

Sierra Metals Announces Positive Updated PEA on the Expansion at Its Yauricocha Mine in Peru

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Sierra Metals Inc. (TSX: SMT) (BVL: SMT) (NYSE AMERICAN: SMTS) ("Sierra Metals" or "the Company") is pleased to report the results of the updated Preliminary Economic Analysis ("PEA") for the expansion at its Yauricocha Mine operation, located in Yauyos Province in Peru. This updated PEA is based on the last reported resource, prepared by SRK and dated March 31st, 2021, and includes revised PFS level CAPEX and opex estimations.

This press release features multimedia. View the full release here:
<https://www.businesswire.com/news/home/20220120005956/en/>

Image 1: Yauricocha Mine, Chumpe Plant Flotation Cells (Photo: Business Wire)

This PEA report was prepared as a National Instrument 43-101 Technical Report for [Sierra Metals Inc.](#) ("Sierra Metals") by SRK Consulting (Canada) Inc. ("SRK") and Redco Global Peru S.A.C. ("Redco"). The full technical report will be filed on SEDAR within 45 days of this news release.

Highlights of the updated PEA include:

- Updated Mine plan based on the last reported resource, prepared by SRK and dated March 31st, 2021
- PFS level CAPEX and OPEX estimation for expansion
- Mine plan includes updated mineral resources, including inferred resources
- Expansion Development Capital (Years 1-3): US\$102.2 Million
- Life of Mine (LOM) after-tax Net Present Value (NPV): US\$273.1 Million at an 8% discount rate
- LOM Net After-tax Cash Flow: US\$407.7 Million
- LOM & Sustaining Capital Cost: US\$312.1 Million
- Average LOM Operating Unit Cost: US\$44.01/tonne and US\$1.30/lb copper equivalent
- Mine Life: 11 years based on existing Mineralized material estimate of 17.4 Mt.
- Average LOM Grades of Copper 1.2%, Zinc 1.4% Silver 31.12 g/t (1.00 oz/t), Lead 0.4% and Gold 0.398 g/t (0.013 oz/t)
- LOM Payable Production: Copper 332.9 million pounds, Zinc 399.9 million pounds, Silver 10.9 million troy ounces, Lead 131.2 million pounds and Gold 19.9 thousand troy ounces
- Metal Price Assumptions: Copper US\$3.39/lb, Zinc US\$1.10/lb, Silver US\$21.02/oz, Lead US\$0.91/lb, Gold US\$1,598/oz.

The PEA is preliminary in nature and includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves. Mineral resources that are not mineral reserves do not have demonstrated economic viability. There is no certainty that inferred resources can be converted to indicated or measured resources or mineral reserves and, as such, there is no certainty that the results of the PEA will be realised.

Instances of the word 'economic' are intended to be conceptual only, and prospects for economic extraction have not been demonstrated.

Luis Marchese, CEO of Sierra Metals commented: "I am pleased with the results of this updated PEA which continues to support the Company's organic growth strategy to profitably develop and grow the Yauricocha Mine production rate to 5,500 TPD in 2024 from today's permitted capacity of 3,600 TPD."

He continued, "The updated positive PEA study demonstrates an economical expansion that supports the goal of maximizing shareholder returns. This result underpins the strategy of incremental organic expansions at our operations, supported by their resource endowment, and our focus on base metals going forward."

With the consistent addition of resources through our highly successful exploration initiatives, as well as added efficiencies on the productivity of the mine due to our focus on continuous improvement, Yauricocha confirms itself as a sustainable mine with a profitable and valuable outlook for many years to come."

Updated PEA Highlights

Mining Methodology

The Yauricocha Mine is a producing underground mining operation with a long production history using well-established, proven mining methods. The majority of the mining is executed through mechanized sub-level caving with a relatively small portion of the mining using overhand cut and fill.

PEA Production Profile

Developed mine plan for Yauricocha is based on the last reported resource, prepared by SRK and dated March 31st, 2021. Many of the assumptions used in the PEA mine plan are based on actual production figures. The economic envelope used to develop the mine plan is based on current operating costs. The economic envelope blocks by Net Smelter Return (NSR) value; blocks with an NSR value greater than US\$ 32.48/t are considered marginal and blocks with an NSR value greater than US\$ 42.94/t are considered potentially economic. Marginal blocks are only included in the mine plan when they are adjacent to potentially economic blocks and their recovery does not require additional mine development. NSR values considered planned and unplanned dilution (variable dilution between 10% and 25% respectively) and historical performance achieving mine recoveries of 80%.

The mine schedule includes measured, indicated and inferred resources. Inferred resources to be mined in the LOM production plan include 7.6 M tonnes or 43.7% of total tonnes. The schedule establishes a LOM at Yauricocha of 11 years, with a maximum production rate of 5,500 tpd. This LOM considers mine development between 2022-2023, ramping up to 5,500 tpd in 2024 until 2029, where production would reduce until the end of the LOM.

