

PRESS RELEASE



Aya Gold & Silver Reports Recoveries of 89% Silver and 85% Gold from Metallurgy Test Work on Boumadine

Montreal, Quebec, November 9, 2023 - Aya Gold & Silver Inc. (TSX: AYA; OTCQX: AYASF) ("Aya" or the "Corporation") is pleased to announce robust results from recent metallurgical test work on its Boumadine Project. The Corporation envisions a two-step process which includes a flotation stage followed by an oxidation and leaching stage. Total recoveries of 89% for silver ("Ag"), 85% for gold ("Au"), 85% for lead ("Pb") and 72% for zinc ("Zn") were obtained.

Results reported below are from a two-step process: Phase I via a flotation circuit, and Phase II processing using the Albion Process™ and cyanide leaching as follows:

- **Phase I:** flotation achieved Pb and Zn recoveries, and partial recoveries of Au and Ag:
 - Pb and Zn sellable concentrates were produced.
 - To reduce mass pull, capital investment and operating costs, a sulfur-rich pyrite concentrate containing most of the remaining Au and Ag was produced.
- **Phase II:** amenability test work assessed four separate potential oxidation processes - roasting, pressure-oxidation ("POX"), Albion Process™, and biological oxidation ("BIOx"):
 - Using the Albion Process™, a total of 89% Ag and 85% Au were recovered from Boumadine.
 - The Albion Process™ delivered the highest recoveries and was selected for its proven operational robustness and cost effectiveness.
 - Test work also indicated further sulfide oxidation through increased limestone dosage and finer grind.
- Next steps include refining the metallurgy work and evaluation of key reagents and input parameters.

"Today's metallurgical test work shows the potential and strength of our Boumadine Project through a two-step process that integrates the Albion Process™," said Benoit La Salle, President & Chief Executive Officer. "We look forward to refining these initial results as we build our resource estimate through our expanded drill program. This important milestone further de-risks Boumadine as we expedite development of our unique and highly scalable polymetallic project."

Test Work Summary

Phase I flotation recovered Pb and Zn and achieved partial recoveries of Au and Ag: approximately half of the metal value contained in the test sample was recovered. The remaining value was in the flotation tailings, which was rich in Au and Ag, finely disseminated in pyrite ("Py"). A final sulfur flotation was carried, and several oxidative methods were tested prior to cyanide leaching. The Albion Process™, a sequence of fine grinding and atmospheric pressure oxidation, emerged as the most suitable method followed by cyanide leaching, to recover the remaining Au and Ag from the sulfur-rich Py concentrate (Phase II).

Table 1 – Total Recoveries from Flotation (Phase I) and the Processing of Py Concentrate through Albion Process™ and Cyanide Leaching (Phase II)

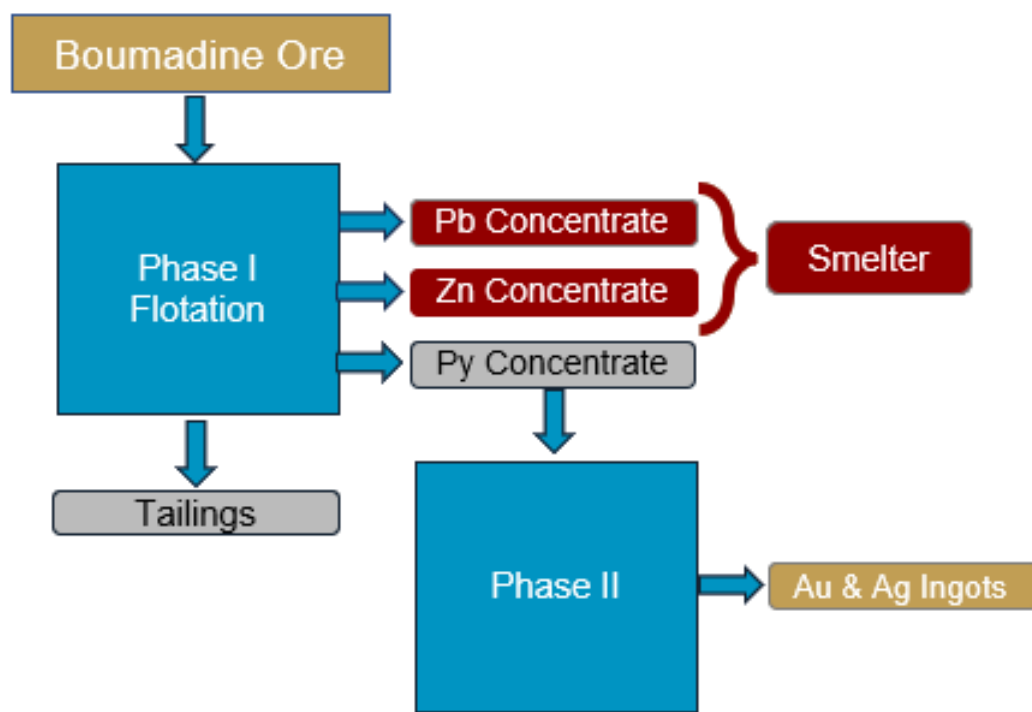
Total Recoveries (Phases I+II) (%)	Au	Ag	Zn	Pb
Zinc Concentrate (Phase I)	-	-	72.0	-
Lead Concentrate (Phase I)	26.5	53.1	-	84.5
Pyrite Concentrate Processing (Phase II)	58.6	36.1	-	-
Total Metal Recovered (Phases I+II) (%)	85.1	89.2	72.0	84.5

