

# Ero Copper announces updated high-grade mineral reserve with average production of 40,500 ounces over initial three-year mine life extension at the NX Gold Mine

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VANCOUVER, Dec. 19, 2019 - [Ero Copper Corp.](#) ("Ero" or the "Company") (TSX: ERO) is pleased to announce its 2019 updated National Instrument 43-101 *Standards of Disclosure for Mineral Projects* ("NI 43-101") compliant mineral reserve and resource estimate along with updated life of mine ("LOM") production, capital and operating cost projections for its 97.6% owned NX Gold Mine, located in Mato Grosso State, Brazil. The update incorporates the results of the first systematic drill exploration effort undertaken since the mine commenced operations in 2012, and includes the Santo Antonio Vein discovery. Highlights of the update include:

- 416% increase in Indicated mineral resources, inclusive of mineral reserves, to 442,600 tonnes containing approximately 174,700 ounces of gold (a 296% increase in contained gold) compared to the Indicated mineral resources set out in the 2018 Technical Report (as defined below);
- 476% increase in Probable mineral reserves to 378,900 tonnes containing approximately 138,200 ounces of gold (a 448% increase in contained gold) compared to the Probable mineral reserves set out in the 2018 Technical Report;
- Over 1,000% increase in Inferred mineral resources to 470,200 tonnes containing approximately 141,700 ounces of gold (a 458% increase in contained gold) compared to the Inferred mineral resources set out in the 2018 Technical Report; and,
- Underpinning the significant increase in mineral reserves and resources, an updated LOM plan shows average annual production of approximately 40,500 ounces of gold at an average annual head grade of 11.63 grams per tonne gold resulting in average C1 cash costs of approximately US\$479 per ounce of gold produced over the next three years.

Commenting on the update, David Strang, President & CEO stated, *"Our strategy for the NX Gold Mine at the outset of 2019 was to secure an initial mine life extension of three to five years at low-cost production for the Company. We are pleased with the result of this effort as we now see a strong foundation of gold production on which to build longer-term growth. The fact that this was achieved over only eight months of drilling in what amounts to the first real exploration effort undertaken at the property since 2012, speaks to the opportunity we see at NX Gold to continue to organically grow the mineral reserves and resources, extend mine life and ultimately significantly increase production volumes from the mine.*

*Over the next year, we will continue to expand upon the success of the Santo Antonio Vein discovery adding incremental mine life through resource conversion of our significant inferred mineral resource base, drill testing new extensions of the Santo Antonio, Bras and Matinha veins as well as undertaking the first regional exploration program ever conducted on the extensive land package controlled by NX Gold."*

The NX Gold mineral reserve and resource estimate is shown in the following table:

Classification	Tonnage (000 tonnes)	Grade (gpt Au)	Au Contained (000 ounces)
Probable Mineral Reserve			
Santo Antonio Vein	373.2	11.45	137.4
Brás Vein	3.0	3.83	0.4
Buracão Vein	2.7	5.42	0.5
Total Probable Reserve	378.9	11.35	138.2
Indicated Mineral Resource (inclusive of Reserves)			
Santo Antonio Vein	403.7	12.53	162.6

Brás Vein	33.2	7.29	7.8
Buracão Vein	5.78	23.08	4.3
Total Indicated Resource	442.6	12.28	174.7
<i>Inferred Mineral Resource</i>			
Santo Antonio Vein	164.2	11.31	59.7
Matinha Vein	149.0	12.15	58.2
Brás Vein	149.3	4.81	23.1
Buracão Vein	7.7	2.77	0.7
Total Inferred Resource	470.2	9.37	141.7

