Arizona Sonoran Reports Final Extraction Rates from Phase 1 of Nuton™ Technologies on the Cactus Sulphides and Expands the Program

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- Phase 1: Indicative, interim results available at the end of November 2023, for first 15 small (3 ft | 1 m) columns completed:
  - Targeting an average life of asset ("LoA") copper extraction rate of 80% from the Cactus area material
  - Primary sulphide as dominant material copper extractions at elevated temperatures range from 80% to 85%
  - Secondary sulfide ("enriched") as dominant material copper extraction at elevated temperatures range from 85% to +95%
- Phase 1: Next steps
  - To conduct small column tests (3 ft | 1 m) on a Parks/Salyer primary blend and a mixed enriched blend sample
- Phase 2: Next Steps
  - Metallurgical program contingent upon advancing a Commercial Framework agreement with Nuton
  - To include tall column tests (30 ft | 10 m) on Cactus mineralized material to mitigate or test threats/opportunities identified under the Phase 1 test program

Arizona Sonoran Copper Company Inc. (TSX:ASCU | OTCQX:ASCUF) ("ASCU" or the "Company") an emerging US-based copper developer and near-term producer, today announces metallurgical results from the Nuton Phase 1 column leach program from ASCU's Cactus copper porphyry project in Arizona, USA (see FIGURES 1-3).

This press release features multimedia. View the full release here:
https://www.businesswire.com/news/home/20231213084303/en/

Figure 1: Updated Nuton Primary Sulphides Columns Cu Extraction (Graphic: Business Wire)

George Ogilvie, Arizona Sonoran Copper Company President and CEO commented, "We are encouraged by the extraction rates resulting from our primary and secondary sulphides using the Nuton™ technologies. These results demonstrate a continued extraction rate improvement from the columns reported in June. Nuton's heap leaching technology is a potential solution to gain access to our currently stranded primary mineral resource while also incrementally improving the copper extraction rates from the enriched material. Particularly interesting to ASCU, is that Nuton's flow sheet could be integrated into the planned Cactus heap leach and SXEW flow sheet. With a successfully negotiated Commercial Framework Agreement in place and a completed Phase 1 test program, we would seek to coordinate the improved extraction rates into an updated and expanded technical study, complementing the base case PFS anticipated in Q1 2024 and demonstrating economies of scale."

The Phase 1 scope includes column testing the Cactus sulphides, primary and enriched, using the proprietary Nuton additives for consideration within a traditional heap leach and SXEW mining flow sheet. Testing included a variety of conditions, including operating temperatures and additive schemes. Pending the completion of a Commercial Framework Agreement, Nuton and ASCU are currently planning a Phase 2 column leach program. Phase 2 would be designed to test and/or mitigate opportunities and threats identified under the Phase 1 test program.

On the Cactus deposit, a total of 23 small column leach tests (3 ft | 1 m) on 10 ore types, plus a Life of Asset (LoA) Blend, are currently completed or in progress. Preliminary test work results indicate that using Nuton additives at elevated temperatures have the potential to significantly enhance chalcopyrite extraction in the LoA blend and the other primary sulphide ore types, as evidenced in FIGURES 1 and 2. The highest copper extraction achieved to date for the LoA Blend is 80% (FIGURE 3). Condition optimizations, including a higher

temperature control for the LoA blend is currently underway, with the target of consistently exceeding 80% extraction rates. Acid consumption for the primary sulfide ores ranges from 10 to 60 kg/t. For the higher acid consuming ores, increasing the pH appears to have a positive effect on acid consumption, but also a negative impact on the rate of copper extraction. Nuton will continue to analyze residue samples that may yield further insights. Copper extractions from the secondary sulfide dominant ore types at elevated temperatures are very high, ranging from 86% to 98%. These ores contain very little reactive gangue, consequently most of the ore types are net acid generators.

Please refer to press release dated June 5, 2023 for Sample Location and Preparation.

TABLE 1: Copper Extraction and Acid Consumption Estimates by Material Type

	ASCU				NUTON&TRA
	Programs updated Feb 2022 and May 2023				Preliminary C
Mineral Resource Location	Net Copper Extraction (% Cu AS)	Net Copper Extraction (% CuCN)	Blended Extraction (%)	Net Acid Consumption (kg/tonne)	Extraction (%)
Oxides					
Stockpile	90% [1]	40% [1]	81%	8[1]	n/a
Cactus West	92% [1]	73% [1]	88%	8[1]	
Cactus East	92% [1]	73% [1]	90%	8[1]	
Parks Salyer					
Enriched (Secondary Sulphide)					
Cactus West	92% [1]	73% [1]	78%	(-) [5]	86% - 98%
Cactus East	92% [1]	73% [1]	76%	(-) [5]	86% - 98%
Parks Salyer			80%	(-) [5]	80%
Primary Sulphides					
Flotation (ASCU)			86% [2]	(-) [5]	n/a
Leaching (Nuton)					80% - 85% [3]
Blended (Primary and Secondary Sulphide)					
Flotation (ASCU)/			91% [2]	(-) [5]	n/a
Leaching (LoA) (Nuton)					86% - 95% [4]

[1] As reported on February 23, 2022, Arizona Sonoran Updates on Metallurgical improvements at the Cactus Mine Proj kg/tonne from lbs/ton for comparison purposes

[2] Initial flotation results from 2022 testing program

[3] Excludes ASC 6 (ECW-011) that has anomalous high Biotite content (See Phase 2 workplan)

[4] Excludes column ASC 6 (ECW-011) that has anomalous high Biotite content and low temperature (See Phase 2 work

[5] Net acid consumption is either nil or net generating

Qualified Persons Statement
Technical aspects related to the metallurgical program of this news release have been reviewed and verified by James L. Sorensen - FAusIMM Reg. No. 221286 with Samuel Engineering, who is a qualified person as defined by National Instrument 43-101- Standards of Disclosure for Mineral Projects. The indicative metallurgical information presented describes preliminary results from testing that is currently in progress and subject to confirmation. Final metallurgical performance estimates will require decommissioning of the columns and analysis of the column residues.

Links from the Press Release:
Images: https://arizonasonoran.com/projects/cactus-mine-project/press-release-images/
June 5, 2023:
https://arizonasonoran.com/news-releases/arizona-sonoran-reports-positive-nutontm-technologies-extraction-rates-on-

Neither the Toronto Stock Exchange nor the regulating authority has approved or disproved the information contained in this press release.

About Nuton
Nuton is an innovative 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. Nuton offers the potential to economically unlock copper from primary sulfide resources worldwide through leaching, obtaining market-leading recovery rates, contributing to an increase in copper production from copper bearing waste and tailings, and achieving higher copper recoveries on oxide and transitional material. One of the key differentiators of Nuton is the potential to produce the world's lowest footprint copper while having at least one Positive Impact at each of our deployment sites, across our five pillars: water, energy, land, materials and society.

About Arizona Sonoran Copper Company (www.arizonasonoran.com | www.cactusmine.com)
ASCU's objective is to become a mid-tier copper producer with low operating costs and to develop the Cactus and Parks/Salyer Projects 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. Contiguous to the Cactus Project is the Company's 100%-owned Parks/Salyer deposit that could allow for a phased expansion of the Cactus Mine once it becomes a producing asset. 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.

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 result of new information, future events or results or otherwise, except as required by applicable securities laws.

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