Two-Step Process

Boumadine is a polymetallic project. Various processes were studied to maximise recoveries of each valuable element contained in a blended, typical sample: Au, Zn, Ag, and Pb, each listed in decreasing economical value. It was found that recoveries could be improved through two distinct phases of sequential processing. During Phase I, flotation recovered most of the base metals and a significant portion of the precious metals by producing two sellable concentrates. Based on these results, the Corporation solicited potential buyers and received several offers to purchase future production of Pb and Zn concentrate.

Approximately half of the metal value remained in the flotation tails. To reduce mass pull, capital investment and operating costs, a sulfur-rich pyrite concentrate containing most of the remaining Au and Ag was produced. This sulfide concentrate formed the basis of Phase II of the test campaign: Py flotation, the Albion Process™ and cyanide leaching (Figure 1).

Figure 1 – Simplified Flow Diagram for Boumadine Processing



Phase I – Base Metal Flotation

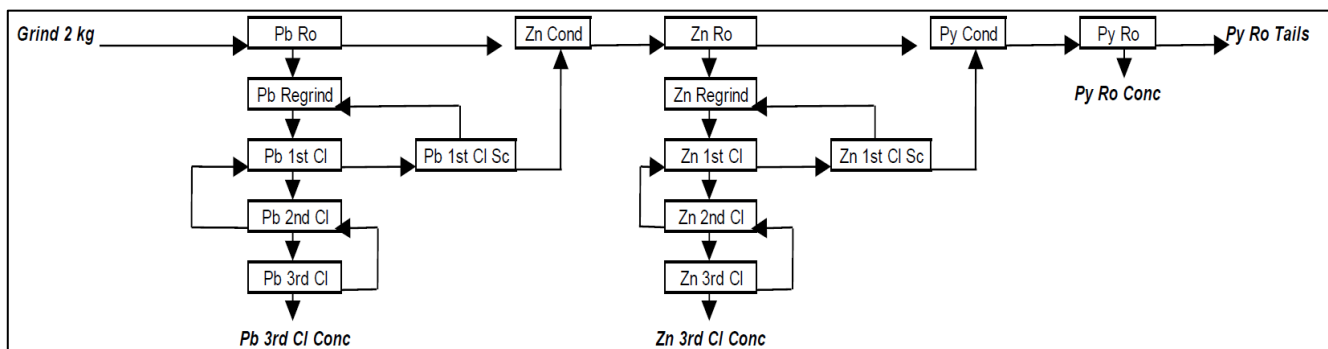
The material tested is suitable for flotation. Furthermore, historical metallurgical tests and reports indicate that a semi-industrial plant at Boumadine produced concentrate from 1988 to 1991. Recent metallurgical test work reconfirmed the potential for saleable lead and zinc concentrate production, including substantial Au and Ag associated with the lead concentrate (Table 2).

