

NEWS RELEASE

LUCA INTERSECTS 7.9 METRES OF 5.87 GRAMS PER TONNE AUEQ FROM FIRST DRILLHOLES COLLARED AT THE TAHUEHUETO MINE IN OVER A DECADE

Vancouver, British Columbia, February 20, 2025 - Luca Mining Corp. (“Luca” or the “Company”) (TSX-V: LUCA; OTCQX: LUCMF; Frankfurt: Z68) is pleased to announce analytical results from the first four (4) underground diamond drill holes of an ongoing 5,000 meter (“m”) exploration drill program at the Tahuehueto gold-silver mine in Durango State, Mexico.

Drillhole DDH24-213 targeted a previously untested zone, approximately 20m below the active mine workings of Level 23, and intersected a new high-grade brecciated zone within the El Creston vein system that returned **7.9m of 2.59 g/t Au, 68.41 g/t Ag, 0.68% Cu, 2.32% Pb, and 2.73% Zn** within a larger **22.3m zone of 1.47 g/t Au, 41.88 g/t Ag, 0.44% Cu, 1.46% Pb, and 2.34% Zn** from 201.2m. Figure 1 presents the location of the drillholes and Tables 1 and 2 provide drill collar details.

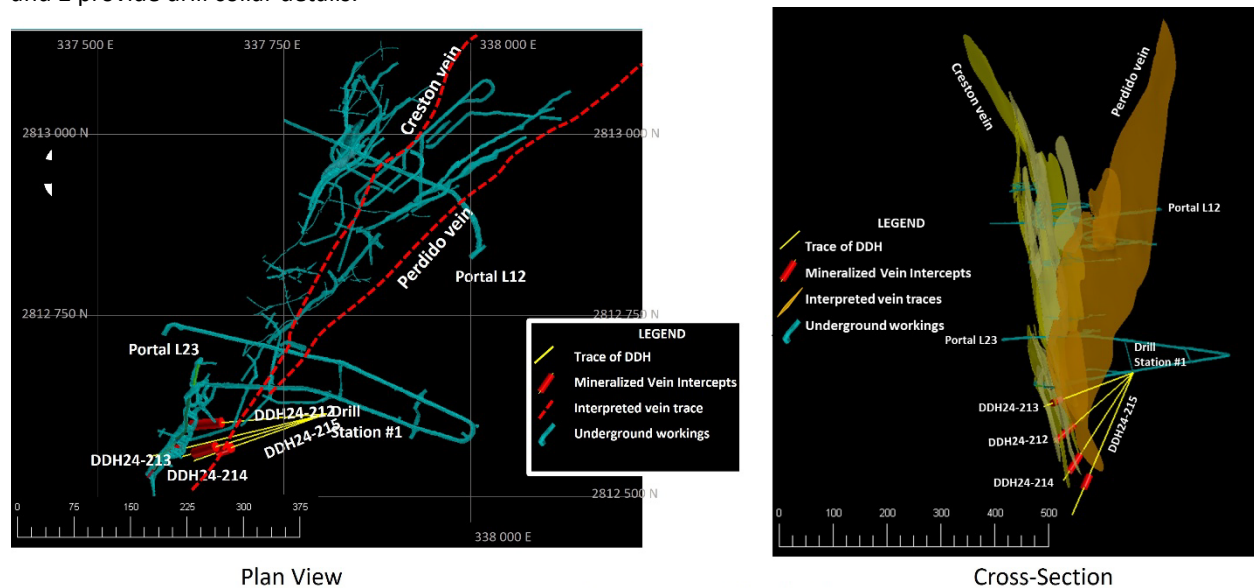


Figure 1 – Location of Drill Holes

To date, 11 holes have been completed for over 2,550m as part of the current exploration campaign which has a primary objective to determine both vertical and lateral extents of known mineralization within the Creston and Perdido vein systems that are: a) proximal to current mine workings and b) interpreted to host un-tested extensions of the mineralized structures. Through these efforts, it is anticipated that the Mineral Resource will be expanded - thereby adding mineable resources into the near-term and medium term Tahuehueto Mine Plan. All 11 holes completed thus far have intersected mineralized veins of the Creston and Perdido structures from previously undrilled portions of deposit, further validating the continuous nature of these pervasive and mineralized structures.

Paul D. Gray, Luca VP Exploration, commented, "The Tahuehueto Team is extremely excited with the results from these, the first drillholes that the Project has seen in over 12 years. The results from the four drill holes have confirmed key exploration objectives"

1. Demonstrate mineralized veins consistence in untested areas outside of the resource envelope, where the veins are expected to continue;

2. Successfully discovered a new, High Grade Breccia Zone immediately beneath current mine workings, based on our structural model for Tahuehueto. The Tahuehueto mineralizing system is a multi-stage mineralizing event, with the last stage of mineralization interpreted to represent high grade gold-silver breccia zones. The discovery of this new High Grade Breccia Zone is an important “proof of concept” that will allow our exploration team to fully delineate and to make additional new discoveries of this style of higher-grade gold-silver mineralization; and,
3. Each of the holes drilled in this program has intersected mineralized vein material associated with the Creston and Perdido structures, underscoring the upside potential of this long neglected mineralized system and moreover, demonstrates that systematic drilling efforts will result in meaningful additions to the Mineral Resources at Tahuehueto.”