## Mineral Reserve &amp; Resource Notes:

1. Mineral Resource effective date of August 31, 2019.
2. Mineral Reserve effective date of September 30, 2019.
3. Presented mineral resources inclusive of mineral reserves. All figures have been rounded to the relative accuracy of the estimates. Summed amounts may not add due to rounding.
4. Mineral resource gold cut-off grade of 1.90 grams per tonne (&ldquo;gpt&rdquo;) gold. Mineral resources have been estimated using ordinary kriging inside 2.5m x 2.5m x 0.5m block sizes and minimum stope dimensions of 1.25m x 1.25m x 1.50m. The mineral resource estimates were prepared in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum (&ldquo;CIM&rdquo;) Definition Standards for Mineral Resources and Mineral Reserves, adopted by the CIM Council on May 10, 2014 (the &ldquo;CIM Standards&rdquo;), and the CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines, adopted by CIM Council on November 23, 2003 (the &ldquo;CIM Guidelines&rdquo;), using geostatistical and/or classical methods, plus economic and mining parameters appropriate to the deposit.
5. Mineral reserve estimates were prepared in accordance with the CIM Standards and the CIM Guidelines, using geostatistical and/or classical methods, plus economic and mining parameters appropriate for the deposit. Mineral reserves are based on a long-term gold price of US\$1,350 per ounce (&ldquo;oz&rdquo;), and a USD:BRL foreign exchange rate of 3.80. Mineral reserves are the economic portion of the Indicated mineral resources. Mineral reserve estimates include operational dilution of 10% plus planned dilution of approximately 10% within each stope. Assumes mining recovery of 90% and pillar recovery of 60%. Practical mining shapes (wireframes) were designed using geological wireframes / mineral resource block models as a guide.

Mineral resources which are not mineral reserves do not have demonstrated economic viability.

## UPDATED LOM PRODUCTION PLAN

The Company's updated LOM production plan, prepared in conjunction with the updated mineral resource and mineral reserve estimate, provides a pathway for average annual production of approximately 40,000 ounces of gold over the next three years.

	2019*	2020e	2021e	2022e
Ore Mined & Processed (000 tonnes)	21.2	138.9	106.0	112.8
Au Grade (gpt)	6.65	9.95	16.36	9.24
Recovery (%)	87.0%	91.0%	91.0%	91.0%
Gold Production (oz)	3,936	40,438	50,720	30,472
Silver Production (oz)	2,249	23,107	28,983	17,413

(\*) 2019 production outlines the mineral reserve schedule for the three months from the effective date of September 30, 2019 to December 31, 2019.

## UPDATED LOM OPERATING &amp; CAPITAL COSTS

The updated production plan has resulted in changes to the forecast operating and capital cost estimates. The tables below show the operating and capital costs for the updated LOM production schedule.

	2019e
C1 Cash Cost (\$US per oz)	\$677.8

## C1 Cash Cost Notes:

1. 2019 cash costs presented for the three months of the mineral reserve schedule from the effective date of September 30, 2019 to December

31, 2019.

2. Assumes USD:BRL FX rate of 3.80.

3. Assumes gold price of US\$1,400 per ounce and silver price of US\$17.00 per ounce.

4. C1 cash costs per ounce of gold produced is a non-IFRS measure, as more particularly discussed under the &ldquo;Technical and Scientific Information&rdquo; section of this press release.

	2019 <sup>[1]</sup>	2020e	2021e	2022e
Capital Expenditures (BRL 000s)	R\$12.7	R\$21.0	R\$7.2	R\$3.6

Capital Expenditure Notes:

1. 2019 capital expenditure presented for the three months of the mineral reserve schedule from the effective date of September 30, 2019 to December 31, 2019.

2. Capital expenditures presented in Brazilian real (&ldquo;BRL&rdquo;);

3. Amounts shown do not include discretionary greenfield or brownfield exploration in years 2020 through 2022.

## TECHNICAL AND SCIENTIFIC INFORMATION

### Mineral Resources

Block model tonnage and grade estimates for the NX Gold Mine were classified according to the CIM Standards and the CIM Guidelines by Sr. Porfirio Cabaleiro Rodriguez of GE21 Consultoria Mineral Ltda. (&ldquo;GE21&rdquo;); who is an independent qualified person as such term is defined under NI 43-101.

Cut-off grades of 1.90 gpt gold were used for the mineral resource estimate based on gold price of US\$1,900 per ounce of gold, underground mining and processing costs of US\$115.30 per tonne of ore mined and processed. Mineral resources were estimated using ordinary kriging within 2.5 meter by 2.5 meter by 0.5 meter block sizes and were constrained using a minimum stope dimension of 1.25 meters by 1.25 meters by 1.50 meters. Mineral resources are shown inclusive of mineral reserves.