Table 2 – Grade and Metal Distribution of Lead and Zinc Concentrates

Flotation (Phase 1)				
Assays (g/t, %)	Au (g/t)	Ag (g/t)	Zn (%)	Pb (%)
Feed	3.3	113	2.3	1.0
Zinc Concentrate	1.2	166	58.1	0.5
Lead Concentrate	26.6	1,923	4.4	26.7
Recoveries (%)	Au	Ag	Zn	Pb
Zinc Concentrate	-	-	72.0	-
Lead Concentrate	26.5	53.1	-	84.5
Total Metal Recovered (Phase I)	26.5	53.1	72.0	84.5

The grinding work index of the Boumadine sample was found to be moderately hard, at 15.4kWh/t. For flotation testing, mineralized material was ground to P80: 60µm and a conventional lead and zinc flotation flowsheet was applied (Figure 2).

Figure 2 – Locked Cycle Test Flowsheet Used for Recent Tests on Lead and Zinc Flotation



Regrind of both Pb and Zn rougher concentrates was set to approximately P80: 30µm to improve liberation. Although Au and Ag significantly transferred to the sulfur concentrate, precious metal grades of the pyrite-rich concentrate were low and required further processing. As such, a secondary processing step was tested to recover the precious metals within the Py concentrate.

Table 3 –Pyrite Concentrate and Associated Precious Metals

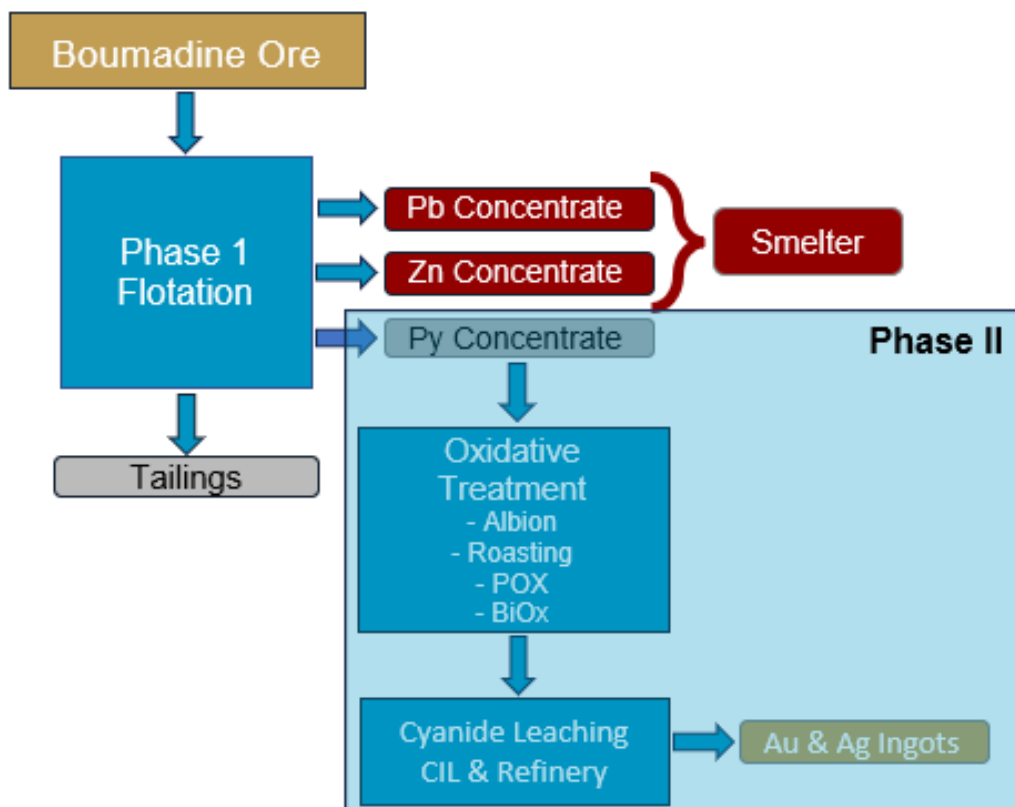
Py Conc. Assays & Metal Distribution	Au	Ag	Zn	Pb
Grades (g/t, %)	3.8	78.5	0.65	0.18
Metal Distribution (%)	69.0	39.6	19.5	10.6

The sulfur concentrate was found to be refractory to conventional cyanide leaching. However, its high sulfur content provides an energy source which can be used to sustain oxidation. As such, several different methods of oxidation were tested.

