



Arizona Sonoran Updates on Company Activities and Announces the Appointment of Steve Dixon, Chief Metallurgist

Casa Grande, AZ and Toronto, ON, September 6, 2023 – Arizona Sonoran Copper Company Inc. (TSX:ASCU) (“ASCU” or the “Company”), an emerging US-based copper developer and near-term producer, today updates on exploration and development activities at the Cactus Mine Project, inclusive of the Parks/Salyer deposit. All activities are focused on de-risking its high-quality asset in a tier one location, in preparation for the pending step-up Pre-Feasibility Study (“PFS”) expected in Q1 2024. Furthermore, the owner-operator team continues to strengthen with the appointment of Mr. Steve Dixon, M.Sc.; Chief Metallurgist. He will be managing the metallurgical programs in preparation for the base case PFS and Definitive Feasibility Study (“DFS”).

Highlights include:

- **On track and on budget to deliver a PFS in Q1 2024**
 - o Targeting step up from the Preliminary Economic Assessment’s (“PEA”) 28ktpa to 45-50ktpa and to a mine life well-beyond the 18 years previously outlined
 - o PFS scope includes the enriched and oxide material, or approximately 75% of the total mineral resources (based on the 2022 mineral resource update – Sept 28, 2022)
- **Building owner-operator team**
 - o Bernie Loyer, SVP Projects and Christopher White, Chief Mine Geologist (June 2023)
 - o Steve Dixon, Chief Metallurgist (July 2023)
- **Anticipating high conversion of the 2.9B lb @ 1.015% TCu Parks/Salyer mineral resource estimate into the indicated category from the inferred category**
 - o Infill to indicated category drilling complete
 - o Infill to measured category drilling is ongoing for a DFS expected in H2 2024
- **2 years of positive metallurgical results now in hand for oxides and enriched material**
 - o Parks/Salyer enriched material shows comparable recovery rates to Cactus (76% and higher) with potentially shorter leach periods
 - o 90% recovery rates for oxides in the Cactus deposits and the Stockpile Project
 - o DFS level metallurgical studies ongoing
- **Completed all major Cactus permits based on the 2021 PEA**
 - o Amendments will be made to accommodate the larger operation, post-PFS

- **Increased land to 5,368 acres by optioning the MainSpring Property, extending south from Parks/Salyer**
 - o Improves planning flexibility for the pending PFS
 - o Creates additional exploration target
- **Nuton testwork continues to deliver positive results, providing optionality to scale the asset beyond the oxide and enriched base case**
 - o 61-82% estimated extraction rates of the primary sulphide material after 75-150 days of leaching

George Ogilvie, Arizona Sonoran CEO commented, “The Company has continued to deliver on its key objectives and will continue striving to outperform. Ongoing work programs include our advanced metallurgical programs, final engineering, mine planning and site characterizations as we progress towards our PFS. Our drilling also continues, both infill and exploration, as we look towards upgrading resources again from the indicated to measured category.”

He continued, “As the Project and Company continues to evolve, strengthening of the owner’s team sets us up well for future technical studies and any eventual decision to move into a construction and development phase.”

Personnel

The Company now has 19 employees, up from 17 at the end of 2022, with a key focus on strengthening the development and operations team onsite in Casa Grande, Arizona. ASCU’s most recent hire is Steve Dixon as Chief Metallurgist. Steve has an M.S. in Metallurgical Engineering and B.S in Chemistry. He is based in Tucson, and joins with over 30 years of metallurgical management experience. For the past 14 years, Steve has focused on consulting for mining, exploration and development companies and institutional investors for feasibility studies, project and process development and assistance to operations. His area of expertise is in leaching, process design and cost reduction as it relates to managing technical studies and process development and operations. Steve has held various project management and metallurgy roles at Goldcorp, Freeport-McMoRan, Quadra, Phelps Dodge Mining and others, with a special focus on the Americas.

Rounding out the appointments made within the last 18 months include, Bernie Loyer as SVP Projects, Chris White as Chief Mine Geologist, Dan Johnson Projects Director, Greg Phillips, Process

Superintendent, Victor Moraila, Chief Mine Engineer, Graeme Hendricks, Senior Mine Engineer and now Steve Dixon, Chief Metallurgist.

Pre-Feasibility

Under the supervision of ASCU's growing owner-operator team, the step-up PFS is being led by Ausenco and a consultant team comprised of Samuel Engineering, AGP Mining Consultants, Stantec, MineFill Services, Clear Creek Associates and Call & Nicholas Inc. The Company and its consultants are scoping the oxide and enriched material from Cactus and Parks/Salyer Mineral Resource Estimates for a 45-50ktpa heap leach operation with onsite SXEW processing plant to produce LME grade A copper cathode. Currently, ASCU's copper resource containing 1.6B lbs Indicated and 4.9B lbs Inferred (see PR dated [Sept 28, 22](#)), is the third largest independent copper deposit within the US.

