# ATEX Announces Excellent Metallurgical Recoveries for Cu-Au Porphyry Mineralization at Valeriano

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Toronto, October 18, 2023 - ATEX Resources Inc. (TSXV: ATX) ("ATEX" or the "Company") is pleased to announce the results of metallurgical test work completed on copper ("Cu") gold ("Au") porphyry related material, completed at Base Met Laboratories ("BML") in Kamloops, British Columbia. This work was completed using samples selected from drill core from the Phase II and III drill programs at the Valeriano Project ("Valeriano" or the "Valeriano Project") located in Atacama Region, Chile.

The metallurgical program was undertaken using three composite samples of >100 kilograms each selected from within the Valeriano resource area (See Company news September 12, 2023). The work in this program was completed to a PEA level and was designed, scoped, and supervised by Libertas Metallurgy LTD, Chatsworth, Ontario.

HIGHLIGHTS:

- ROBUST COPPER AND GOLD RECOVERIES - Copper recoveries ranging from 91% to 95% and total gold recovery ranging from 83% to 94%, using a combination of flotation (Cu, Au) and cyanidation of cleaner tails (Au).
- ATTRACTIVE CONCENTRATE GRADES - Desirable concentrate grades of 26% to 31% Cu and 7g/t to 12g/t Au with negligible deleterious elements.
- SIMPLE COMMUNUTION - The test work has demonstrated that Valeriano mineralized material is amenable to SAG and ball milling.
- COPPER-MOLYBDENUM SEPARATION UPSIDE: Cu-Mo separation could produce a molybdenum concentrate at 65%-75% Mo recovery.

"We are very excited by these results, confirming that Valeriano can produce a high quality, clean concentrate using conventional recovery methods," stated Raymond Jannas, President, and CEO of ATEX. "The copper and gold recovery results from this program have exceeded our expectations, and the high quality of the concentrate would be extremely attractive to smelters."

Overview

In May 2023, a PEA level metallurgical test work program was designed and scoped by Libertas Metallurgy and ATEX Resources. Samples were collected from half core under supervision of Libertas in June 2023. The samples we packaged and shipped to BML and were delivered in July 2023. Metallurgical test work was completed at Base Met Laboratories in Kamloops, BC during August and September 2023.

A total of three representative samples (>100 kg of material) were selected by Libertas Metallurgy and ATEX geologists:

1. High Grade Composite ("HGC") selected from the Early Porphyry ("EP") lithology within the Central High-Grade Trend.
2. Medium Grade Composite ("MGC") selected from within the EP around the contact with the host rock.
3. Wall Rock Composite ("WRC") selected from mineralized wall rock material above and adjacent to the EP.

Program Scope

The PEA level test work included the following objectives:

1. Head characterization including chemical assays and quantitative mineralogy.
2. Comminution test work for SAG milling (SMC tests) and ball milling (Bond Ball Work Index tests).
3. Comprehensive program of rougher and cleaner flotation tests culminating in successful locked cycle tests on each of the three composites.

Sample Selection

Due to the homogenous nature of the copper and gold mineralization over long intervals at Valeriano, a significant amount of candidate material was available for selection of the metallurgical composite samples.

Libertas was provided with lists of available material for the high-grade, medium grade and wall rock composites by ATEX and representative composite samples were selected with grades ranging from 0.4%-0.7% Cu and 0.2g/t-0.4g/t Au (Table 1).

Table 1 -Selected Composite Calculated Grades

| Comp ID | Cu (%) | Au (g/t) | Ag (g/t) | Mo (ppm) | Fe (%) |
|---|---|---|---|---|---|
| High Grade (EP) | 0.7 | 0.42 | 1.3 | 42 | 2.63 |
| Medium Grade (EP) | 0.42 | 0.23 | 1.4 | 17 | 2.45 |
| Wall Rock | 0.49 | 0.17 | 0.8 | 58 | 1.8 |

Flotation, Leaching and Comminution Test Work

A total of 22 rougher and cleaner batch flotation tests were conducted on 2.0 kg test work charges from the three metallurgical composites. A conventional copper porphyry processing flowsheet was used as the basis of flowsheet optimization including:

- A primary grind circuit, reducing sample material to a size of 80 to 120 microns.
- A copper rougher flotation circuit with copper and gold collectors.
- Followed by regrinding of the copper rougher concentrate and,
- 2-3 stages of copper cleaner flotation to produce a concentrate grading +27% Cu.
- Leaching of rougher flotation and Cleaner 1 flotation tails.

Outcomes and Optimization

The following flotation variables were investigated and optimized for the high-grade composite based on the assumption of any future production scenario commencing in the HGC material. This was subsequently confirmed on the MGC and WRC material:

- Sensitivities were tested on the primary grind size resulting in the selection of 120 microns as the optimal grind size.
- Copper rougher flotation time and mass pull sensitivities were run that focused on increasing gold recovery to copper concentrate.
- Regrind sensitivity tested regrind sizes down to 20-25 microns.
- Reagents dosage sensitivities were run and demonstrated that conventional combinations of the PAX and 3477 collector reagents were suitable.
- Sensitivities run on pH demonstrated that moderate lime dosages were required to increase cleaner flotation pH to 10.0 for the high grade and medium composites, and to pH 11.5 for the wall rock composite.
- The application of fuel oil was investigated to increase molybdenum recovery and yielded successful results boosting potential recoveries from 65% to 75%. Cu-Mo separation testwork was considered to be beyond the scope of this phase of testwork.