Phase II – Oxidation and Leaching of Pyrite Concentrate

Gold and silver in the sample were finely disseminated mostly associated with Py, and to a lesser extent galena and arsenopyrite. To extract the Au and Ag from the Py concentrate, a pre-treatment is necessary to oxidize the sulfides prior to cyanide leach. Four technologies were tested for Phase II (Figure 3): roasting, POX, the Albion Process™, and BIOx. With sufficient oxidation, the resulting product can be leached through cyanide to recover the precious metals.

Figure 3 – Simplified Process Diagram for Phase II, Highlighting Technology Options



While all four methods successfully recovered precious metals within the Py concentrate, the Albion Process™ was selected for further test work given its high recovery rates, proven operational robustness and cost effectiveness. By fine grinding, limestone addition and oxygen injection, sulfides were oxidized at 75%. Subsequent cyanide leach results successfully leached 84.9% of the Au and 91.2% of the Ag contained in the sulfur concentrate (Table 4).

Table 4 – Metal Distribution for the Sulfur Concentrate and the Solution Resulting from Oxidation and Cyanide Leach of the Same Concentrate

Albion Process™ & Leach (Phase II)				
Metal Distribution (%)¹	Au	Ag	Zn	Pb
Sulfur Conc. (Relative to Feed)	69.0	39.6	19.5	10.6
Leach Solution (Relative to Feed)	58.6	36.1	-	-
Leach Solution (Relative to Sulf. Conc.)	84.9	91.2	-	-

¹ **Sulfur Conc. (Relative to Feed)** refers to the amount of metal found in the sulfur concentrate, as a percent of the metal found in the feed (test sample).

Leach Solution (Relative to Feed) refers to the amount of metal leached from the sulfur concentrate, as a percent of the metal found in the feed (test sample).

Leach Solution (Relative to Sulf. Conc.) Refers to the amount of metal leached from the sulfur concentrate, as a percent of the metal contained in the sulfur concentrate.