Drillholes DDH24-212 through DDH24-215 have combined to successfully establish the continuity of the Creston Mineralized Vein Structure within previously untested areas, to greater than 60m below Level 23. Next steps in the execution of the 2025 Tahuehueto Exploration program include the additional underground drilling of areas interpreted as open extensions of the Creston vein to the northeast of current mine workings and importantly surface drilling in and around the Santiago Deposit, located ~950m from the eastern extent of the existing Tahuehueto mine development and is ripe for expansion as it remains open along strike and to depth – recent surface mapping at Santiago has identified the potential for higher grade brecciated zones within the limitedly tested deposit. See Company News Release of April 26, 2022.

Table 1: Highlighted Diamond Drill Assay Results from DDH24-212 through DDH24-215

Hole	From (m)	To (m)	Interval (m)*	Au (g/t)	Ag (g/t)	Cu (%)	Pb (%)	Zn (%)	Au Eq**
DDH24-212	219.1	220.9	1.8	0.95	59.82	1.11	0.22	0.17	3.23
DDH24-213	201.2	223.4	22.3	1.47	41.88	0.44	1.46	2.34	3.75
including	213.3	221.2	7.9	2.59	68.41	0.68	2.32	2.73	5.87
DDH24-214	8.0	8.9	0.9	0.09	17.60	0.21	0.94	4.02	2.19
and	210.9	213.2	2.3	2.37	3.07	0.00	0.12	0.30	2.54
and	214.1	221.2	7.2	0.37	40.97	0.26	1.80	0.93	2.02
DDH24-215	11.5	13.1	1.7	0.09	22.17	0.29	2.09	2.05	2.00

*True widths are estimated to be 85% of drilled intervals

** AuEq equation is: $AuEq = Au + (Ag * 0.0128) + (Cu * 1.2799) + (Pb * 0.2737) + (Zn * 0.3359)$ - \$2,250 US\$/oz Au, 28 US\$/oz Ag, 9,260 US\$/Tonne Cu, 1,980 US\$/Tonne Pb and 2,430 US\$/Tonne Zn, respectively.

Table 2: Drill Collar Locations and Details for Released Results

Hole_ID	East WGS84 Z14	North WGS84 Z14	Elevation (m)	Azimuth	Dip (°)	Total Depth (m)
DDH_24-212	337563.09	2812618.67	1,261.67	265	-34	226.80
DDH_24-213	337563.09	2812618.69	1,261.67	256	-13	250.05
DDH_24-214	337563.09	2812618.69	1,261.67	253	-44	279.45
DDH_24-215	337563.08	2812618.66	1,261.72	250	-54	320.30

About 2025 Tahuehueto Exploration Program

The Tahuehueto property comprises a large, epithermal gold/silver vein system that covers over 11 kilometres of strike length of known mineralized veins/structures and this campaign is the first substantive exploration drill program on the Property in over 12 years. Mineralization remains open along strike and at depth for the vast majority

of the modeled Mineral Resource Areas and the objective of the current campaign will be a combination of in-fill and step-out drilling to demonstrate the vertical and lateral extent of mineralization as well as to target high-grade mineralized brecciated zones known to exist within the epithermal vein system. Recent mining in Level 23 encountered higher grade mineralization averaging 3.30 g/t Au over vein widths up to 20 meters (with values up to 65.04 g/t Au) in ore shoots branching off the main Creston vein (See news release dated May 29, 2024).

In addition to the four veins that comprise the mineralized resource, there are at least 14 additional prospective veins or splays documented within concession area that have potential to host additional low-sulphidation epithermal mineralization. In some cases, these prospective targets may represent extensions or continuations of the currently defined resource. The Company estimates that there are more than 11 km of prospective vein structures (measured along strike), compared to 4.5 km of mineralized veins that support current resource models.

Figure 2 below shows the relative location of prospective veins (yellow) and veins modeled for resources and reserves (pink) within the Company's concession area (white).