Mineral Resource effective date of August 31, 2019.

### Mineral Reserves

The mineral reserves for the NX Gold Mine are derived from the Indicated mineral resource as defined within the resource block model following the application of economic and other modifying factors further described below. Inferred mineral resources, where unavoidably mined within a defined mining shape have been assigned zero grade. Dilution occurring from Indicated resource blocks was assigned grade based upon the current mineral resource grade of the blocks included in the dilution envelope. Mineral reserves were classified according to the CIM Standards and the CIM Guidelines by Sr. Porfirio Cabaleiro Rodriguez of GE21, an independent qualified person as such term is defined under NI 43-101.

Mineral reserve cost assumptions are based on actual operating cost data during the 8-month period from January 1, 2019 to August 30, 2019. The USD:BRL rate of 3.80 was selected.

Mineral reserve cut-off grades and parameters applied to the mineral reserve estimate are summarized below:

- 2.92 gpt applied to mining stopes incorporating mining and development, processing, general and administrative (&ldquo;G&A&rdquo;); and indirect costs;
- 1.50 gpt applied to gallery development incorporating development and processing costs; and,
- 2.26 gpt applied to mining marginal material adjacent to planned mining stopes incorporating mining, development and processing costs.

Mineral reserve cut-off cost parameters are expressed as per tonne of ore mined and processed (run of mine &ldquo;ROM&rdquo;):

Mining Costs (US\$/tonne ROM)	\$33.48
Processing Costs (US\$/tonne ROM)	\$44.30
G&A Costs (US\$/tonne ROM)	\$24.36
Indirect Costs (US\$/tonne ROM)	\$13.16
Metallurgical Recovery (average)	91.0%
Gold Price (US\$/oz)	\$1,350
Foreign Exchange Rate (USD:BRL)	3.80

Other modifying factors considered in the determination of the mineral reserve estimate include:

- A cut-off grade of 2.92 gpt was applied in the determination of planned mining stopes within the mineral resource blocks based on actual operating cost data and past operating performance of the mine.
- The mining method employed for the Brás and Buracão Veins is overhand cut and fill, with backfill requirements generated from waste development. The mining method employed for the Santo Antônio vein is inclined room and pillar.
- Maximum stope spans between sill pillars of 17 meters by 17 meters for the Buracão Vein, 39 meters by 10 meters for the Brás Vein, 40m by 18m for the east portion of the Santo Antonio Vein and 40 meters by 15 meters for the west portion of the Santo Antonio Vein based on geotechnical mapping, modeled rock quality and uniaxial compression (&ldquo;UCS&rdquo;) test results.
- Within designed stopes, all contained material was assumed to be mined with no selectivity. Inferred mineral resources, where unavoidably included within a defined mining shape have been included in the mineral reserves estimate at zero grade. Mining dilution resulting from Indicated blocks was assigned the grade of those blocks captured in the dilution envelope using the current mineral resource estimate.
- Operational dilution of 10%, mining recovery of 90% within planned stopes, 60% pillar recovery

## Non-IFRS Measures

The Company utilizes certain non-IFRS measures, including C1 cash cost of gold produced, which are not measures recognized under IFRS. The Company believes that these measures, together with measures determined in accordance with IFRS, provide investors with an improved ability to evaluate the underlying performance of the Company. Non-IFRS measures do not have any standardized meaning prescribed under IFRS, and therefore they may not be comparable to similar measures employed by other companies. The data is intended to provide additional information and should not be considered in isolation or as a substitute for measures of performance prepared in accordance with IFRS.

C1 cash cost of gold produced (per ounce) is the sum of production costs, net of capital expenditure development costs and silver by-product credits, divided by the gold ounces produced. By-product credits are calculated based on actual precious metal sales during the period divided by the total ounces of gold produced during the period. C1 cash cost of gold produced per pound is a non-IFRS measure used by the Company to manage and evaluate operating performance of the Company's operating mining unit and is widely reported in the mining industry as benchmarks for performance but does not have a standardized meaning and is disclosed in addition to IFRS measures.

