

Luca Mining Announces Significant Performance Gains at Campo Morado, and AGM Results

Vancouver, British Columbia - 20 November 2023

Luca Mining Corp. (“**Luca**” or the “**Company**”) (TSX-V: LUCA; OTCQX: LUCMF; Frankfurt: Z68) is pleased to announce excellent results from its optimization program at the Company’s wholly owned Campo Morado polymetallic mine in Guerrero, Mexico. The program designed in cooperation with consulting metallurgical engineers, Ausenco, has yielded substantial increases in both recoveries and grades of the copper, zinc, and lead concentrates. These positive test results were achieved both in the laboratory and in the plant at Campo Morado.

Highlights

- A bulk concentrate is being produced with greater than 70% copper recovery (compared to a historical range between 35- and 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.
- The Company expects the optimization program to result in a revenue increase of at least 40% with only very modest capital expenditures.

Ausenco Test Work and Plant Trials

The site historically produces zinc and bulk copper-lead concentrates, but the ultimate goal of the optimisation program is to generate clean zinc, copper, and lead concentrates, adding considerable value to the operation.

Optimisation of primary grinding and implementing an effective mine-to-mill program, has enabled downstream improvements in flotation performance.

Ausenco have conducted a range of laboratory testing, initially of zinc circuit feed samples, to study the potential for improved zinc circuit stage recoveries. With a series of changes to reagents and other operational parameters in flotation in the plant, overall zinc recovery increased from 75% to 82% and the final concentrate grade from 45% to 51% zinc.

For the bulk circuit, a trial was conducted using laboratory reagent conditions with average plant feed grades of 0.80% copper and 0.65% lead. A bulk concentrate was produced with greater than 70% copper recovery (compared to a historical range between 35 and 40%). The concentrate produced contained between 14 and 16% copper (compared to historical values near 11%).

Additional test work is being conducted at the ALS laboratories in Canada, focusing on the copper-lead separation, with the expectation that this will lead to a reconfiguration of the process flowsheet to produce clean and higher-grade copper and lead concentrates, further improving revenues. This test work will be completed by the end of Q1 2024.

Mine-to-Mill Program, and Blending

The operation is implementing an effective Mine-to-Mill program, integrating geology, mining, and processing functions. This is coupled with metallurgical test work of ore from future mining areas to

improve short- and long-range planning. A vital element of improved plant performance is the blending of ores to create a consistent plant feed, and recent operations have confirmed these benefits.

Mike Struthers, CEO, commented: *“With the work done in recent months 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 Campo Morado to maximise 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 the operation. We are very grateful for the substantial support provided by the Ausenco engineers. I look forward to providing updates on this initiative in the coming weeks and months.”*

AGM Results

Luca Mining Corp. (the “Company” or “Luca”) is pleased to announce that at its 2023 Annual General Meeting held on October 30, 2023, shareholders approved all resolutions put to the meeting as listed below:

- Fixing the number of directors for the ensuing year at eight (8).
- The election of Mike Struthers (CEO), David Rhodes (Chairman of the Board), Ralph Shearing, Roberto Guzman Garcia, Ruben Alvidrez Ortega, Phil Brumit, Neil O’ Brien, and Rory S. Godinho as Directors of the Company.
- The Company’ s 2023 Omnibus Equity Incentive Plan.
- The appointment of Grant Thornton LLP as the Company’ s auditors for the ensuing year.

Board Committees

Following the Annual General Meeting the Company has reconstituted its Audit, Compensation & Nomination, Corporate Governance and Technical & HSEC Committees as follows:

- Audit Committee - David Rhodes (Chair), Phil Brumit, and Ruben Alvidrez Ortega.
- Compensation and Nomination Committee - David Rhodes (Chair), Rory Godinho and Ruben Alvidrez Ortega.
- Corporate Governance Committee - Rory Godinho (Chair), David Rhodes and Neil O’ Brien.
- Technical & HSEC Committee – Phil Brumit (Chair), Mike Struthers, Neil O’Brien and Ralph Shearing

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.

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.

Qualified Persons

The technical information contained in this News Release has been reviewed by Mr. Chris Richings, P.Eng. (EGBC) Vice-President Technical at Luca Mining a Qualified Person for the Company as defined in National Instrument 43-101, and Mr. Richard Whitering, Principal Consulting Metallurgist with Ausenco XXXX.

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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 recommencement of 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 recommencement of 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.

Neither TSX Venture Exchange nor its Regulation Services Provider (as that term is defined in the policies of the TSX Venture Exchange) accepts responsibility for the adequacy or accuracy of this release.



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