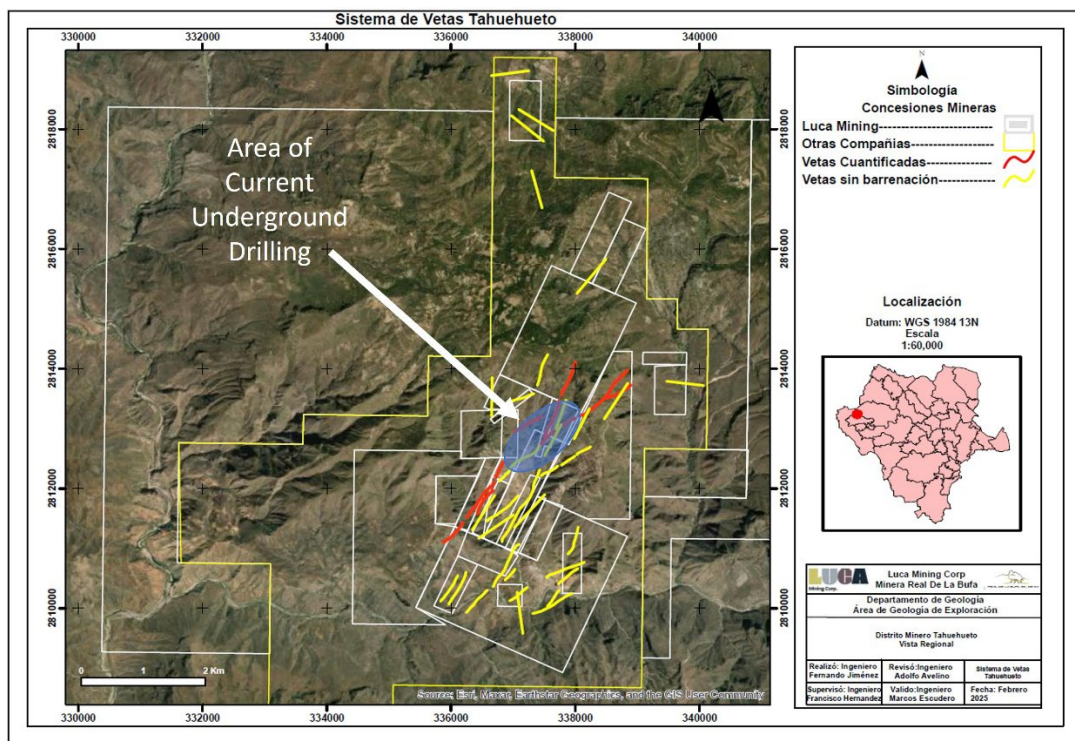


Figure 2

About Luca Mining Corp.

Luca Mining (TSX-V: LUCA, OTCQX: LUCMF, Frankfurt: Z68) is a diversified Canadian mining company with two 100%-owned producing mines within the prolific Sierra Madre mineralized belt in Mexico which hosts numerous producing and historic mines along its trend. The Company produces gold, copper, zinc, silver and lead from these mines that each have considerable development and resource upside.

The Campo Morado polymetallic VMS mine is an underground operation located in Guerrero State. It produces copper-zinc-lead concentrates with precious metals credits. It is currently undergoing an optimization program which is already generating significant improvements in recoveries, grades, efficiencies, and cashflows.

The Tahuehueto epithermal gold and silver mine is a new underground operation in Durango State. The Company is commissioning the Tahuehueto mill and expects to achieve commercial production in early 2025.

Qualified Person

The technical information contained in this news release has been reviewed and approved by Mr. Paul D. Gray, P.Ge., Vice President Exploration at Luca Mining. Mr. Gray is a Qualified Person for the Company as defined by National Instrument 43-101.

Analytical Method and Quality Assurance/Quality Control Measures

All drill core splits reported in this news release were analysed by Bureau Veritas of Durango, Mexico, utilizing the Multi-Acid digestion ICP-ES 35-element MA300 analytical package with FA-430 30-gram Fire Assay with AAS finish for gold on all samples. Au over-limits from FA-430 are re-analyzed by FA530 30-gram Fire Assay with Gravimetric finish. Ag over-limits from ICP MA300 analytical package are re-analyzed by FA530 30-gram Fire Assay with Gravimetric finish. Similarly, Cu, Pb and Zn over-limits from ICP MA300 analytical package are re-analyzed by ICP Multi-Acid digestion MA370 package. All core samples were split by core saw on-site at Luca's core processing facilities at the Tahuehueto Mine. Once split, half samples were placed back in the core boxes with the other half of split samples sealed in poly bags with one part of a three-part sample tag inserted within. Samples were collected by Bureau Veritas at the Tahuehueto Mine site and transported to Bureau Veritas' Durango Laboratory, where samples are prepared to a 250-gram pulp and analyzed for Gold by Fire assay with pulps shipped to Bureau Veritas's Analytical laboratory in Vancouver, B.C., for final ICP chemical analysis. A robust system of standards, 1/4 core duplicates and blanks was implemented in the 2024-2025 exploration drilling program and is monitored as chemical assay data become.

On Behalf of the Board of Directors

(signed) "Dan Barnholden"

Dan Barnholden, Chief Executive Officer

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Cautionary Note Regarding 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 releases 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, estimated timing of the 2025 Tahuehueto exploration program and other possible events, conditions or performance that are based on assumptions about the proposed exploration program and its anticipated results; the timing and costs of future activities on the Company's properties, such as production rates and increases; success of exploration, development, 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 Company will be able to raise additional capital as necessary; the current exploration, development, environmental and other objectives concerning the Tahuehueto Project can be achieved; the commissioning of the Tahuehueto mill will proceed as planned in 2025; the continuity of the price of gold and other metals and economic and political conditions. 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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