## QUALITY ASSURANCE / QUALITY CONTROL

### Database QA/QC Validation

In order to validate the current mineral resource estimate, GE21 selected a series of quality assurance, quality control (&ldquo;QA/QC&rdquo;) samples, including blanks, duplicate and standard control samples from those performed by NX Gold. The set of samples was taken from the current mineral resource estimate zone as well as adjacent areas. In the opinion of GE21, blank, standard and duplicate sample analysis was found to be within the acceptance limits for the classification of mineral resources. No sample or database biases were detected. This work was supplemented by drill hole database validation performed using the Geovia Surpac software database tool which looks to validate final depth, overlapping results and drill hole collar information. No inconsistencies or errors were found in the drill database review.

### QA/QC Program

Drill core is logged, photographed and split in half using a diamond core saw at NX Gold's secure core logging and storage facilities. Half of the drill core is retained on site and the other half-core is used for analysis, with samples collected on a minimum of 0.2 meters and a maximum of 2.0 meters with an average length of 0.5 meters. Sampling commences at least 1.0 meter before the start of the mineralized zone and continues at least 1.0 meters beyond the limit of the mineralized zone. All sample preparation is performed in NX Gold's secure on-site laboratory. Gold content is determined using fire assay. All sample results used in the preparation of the 2019 updated mineral resource and reserve estimate have been monitored through a QA/QC program that includes the insertion of certified standards, blanks, and pulp and reject duplicate samples at a rate of one standard, one blank, and one duplicate pulp sample per every 20 samples for a blended rate of approximately 5%.

#### Qualified Persons and the NI 43-101 Technical Report

Sr. Porfirio Cabaleiro Rodriguez, MAIG, has reviewed and approved the scientific and technical information contained in this press release. Mr. Rodriguez is independent of the Company and is a Qualified Person as defined by NI 43-101.

The Company will file the associated NI 43-101 compliant report on SEDAR ([www.sedar.com](http://www.sedar.com)) and on the Company's website ([www.ero-copper.com](http://www.ero-copper.com)) within 45 days of this press release, which will serve as an update to the technical report entitled "Mineral Resource and Mineral Reserve Estimate of the NX Gold Mine, Nova Xavantina" prepared by Porfirio Cabaleiro Rodriguez, MAIG, Leonardo Apparicio da Silva, MAIG and Leonardo de Moraes Soares, MAIG all of GE21, who are independent qualified persons under NI 43-101 (the "2018 Technical Report").

#### ABOUT ERO COPPER CORP

[Ero Copper Corp.](http://www.ero-copper.com), headquartered in Vancouver, B.C., is focused on copper production growth from the Vale do Curaçá Property, located in Bahia, Brazil. The Company's primary asset is a 99.6% interest in the Brazilian copper mining company, Mineração Caraíba S.A. ("MCSA"), 100% owner of the Vale do Curaçá Property with over 40 years of operating history in the region. The Company currently mines copper ore from the Pilar and Vermelhos underground mines. In addition to the Vale do Curaçá Property, MCSA owns 100% of the Boa Esperança development project, an IOCG-type copper project located in Pará, Brazil and the Company, directly and indirectly, owns 97.6% of the NX Gold Mine, an operating gold and silver mine located in Mato Grosso, Brazil. Additional information on the Company and its operations, including technical reports on the Vale do Curaçá, Boa Esperança and NX Gold properties, can be found on the Company's website ([www.ero-copper.com](http://www.ero-copper.com)) and on SEDAR ([www.sedar.com](http://www.sedar.com)).

[Ero Copper Corp.](http://www.ero-copper.com)

Signed: *"David Strang"*

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**CAUTION REGARDING FORWARD LOOKING INFORMATION AND STATEMENTS** This press release contains "forward-looking information" within the meaning of applicable Canadian securities laws. Forward-looking information includes statements that use forward-looking terminology such as "may", "could", "would", "will", "should", "intend", "target", "plan", "expect", "budget", "estimate", "forecast", "schedule", "anticipate", "believe", "continue", "potential", "view" or the negative or grammatical variation thereof or other variations thereof or comparable terminology. Such forward-looking information includes, without limitation, statements with respect to the estimation of mineral reserves and mineral resources, updated LOM production plan, updated operating and capital cost estimates including for the LOM plan detailed herein including expected costs and timing of future exploration efforts, the nature of any mineralization which has yet to be defined, mine life extension, and future exploration including specific target areas and regional drilling.