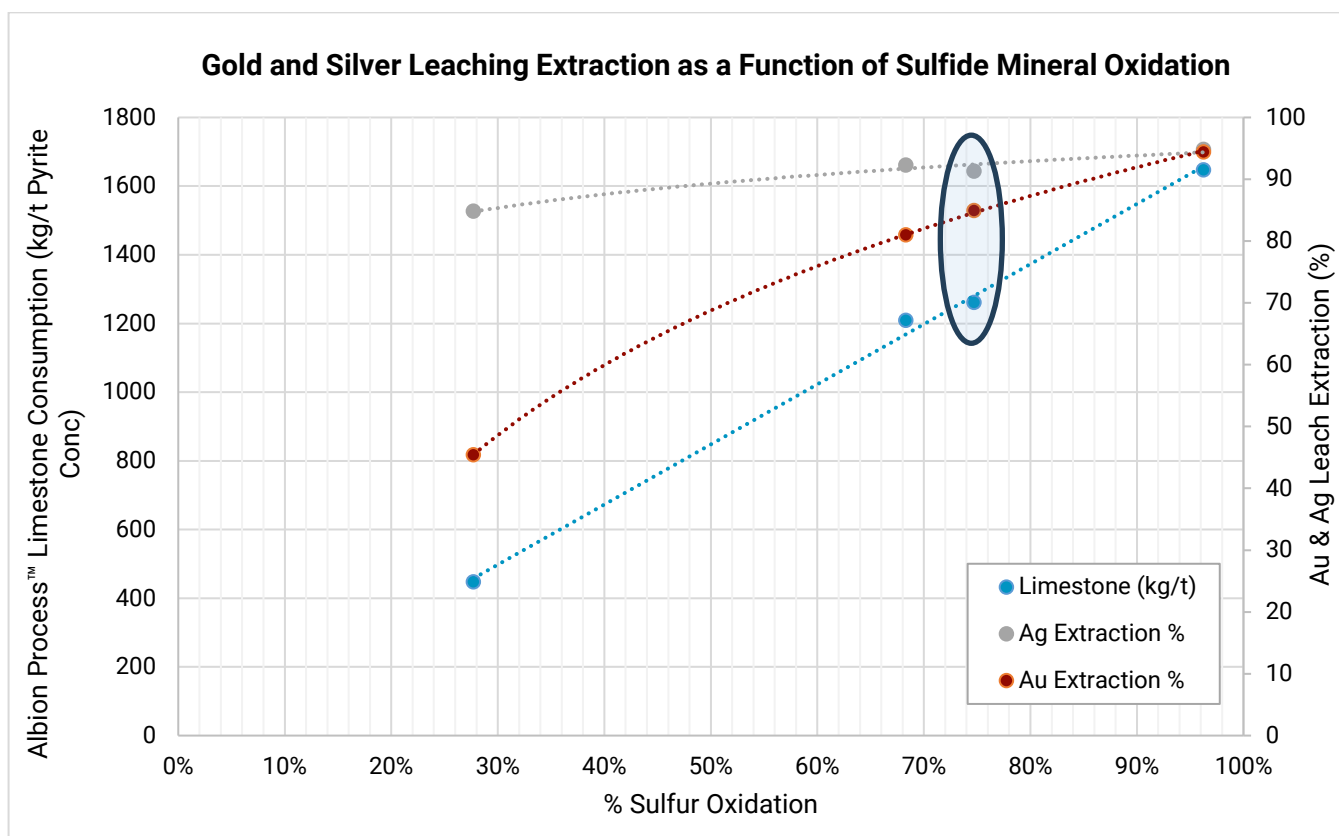
During the testing, total recoveries reached 85.1% Au, 89.2% Ag, 72.0% Zn, and 84.5% Pb (Table 1).

Pyrite Oxidation - Albion Process™

The Albion Process™ tests validated that the Py concentrate produced from the Boumadine composite sample can be treated effectively. The key driver for releasing the precious metals is sulfide mineral oxidation. The test work confirmed that oxidation of sulfides from Boumadine is achievable and correlates well with both limestone addition and the subsequent leaching of Au and Ag (Figure 4).

Under the Albion Process™, 85% of the Au and 91% of the Ag contained in the Py concentrate was recovered, with a limestone consumption of approximately 1.3 tonnes per tonne of Py concentrate. In this sample, Py concentrate was ground to P80:10µm prior to oxidation. Testing also indicated that precious metal recoveries could be further improved through increased limestone dosage and a finer grind, leading to further sulfide oxidation.

Figure 4 – Oxidation of Sulfides using the Albion Process™ on Boumadine Sulfide Concentrate



Limestone Sourcing

Limestone is a key reagent to the Phase II extraction process. The CaO content, reactivity and low MgO content are key parameters used to quantify limestone quality. In 2023, the Corporation mandated limestone specialist Pascal Hitzig to conduct a geological study to determine the availability and quality of limestone deposits near Boumadine. His study located large limestone deposits, 35 kilometers from Boumadine, accessible by road, simple to mine and truck from a future quarry to the mine site.

Next Steps

Several key additional project inputs are being evaluated to support the project including metallurgy, limestone sourcing, water sourcing, mining methods, electricity accessibility and tailings facilities.

- Metallurgical testing will continue to be adapted and refined. Methods previously tested for Py oxidation will be further evaluated.
- Local limestone sourcing will be developed based on the 2023 study.
- A preliminary study to define potential water sources is ongoing.
- The large, massive sulfide zones found through exploration suggest mining can be productive and mechanised, using modern methods such as long-hole stoping and open-pit mining. Mining methods will be defined based on the future resource estimates and mining studies within the scope of a preliminary economic assessment.
- A high voltage power line is available close to the project to ensure energy supply.
- A preliminary study on potential tailing storage facility sites is ongoing.

