

Luca Mining's Q3 2023 Overview: Optimizing Campo Morado and Progress at Tahuehueto Mining Project

Vancouver, British Columbia – December 04, 2023

Luca Mining Corp. ("Luca" or the "Company") (TSX-V: LUCA; OTCQX: LUCMF; Frankfurt: Z68) announces its financial and operating results for the third quarter and nine months ended September 30, 2023. The Company reports net revenue of \$15.1 million in Q3 2023, representing a 2% increase over net revenue of \$14.8 million in Q3 2022. Mine operating income (before depletion, depreciation, and amortization) in Q3 2023 was \$0.30 million compared to \$1.50 million in Q3 2022. The net mine operating loss in Q3 2023 was \$0.74 million compared to a net mine operating gain of \$1.16 million in Q3 2022.

Highlights

- Tahuehueto is nearing completion of 1,000 tonnes per day of installed capacity before year end and on track to ramp up to commercial production in early 2024. First phase production from the mine is expected to achieve over 40,000 ounces gold equivalent per year with an AISC of under USD \$1,000 per AuEq ounce*.
- Campo Morado initiated an optimization program designed in cooperation with consulting metallurgical engineers, Ausenco, which has already demonstrated substantial increases in both recoveries and grades of the copper-lead and zinc concentrates.
- The Company expects the optimization program to result in a revenue increase of at least 40% in 2024 with only very modest capital expenditures.

"During the third quarter of 2023, the Tahuehueto Mining project continued progressing towards its objective of achieving 1,000 tonnes per day installed capacity by year-end and announcement of commercial production early in 2024," said Mike Struthers, CEO. "Following a challenging operational performance in Q3 2023 at Campo Morado, in large part due to reduced throughput as part of a new optimization program by our colleagues at Ausenco, we now have, for the first time in the history of this operation, an understanding of how to correctly operate the project to achieve consistent performance and profitability. The execution of a new mine-to-mill program, an effective blending strategy, and multiple initiatives in the processing plant, will translate into major improvements to the bottom line at Campo Morado. We are very grateful for the substantial support provided by the Ausenco engineers and look forward to the improved results to come to fruition in 2024."

Q3 2023 Overview

Campo Morado

Production and concentrate sales for the three months ended September 30, 2023:

- Produced 5,094 tonnes of zinc concentrate grading an average of 45.8% zinc, 4.08 g/t gold, 450 g/t silver and sold 5,399 tonnes generating Q3-2023 revenue from zinc concentrate of US\$4.59 million.
- Produced 3,674 tonnes of bulk copper-lead concentrate, grading an average of 14.8% copper, 11.72 g/t gold, 753 g/t silver and sold 3,485 tonnes generating Q3-2023 revenue from copper concentrate of US\$5.97 million
- 128,287 tonnes of mineralized material were processed through the processing plant at a C1 cash cost per pound payable of zinc at US\$2.74 with average grades of 2.51% zinc, 0.77% copper, 0.74% lead, 1.62 g/t gold, and 100.91 g/t silver
- Recoveries during Q3-2023 were 72.6% zinc, 47.8% copper, 28% gold, and 36.6% silver.

C1 cash costs per pound of payable zinc for the Campo Morado Mine operation are estimated by adding the total cost to produce concentrate (mining, milling, site general and administration), adding the cost of transporting concentrate to the point of sale, adding the cost of smelter treatment and refining charges, subtracting the byproduct credits estimated from sales of lead, silver, gold and dividing by the pounds of payable zinc. By-product credits are calculated using the realized weighted average metal price, during the year.

Campo Morado Optimization Program

- In July 2023 Ausenco consultants reviewed and optimized the comminution circuit, reducing throughput from 100 to 75 tonnes per hour and adjusting the primary grind from 65 microns to 35 microns to enhance flotation recoveries.
- Subsequent lab tests and plant trials showcased substantial recovery increases, resulting from effective blending in the mine and the use of correct reagents.
- The initiative evolved into a project during the quarter, encompassing a mine-to-mill program, extensive process plant modifications, and lab tests at ALS laboratories in Canada.
- The project is slated for implementation in Q4 2023, with results expected over the subsequent months.
- In a news release dated November 20, 2023, Luca announced initial results from the optimization program.
 - A bulk concentrate is being produced with greater than 70% copper recovery (compared to a historical range between 35-40%). The concentrate produced contained greater than 14-16% copper (compared to historical values near 11%).

- Overall zinc recovery is expected to increase from 76% to 86% and the final concentrate grade increases from 46% to 56% zinc over the next 12 months.