A summary schematic of the locked cycle test flowsheet is provided in Figure 1 below:

Figure 1: Valeriano Locked Cycle Test Flowsheet

To view an enhanced version of Figure 1, please visit:
https://images.newsfilecorp.com/files/6303/184332_figure1.jpg

Excellent metallurgical recovery was achieved for all three composites tested and is summarized in Table 2 below.

Table 2: Summary of Locked Cycle Test Results

| | Concentrate Grade | | | | Recovery (Flotation) | | | Recovery (Flotation + Leach) |
|---|---|---|---|---|---|---|---|---|
| Comp ID | Cu % | Au g/t | Ag g/t | Mo ppm | Cu % | Ag % | Mo % | Au % |
| High Grade (EP) | 31 | 12 | 52 | 2,021 | 95 | 89 | 83 | 94 |
| Medium Grade (EP) | 31 | 10 | 90 | 1,240 | 94 | 89 | 71 | 94 |
| Wall Rock | 26 | 7 | 37 | 3,605 | 91 | 78 | 80 | 83 |
| Resource Assumptions | | | | | 90 | 80 | 60 | 70 |

- Copper recovery to copper concentrate ranged from 91% to 95%, at copper concentrate grades of 26% to 31% Cu.
- Gold recovery to copper concentrate ranged from 63% to 64% at grades of 7g/t to12g/t Au for flotation and was increased to 83%-94% in leach testing of rougher flotation and Cleaner 1 flotation tails.
- Molybdenum recovery to copper concentrate ranged from 71% to 83% and although Cu-Mo separation test work was not completed in this phase, concentrate grades of 1,240 ppm - 2,021 ppm appear amenable to production of a separate molybdenum concentrate. Further test work is required to demonstrate this in practice.
- Although low in silver, the concentrates were above marketable silver grade and silver recoveries ranged from 78%-89%.

SAG mill amenability (SMC tests) and ball milling amenability (Bond Ball Work Index tests) were also completed on each composite - these suggest that Valeriano material is amenable to SAG mill grinding with Bond Ball Work Indices ranging from 12.7 kwh/t for the wall rock to 15 kwh/t -16 kwh/t for the porphyry composites.

QUALIFIED PERSON

Mr. Ben Pullinger, P.Geo., registered with the Professional Geoscientists Ontario, is the Qualified Person, as defined by National Instrument 43-101 - Standards for Disclosure for Mineral Projects, for the Valeriano Project. Mr. Pullinger is not considered independent under NI 43-101 as he is Senior Vice President Exploration and Business Development of ATEX. He has reviewed and approved the disclosure of the scientific and technical information contained in this press release.

About ATEX

ATEX is exploring the Valeriano Copper Gold Project which is located within the emerging copper gold porphyry mineral belt linking the prolific El Indio High-Sulphidation Belt to the south with the Maricunga Gold Porphyry Belt to the north. This emerging belt, informally referred to as the Link Belt, hosts several copper gold porphyry deposits at various stages of development including, Filo del Sol (Filo Mining), Josemaria (Lundin Mining), Los Helados (NGEX Minerals/JX Nippon), La Fortuna (Teck Resources/Newmont) and El Encierro (Antofagasta/Barrick Gold).

Valeriano hosts a large copper gold porphyry resource: 1.41 billion tonnes at 0.67% CuEq (0.50% Cu, 0.20 g/t Au, 0.96 g/t Ag and 63.80 g/t Mo), reported in September 2023, which includes a higher-grade core totaling 200 million tonnes at 0.84% CuEq (0.62% Cu, 0.29 g/t Au 1.25 g/t Ag and 55.7 g/t Mo).

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This news release contains forward-looking statements, including predictions, projections, and forecasts. Often, but not always, forward-looking statements can be identified by the use of words such as "plans", "planning", "expects" or "does not expect", "continues", "scheduled", "estimates", "forecasts", "intends", "potential", "anticipates", "does not anticipate", or describes a "goal", or variation of such words and phrases or state that certain actions, events or results "may", "could", "would", "might" or "will" be taken, occur or be achieved. Forward-looking statements involve known and unknown risks, future events, conditions, uncertainties and other factors which may cause the actual results, performance or achievements to be materially different from any future results, prediction, projection, forecast, performance or achievements expressed or implied by the forward-looking statements.

Such forward-looking statements include, among others: plans for the evaluation of exploration properties including the Valeriano Copper Gold Project; the success of evaluation plans; the success of exploration activities; mine development prospects; potential for future metals production; changes in economic parameters and assumptions; all aspects related to the timing and extent of exploration activities including the Phase III drill program contemplated in this press release; timing of receipt of exploration results; the interpretation and actual results of current exploration activities and mineralization; changes in project parameters as plans continue to be refined; the results of regulatory and permitting processes; future metals price; possible variations in grade or recovery rates; failure of equipment or processes to operate as anticipated; labour disputes and other risks of the mining industry; the results of economic and technical studies; delays in obtaining governmental and local approvals or financing or in the completion of exploration; timing of assay results; as well as those factors disclosed in ATEX's publicly filed documents.

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