

# Arizona Gold & Silver Achieves +90% Gold Extraction by Agitation Leach and 61-73% Extraction by Column Leaching at the Philadelphia Gold-Silver Project

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Vancouver, October 23, 2024 - [Arizona Gold & Silver Inc.](#) (TSXV: AZS) (OTCQB:AZASF) is pleased to announce it has received the final metallurgy report from McClelland Laboratories on agitation and column leach test work performed on two bulk samples from the Philadelphia gold-silver property. The samples were entirely of oxidized material taken from underground and surface workings. The objective of the program was to demonstrate the amenability of 1-2 grams per tonne gold material for heap leaching, the most cost-effective method for recovering precious metals from bulk tonnage gold deposits of this type.

Column leach tests are the standard laboratory method for determining the amenability of oxide gold and silver bearing material to heap leach methods. The program established on a preliminary basis the optimum crush and recovery characteristics of the 1-2 grams per tonne gold material tested. Agitation leaching at various grind sizes was performed to assess gold and silver extractions for milling purposes. The column test work was completed at several crush sizes to assess gold and silver extractions under simulated heap leach conditions.

Greg Hahn, Vice President of Exploration, commented "We have yet to see sulphides in old workings or in our drilling at Philadelphia. That being the case, we are very pleased with the results of test work on what I see as potentially large volumes of oxide material. The program demonstrated excellent gold extractions and modest silver extractions (as expected). Importantly, the column leach work demonstrates that our metal extractions at Philadelphia are in line with other heap leach operations in the region. The columns were still leaching gold at the end of the 177-day test period. Projections out to 360 days indicate additional extractions to 70% to 80% could be achieved, as during a commercial heap leach operation. The trade-off between higher capital and operating costs in a milling operation versus lower capital and operating costs for heap leaching would be the subject for an economic trade-off study down the road".

Previous metallurgical test work completed by the Company in 2020 on the north end of the property demonstrated the amenability of both low and high grades material to cyanide leaching. That test work achieved 89-99% gold extraction under agitation leach conditions at -104 micron grind. Silver recovery was not addressed in those tests.

The Company submitted 429 kilograms of oxidized bulk material from two sample sites for testing at McClelland Laboratories Inc. in Sparks, Nevada. These samples represent the two dominant metallurgical types present on the property: stockwork quartz in dominantly TR2 rhyolite and stockwork quartz in dominantly granite. The test work consisted of three columns from each bulk sample at crush sizes of -1/4 inch (6.3mm), -3/8 inch (9.5mm) and -1/2 inch (12.5mm) particle size. Bottle roll leach tests were also done on -10 mesh material. Tails analyses were included to assess ultimate gold and silver extractions and reagent consumption. Load permeability tests after completion of the leach cycle assess potential heap heights under each crush size scenario.

Agitation leach tests indicated both bulk samples are readily amenable to agitation cyanidation at all grind sizes. Gold extractions of +90% were achieved from both samples at a grind size of -425 microns or finer. The report concludes that the Philadelphia deposit is very amenable to agitation cyanidation with excellent gold extractions and low reagent consumption. Silver extractions were significantly lower, being in the range of 10-55%, depending upon sample and grind size.

Column leach tests indicated both bulk samples were readily amenable to simulated heap leach at all three crush sizes tested. Extractions improve with finer crush sizes, indicating the -1/4" inch size generated the best extractions over the 177-day leach period of 60.6% to 72.7% for the two samples. Gold was still

leaching at the end of the 177-day test period, and the curves suggest gold extractions will improve over a longer leach cycle. Silver extractions were also lower than in agitation leach tests. Regression analysis of the leach curves suggests extraction should reach 70-80% if leaching is extended out to 360 days. Also, due to the silicious nature of the bulk sample material and the lack of significant fines, it is suggested that further test work be performed using HPGR (high pressure grinding rolls) crushing which generates more fine material than conventional crushing and is known to enhance both total extraction and the rate of extraction, and is currently in use at some heap leach operations in the region.

Additional column test work and agitation leach test work is planned on dedicated drill core samples and coarse rejects of reverse circulation ("RC") cuttings from both the high-grade veins and the stockwork mineralized zones throughout the deposit. This will characterize the leach characteristics and kinetics along the entire strike length of the deposit.

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#### Qualified Person

Gregory Hahn, VP-Exploration and a Certified Professional Geologist (#7122) is a Qualified Person under National Instrument 43-101 ("NI 43-101") and has reviewed and approved the technical information contained in this news release.

#### Retirement of Board Member

Arizona Gold & Silver Inc. reports today that Mr. Eugene Spiering, a member of the Board of Directors since November 27, 2018 and with 45 years in the industry, has decided to retire. The Company respects his decision and would like to thank Gene for his dedicated service with Arizona Gold & Silver Inc. and the valuable knowledge and experience he contributed during his tenure. Board members would like to extend our congratulations to Gene, and we hope his retirement is full of enjoyment and adventurous times ahead.

#### About Arizona Gold & Silver Inc.

Arizona Gold & Silver Inc. is a leading exploration company focused on uncovering precious metal resources in Arizona and Nevada. With a commitment to sustainable practices and innovative exploration techniques, the company aims to drive value for stakeholders while prioritizing environmental stewardship. The flagship asset is the Philadelphia gold-silver property where the Company is drilling off an epithermal gold-silver system ahead of an initial resource calculation.

#### On behalf of the Board of Directors:

ARIZONA GOLD & SILVER INC.

Mike Stark, President and CEO, Director

Phone: (604) 833-4278

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This news release includes certain forward-looking statements or information. All statements other than statements of historical fact included in this release are forward-looking statements that involve various risks and uncertainties. Forward-looking statements in this news release include statements in relation to the timing, cost and other aspects of the 2024 exploration program; the potential for development of the mineral resources; the potential mineralization and geological merits of the exploration properties; and other future plans, objectives or expectations of the Company. There can be no assurance that such statements will prove to be accurate and actual results and future events could differ materially from those anticipated in such statements. Important factors that could cause actual results to differ materially from the Company's plans or expectations include the risk that actual results of current and planned exploration activities, including the results of the Company's 2024 drilling program(s) on its properties, will not be consistent with the Company's expectations; the geology, grade and continuity of any mineral deposits and the risk of unexpected variations in mineral resources, grade and/or recovery rates; fluctuating metals prices; possibility of accidents, equipment breakdowns and delays during exploration; exploration cost overruns or unanticipated costs and expenses; uncertainties involved in the interpretation of drilling results and geological tests; availability of capital and financing required to continue the Company's future exploration programs and preparation of geological reports and studies; delays in the preparation of geological reports and studies; the metallurgical characteristics of mineralization contained within the exploration properties are yet to be fully determined; general economic, market or business conditions; competition and loss of key employees; regulatory changes and restrictions including in relation to required permits for exploration activities (including drilling permits) and environmental liability; timeliness of government or regulatory approvals; and other risks detailed herein and from time to time in the filings made by the Company with securities regulators. In connection with the forward-looking information contained in this news release, the Company has made numerous assumptions, including that the Company's 2024 programs would proceed as planned and within budget. The Company expressly disclaims any intention or obligation to update or revise any forward-looking statements whether as a result of new information, future events or otherwise, except as otherwise required by applicable securities legislation.

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