Tahuehueto Mining Project

While the project is still under construction, the following details the production and concentrate sales for the three months ended September 30, 2023:

- Produced 782 tonnes of zinc concentrate grading an average of 52.2% zinc, 8.70 g/t gold, 117.15 g/t silver and sold 591 tonnes generating Q3-2023 revenue from zinc concentrate of US\$0.64 million.
- Produced 487 tonnes of lead concentrate grading an average of 38.4% lead, 79.95 g/t gold, 794.12 g/t silver and sold 532 tonnes generating Q3-2023 revenue from lead concentrate of US\$2.61 million.
- 19,433 tonnes of mineralized material were processed through the processing plant with average grades of 3.27% zinc, 1.34% lead, 3.05 g/t gold, and 32.79 g/t silver.
- Recoveries during Q3-2023 were 64.1% zinc, 79.4% lead, 82.3% gold, and 82.7% silver.
- Daily output has varied considerably during the period, as equipment and systems are tested, optimized, installed, and commissioned. The average daily throughput during the period was 211 tonnes per day, with a peak production output of 440 tonnes per day tonnes per day.

Management Discussion and Analysis Refiling

On November 27, 2023, the Company filed its condensed interim consolidated financial statements and corresponding management discussion and analysis (“MD&A”) for the period ending September 30, 2023. Subsequently, the Company became aware of minor update revisions and typographical corrections (including, but not limited to, page 7 of such MD&A under the heading “Operational Performance Results) required to the MD&A and as a result the Company has refiled its MD&A on November 30, 2023. These corrections do not materially impact the substantive content or key insights presented in the original MD&A but aim to ensure the precision and accuracy of our communication.

About Luca Mining Corp.

Luca Mining Corp. is a Canadian based mining company with two 100% owned Mexican gold, silver, and base metal mining projects. With one mine ramping up, and another going through an optimisation program, the Company expects these operations to generate consistent, positive free cash flow starting in early 2024.

Luca's Tahuehueto Mine is a new underground gold mine in northwestern Durango State, Mexico, located within the prolific Sierra Madre Mineral Belt which hosts numerous producing and historic mines along its trend. Currently in the final stages of construction to the nameplate capacity of 1,000 tonnes per day, Tahuehueto is on track to become a significant and one of Mexico's newest gold mines to come into production. The Pre-Feasibility Study updated in 2022 contemplates an operation achieving production of 40,000 ounces gold-equivalent per year, with approximately 75% of the revenues from precious metals, and a 10-year mine life.

The Campo Morado Mine, located in Guerrero State, Mexico, is an operating underground base and precious metals mine with a throughput of approximately 600,000 tonnes per year, producing zinc, copper, and lead concentrates with significant precious metals credits. It is currently undergoing an optimisation program which is already generating significant improvements in recoveries and grades, and cashflows.

*Pre-feasibility report dated April 21, 2022.

Qualified Persons

The technical information contained in this News Release has been approved by Mr. Mike Struthers, C.Eng., CEO and Director at Luca Mining, a Qualified Person for the Company as defined in National Instrument 43-101.

Visit: www.lucamining.com

On Behalf of the Board of Directors

(signed) "Mike Struthers"

Mike Struthers, CEO and Director

Cautionary Note Regarding Production Decisions and Forward-Looking Statements

It should be noted that Luca declared commercial production at Campo Morado prior to completing a feasibility study of mineral reserves demonstrating economic and technical viability. Accordingly, readers should be cautioned that Luca's production decision has been made without a comprehensive feasibility study of established reserves such that there is greater risk and uncertainty as to future economic results from the Campo Morado mine and a higher technical risk of failure than would be the case if a feasibility study were completed and relied upon to make a production decision. Luca has completed a preliminary economic assessment ("PEA") mining study on the Campo Morado mine that provides a conceptual life of mine plan and a preliminary economic analysis based on the previously identified mineral resources (see News Release dated November 8, 2017, and April 4, 2018).

Statements contained in this news release that are not historical facts are "forward-looking information" or "forward-looking statements" (collectively, "Forward-Looking Information") within the meaning of applicable Canadian securities laws. Forward Looking Information includes, but is not limited to, disclosure regarding the planned program to improve mining operations at Campo Morado; and other possible events, conditions or financial performance that are based on assumptions about future economic conditions and courses of action; the timing and costs of future activities on the Company's properties, such as production rates and increases; success of exploration, development and bulk sample processing activities, and timing for processing at its own mineral processing facility on the Tahuehueto project site. In certain cases, Forward-Looking Information can be identified using words and phrases such as "plans," "expects," "scheduled," "estimates," "forecasts," "intends," "anticipates" or variations of such words and phrases. In preparing the Forward-Looking Information in this news release, the Company has applied several material assumptions, including, but not limited to, that the current exploration, development, environmental and other objectives concerning the Campo Morado Mine and the Tahuehueto Project can be achieved; that the program to improve mining operations at Campo Morado will proceed as planned; the continuity of the price of gold and other metals, economic and political conditions, and operations. Forward-Looking Information involves known and unknown risks, uncertainties and other factors which may cause the actual results, performance, or achievements of the Company to be materially different from any future results, performance or achievements expressed or implied by the Forward-Looking Information. There can be no assurance that Forward-Looking Information will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Accordingly, readers should not place undue reliance on Forward-Looking Information. Except as required by law, the Company does not assume any obligation to release publicly any revisions to Forward-Looking Information contained in this news release to reflect events or circumstances after the date hereof or to reflect the occurrence of unanticipated events.

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