Forward-looking information is not a guarantee of future performance and is based upon a number of estimates and assumptions of management in light of management's experience and perception of trends, current conditions and expected developments, as well as other factors that management believes to be relevant and reasonable in the circumstances, as of the date of this press release including, without limitation, assumptions about; favourable equity and debt capital markets; the ability to raise any necessary additional capital on reasonable terms to advance the production, development and exploration of the Company's properties and assets; future prices of copper, gold, silver and other metal prices; the timing and results of exploration and drilling programs; the accuracy of any mineral reserve and mineral resource estimates; the geology of the Vale do Curaçá Property being as described in the technical report for the property; production costs; the accuracy of budgeted exploration and development costs and expenditures; the price of other commodities such as fuel; future currency exchange rates and interest rates; operating conditions being favourable such that the Company is able to operate in a safe, efficient and effective manner; political and regulatory stability; the receipt of governmental, regulatory and third party approvals, licenses and permits on favourable terms; obtaining required renewals for existing approvals, licenses and permits on favourable terms; requirements under applicable laws; sustained labour stability; stability in financial and capital goods markets; availability of equipment; positive relations with local groups and the Company's ability to meet its obligations under its agreements with such groups; and satisfying the terms and conditions of the Company's current loan arrangements. While the Company considers these assumptions to be reasonable, the assumptions are inherently subject to significant business, social, economic, political, regulatory, competitive and other risks and uncertainties, contingencies and other factors that could cause actual actions, events, conditions, results, performance or achievements to be materially different from those projected in the forward-looking information. Many assumptions are based on factors and events that are not within the control of the Company and there is no assurance they will prove to be correct.

Furthermore, such forward-looking information involves a variety of known and unknown risks, uncertainties and other factors which may cause the actual plans, intentions, activities, results, performance or achievements of the Company to be materially different from any future plans, intentions, activities, results, performance or achievements expressed or implied by such forward-looking information. Such risks include, without limitation the risk factors listed under the heading "Risk Factors" in the Annual Information Form of the Company for the year ended December 31, 2018, dated March 14, 2019.

Although the Company has attempted to identify important factors that could cause actual actions, events, conditions, results, performance or achievements to differ materially from those described in forward-looking information, there may be other factors that cause actions, events, conditions, results, performance or achievements to differ from those anticipated, estimated or intended.

The Company cautions that the foregoing lists of important assumptions and factors are not exhaustive. Other events or circumstances could cause actual results to differ materially from those estimated or projected and expressed in, or implied by, the forward-looking information contained herein. 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 information. Accordingly, readers should not place undue reliance on forward-looking information.

Forward-looking information contained herein is made as of the date of this press release and the Company disclaims any obligation to update or revise any forward-looking information, whether as a result of new information, future events or results or otherwise, except as and to the extent required by applicable securities laws.

**CAUTIONARY NOTES REGARDING MINERAL RESOURCE AND RESERVE ESTIMATES** In accordance with applicable Canadian securities regulatory requirements, all mineral reserve and mineral resource estimates of the Company disclosed or incorporated by reference in this press release have been prepared in accordance with NI 43-101 and are classified in accordance with the CIM Standards.

Mineral resources which are not mineral reserves do not have demonstrated economic viability. Pursuant to the CIM Standards, mineral resources have a higher degree of uncertainty than mineral reserves as to their existence as well as their economic and legal feasibility. Inferred mineral resources, when compared with Measured or Indicated mineral resources, have the least certainty as to their existence, and it cannot be assumed that all or any part of an Inferred mineral resource will be upgraded to an Indicated or Measured mineral resource as a result of continued exploration. Pursuant to NI 43-101, Inferred mineral resources may not form the basis of any economic analysis. Accordingly, readers are cautioned not to assume that all or any part of a mineral resource exists, will ever be converted into a mineral reserve, or is or will ever be economically or legally mineable or recovered.

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