Process design criteria is complete. Sizing of the SXEW plant is complete and assessment of long-lead components, equipment specifications and requirements are underway. Underground and open pit mining methods, heap leach and associated infrastructure designs are being reviewed and optimized to ensure an economic and practical approach to mining. Geotechnical and hydrological work is nearing completion with final assessments to be based on ongoing engineering. The study is on budget and on track to be issued in Q1 2024.

Permitting

After receiving both the Mined Land Reclamation Permit and the Industrial Air Permit in early 2023, the Cactus Project has received all major permits related to its 2021 Preliminary Economic Assessment. As a result, the Company has demonstrated the ability to obtain major permits from the regulators with the support from the community. The framework to receive the remaining permits will be guided by the pending PFS and a future construction decision, including amending major permits with updated site characterizations and mine plans, and applying for the remaining minor permits. The Company continues to benefit from water rights to a permitted water source, as well as a streamlined State and local Municipality permitting process related to the private ownership of a brownfields project with no federal nexus.

Metallurgy

Two years of metallurgical testing is now complete to the PFS level at Parks/Salyer and Cactus. Metallurgical column leach testing and hydrodynamic testing supports multi lift leach pads when

crushed to a top size of minus 1 inch (25 mm). Depending on the deposit, enriched material recoveries range from 80-76% and the oxides recoveries range from 92-88%. Feasibility-level metallurgical testing is ongoing onsite in the TruStone Facility. Gross sulphuric acid consumption continues to show approximately 22 lb/t and net consumption of 16 lb/t in the oxides, whereas the enriched material continues to demonstrate acid generation which will be recycled onsite, potentially lowering costs.

Drilling

Infill to the indicated category drilling at Parks/Salyer is complete for the PFS. The Company expects a high percentage of the inferred mineral resources to convert to the indicated category, which will then be utilized to calculate first reserves in Q1 2024.

New drilling at the Parks/Salyer and Cactus deposits has been ongoing since April to bring Cactus East and the eastern half of Parks/Salyer into the Measured category. A total of 125,000 ft (38,000 m) of infill drilling in these two areas is expected to be completed by the end of 2023, with 45,000 ft (14,000 m) of drilling already complete at Parks/Salyer at the end of June.

Exploration along the mine trend is ongoing, with previously identified target areas being evaluated for future drill testing by surface geochemical (Ionic Soil) surveys and 3D modeling of existing drill data.

Land

In February, ASCU optioned an additional 523 acres of private land contiguous to Parks/Salyer known as MainSpring, for total cash consideration of US\$14 million and due in staged payments. A total of US\$3 million has now been paid to the vendor, the most recent payment of \$2 million was made upon completion of the due diligence period. Final payments will be paid upon successful re-zoning the land (\$5 million) and upon the second anniversary of the close date (\$6 million). Re-zoning approvals are expected on half of the property late in 2023 and the balance in early 2024, based on local hearing dates. The additional land is expected to provide significant operational flexibility with respect to site and infrastructure requirements for the re-scoped PFS, as well as a new exploration target, as the southern extension of the Parks/Salyer deposit. Resultant from the acquisition, the combined Cactus and Parks/Salyer project is now 5,368 acres.

Nuton™ Technologies

ASCU released preliminary extraction rates of 61%-82% for primary sulphide material from Stage 1 Nuton column testing after completing 50% of the 300-day cycle under the testing program. Extraction rates indicate the potential to achieve an optimized 80% life of mine extraction rate for primary sulphides. The Q1 2024 PFS base case will not incorporate the primary sulphide opportunity into the engineered mine plan. The Company is however, working with Nuton to reach a commercial framework agreement that would incorporate the Nuton case into an updated PFS or other future technical study. There is however no certainty that a commercial arrangement may be reached.

The Nuton primary sulphide leaching technologies are applied within a conventional crushed and agglomerated feed, bio-heap leach flow sheet, to extract copper sulphide minerals. The Nuton process also assumes the addition of catalytic and other reagents and a bacterial growth and inoculation facility.

Links from the Press release:

Sept 28, 2022 Press Release: <https://arizonasonoran.com/news-releases/arizona-sonoran-doubles-global-leachable-resource-inventory-and-declares-maiden-mineral-resources-at-parks-salyer-of-2.92/>

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 | 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.

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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 intention or obligation to update or revise any forward-looking statements, whether as a result of new information, future events or results or otherwise, except as required by applicable securities laws.