Qualified Person & Metallurgy

The scientific and technical information contained in this press release have been reviewed by Matthieu Girard, P. Eng. Aya's Principal Metallurgist, Qualified Person, for accuracy and compliance with National Instrument 43-101.

The metallurgical test work on Boumadine was carried out by SGS Canada Inc. in 2023.

About Aya Gold & Silver Inc.

Aya Gold & Silver Inc. is a rapidly growing, Canada-based silver producer with operations in the Kingdom of Morocco.

The only TSX-listed pure silver mining company, Aya operates the high-grade Zgounder Silver Mine and is exploring its properties along the prospective South-Atlas Fault, several of which have hosted past-producing mines and historical resources. Aya's Moroccan mining assets are complemented by its Tijirit Gold Project in Mauritania, which is being advanced to feasibility.

Aya's management team maximizes shareholder value by anchoring sustainability at the heart of its production, resource, governance, and financial growth plans.

For additional information, please visit Aya's website at www.ayagoldsilver.com or contact:

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Forward-Looking Statements

This press release contains certain statements that constitute forward-looking information within the meaning of applicable securities laws ("forward-looking statements"), which reflects management's expectations regarding Aya's future growth and business prospects (including the timing and development of new deposits and the success of exploration activities) and other opportunities. Wherever possible, words such as "robust", "envisions", "promising", "likely", "deliver", "indicate", "potential", "enhance", "increase", "reconfirm", "potential", "achievable", "plan", "could", "opportunity", "support", "suggest", "expected", "probably", and similar expressions or statements that certain actions, events or results "may", "could", "would", "might", "will", or are "likely" to be taken, occur or be achieved, have been used to identify such forward-looking information. Specific forward-looking statements in this press release include, but are not limited to, statements and information with respect to the

exploration and development potential of Boumadine as well as metallurgical results of studies and tests done on said project based on what may not be a representative sample at the time of publishing mineral resources or reserves, as well as the conversion of any exploration results to Inferred Mineral Resources or Measured and Indicated Mineral Resources, future opportunities for enhancing development at Boumadine, and timing for the release of the Company's disclosure in connection with the foregoing. Although the forward-looking information contained in this press release reflect management's current beliefs based upon information currently available to management and based upon what management believes to be reasonable assumptions, Aya cannot be certain that actual results will be consistent with such forward-looking information. Such forward-looking statements are based upon assumptions, opinions and analysis made by management in light of its experience, current conditions, and its expectations of future developments that management believe to be reasonable and relevant but that may prove to be incorrect. These assumptions include, among other things, the results of metallurgy work to continue being robust with ongoing testing, the Corporation's capacity to implement its two-step process including phase 1 and phase 2 at Boumadine, the Albion Process™ to likely deliver the highest recovery and lowest capital and operational cost for the Corporation, the Corporation's capacity to enhance precious metal recoveries in the future, the ability to obtain any requisite governmental approvals, the accuracy of Mineral Reserve and Mineral Resource Estimates (including, but not limited to, tonnage and grade estimates), silver price, exchange rates, fuel and energy costs, future economic conditions, anticipated future estimates of free cash flow, and courses of action. Aya cautions you not to place undue reliance upon any such forward-looking statements.

The risks and uncertainties that may affect forward-looking statements include, among others: the inherent risks involved in exploration and development of mineral properties, including government approvals and permitting, changes in economic conditions, changes in the worldwide price of silver and other key inputs, changes in mine plans (including, but not limited to, throughput and recoveries being affected by metallurgical characteristics) and other factors, such as project execution delays, many of which are beyond the control of Aya, as well as other risks and uncertainties which are more fully described in Aya's 2022 Annual Information Form dated March 31, 2023, and in other filings of Aya with securities and regulatory authorities which are available on SEDAR at www.sedar.com. Furthermore, Aya's corporate update of May 28, 2020 regarding the materiality of its assets as well as to previous studies regarding non-material assets remains applicable as at the date hereof. Aya does not undertake any obligation to update forward-looking statements should assumptions related to these plans, estimates, projections, beliefs, and opinions change. Nothing in this document should be construed as either an offer to sell or a solicitation to buy or sell Aya securities. All references to Aya include its subsidiaries unless the context requires otherwise.