**

Metallurgical characterization testing continues at the McClelland Analytical Service Laboratory, a well-established Mineral Processing research and development firm in Reno, Nevada, under the direction of Mr. Jim Sorensen, Samuel Engineering. A summary of the interim results obtained since the Cactus Mine Project Preliminary Economic Assessment (“PEA”) with an effective date of August 31, 2021, through January 2022 is discussed in this release. Testing continues and results from future work may affect this interim analysis.

Drilling completed on the project in 2020 and 2021 was supervised by on-site ASCU personnel who prepared core samples for assay and implemented a full QA/QC program using blanks, standards and duplicates to monitor analytical accuracy and precision. The samples were sealed on site and shipped to Skyline Laboratories in Tucson AZ for analysis. Skyline’s quality control system complies with global certifications for Quality ISO9001:2008.

Technical aspects of this news release have been reviewed and verified by Dr. Martin Kuhn, who is a qualified person as defined by National Instrument 43-101– Standards of Disclosure for Mineral Projects.

*Neither the TSX nor the regulating authority has approved or disapproved the information contained in this press release.*



**About Arizona Sonoran Copper Company ([www.arizonasonoran.com](http://www.arizonasonoran.com) | [www.cactusmine.com](http://www.cactusmine.com))**

ASCU's objective is to become a mid-tier copper producer with low operating costs, develop the Cactus Project that could generate robust returns for investors, and provide a long term sustainable and responsible operation for the community and all stakeholders. The Company's principal asset is a 100% interest in the Cactus Project (former ASARCO, Sacaton mine) which is situated on private land in an infrastructure-rich area of Arizona. The Company is led by an executive management team and Board which have a long-standing track record of successful project delivery in North America complemented by global capital markets expertise.

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**Forward-Looking Statements**

Forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of ASCU to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. Factors that could affect the outcome include, among others: future prices and the supply of metals; the results of drilling; inability to raise the money necessary to incur the expenditures required to retain and advance the properties; environmental liabilities (known and unknown); general business, economic, competitive, political and social uncertainties; results of exploration programs; accidents, labour disputes and other risks of the mining industry; political instability, terrorism, insurrection or war; or delays in obtaining governmental approvals, projected cash operating costs, failure to obtain regulatory or shareholder approvals.

Although ASCU has attempted to identify important factors that could cause actual actions, events or results to differ materially from those described in forward-looking statements, there may be other factors that cause actions, events or results to differ from those anticipated, estimated or intended. Forward-looking statements contained herein are made as of the date of this news release and ASCU disclaims any obligation to update any forward-looking statements, whether as a



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