Item	Total	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Tonnage (kt)	17,428	1,033	1,405	1,360	2,062	1,918	2,033	1,939	1,889	1,872	1,550	365
Cu (%)	1.16	0.93	0.92	1.11	1.11	0.96	0.94	1.02	1.43	1.69	1.41	1.16
Pb (%)	0.41	0.86	1.01	0.52	0.57	0.53	0.49	0.14	0.12	0.11	0.12	0.07
Zn (%)	1.41	2.23	2.69	1.82	2.24	2.14	1.79	0.52	0.40	0.44	0.57	0.57
Ag (g/t)	31.12	54.62	53.29	41.04	38.84	35.97	33.23	20.95	18.40	17.62	15.86	15.55
Au (g/t)	0.40	0.51	0.45	0.40	0.34	0.36	0.40	0.37	0.40	0.45	0.38	0.35
NSR (USD/t)	74.2	84.5	88.2	79.9	82.8	74.5	69.8	55.3	69.9	80.1	69.3	58.5

Mineral Processing

The Chumpe plant is located approximately one kilometer from the Yauricocha Mine and mineralized material is transported from the mine to the plant by rail. Mineralized material is processed using conventional two-stage crushing followed by grinding-classification and differential flotation circuit to produce commercial quality lead/silver and copper.

SRK is of the opinion that Yauricocha's operations are reasonably well operated and shows flexibility to treat multiple mineralized material sources. The metallurgical performance, i.e., metal recovery and concentrate grade have been consistent throughout the period evaluated allowing them to produce commercial quality copper concentrate, copper concentrate, and zinc concentrate.

Mineral processing and the recovery of the mineral are demonstrated, and copper, silver, gold, lead and zinc recoveries are established at 75.0%, 68.4%, 19.5%, 88.5% and 88.0%, respectively.

The Chumpe Plant's current throughput capacity is 3,600 TPD. In 2020, the average daily production was 3,038 tonnes per day and in Q1 2021, the average increased to 3,532 tonnes per day. In line with proposed increases in mine output, the processing capacity at Chumpe would increase to 5,500 TPD in 2024.

The overall supporting infrastructure exists already and is functioning and adequate to support the mine and mill.

Economic Analysis

This PEA indicates an after-tax NPV of US\$273.1 million (using a discount rate of 8%) at 5,500 TPD (in 2024). The total operating cost for the LOM is US\$766.9 million, equating to a total operating cost of US\$44.01 per tonne milled and US\$1.30 per pound copper equivalent. Highlights of the PEA are provided below.

PEA Highlights

Base case of US\$1,598/oz Gold, US\$21.02/oz	Unit	Value
Silver, US\$3.39/lb Copper, US\$0.91/lb Lead and		
US\$1.10/lb Zinc.		
Net Present Value (After Tax 8% Discount Rate)	US\$ M	273.1
LOM Mill Feed (ROM mineralized material)	Tonnes (Mt)	17.4
Mining Production Rate (360 days per annum)	t/year	1,980,000
LOM Project Operating Period	Years	11.0
Total LOM Capital Costs	US\$ M	312.1
Net After - Tax Cashflow	US\$ M	407.7
EBITDA	US\$ M	1,007.4
Average LOM total Operating Unit Costs	US\$/t	44.01
LOM Copper Production (Payable - in copper conc)	M Lb	320.3
LOM Copper Production (Payable - in lead conc)	M Lb	12.6
LOM Gold Production (Payable)	koz	19.9
LOM Silver Production (Payable)	Moz	10.9
LOM Lead Production (Payable)	M Lb	131.2
LOM Zinc Production (Payable)	M Lb	399.9

Capital and Operating Costs Breakdown

The total initial development capital for the Yauricocha Mine Expansion is estimated to be approximately

US\$102.0 million, which includes a contingency of US\$10.8 million. A break down of costs is shown in the table below.

Total Initial Development and Expansion Capital

	US\$ Millions	
(Years 1-3)		
Direct Costs		
Mining	\$	16.4
Processing Plant	\$	48.6
Infrastructure	\$	2.1
Ancillaries	\$	6.9
Total Direct Costs	\$	74.0
Indirect Costs		
Indirect Costs	\$	13.3
Owners Costs	\$	3.9
Total Indirect Costs	\$	17.2
Subtotal	\$	91.2
Contingency	\$	10.8
Total Project	\$	102.0

Total Operating Unit Costs from 2021 to 2023 are expected to average US\$ 47.61/t, declining to an LOM average of US\$ 43.00/t starting in 2024 based on the effect of increasing the production rate from the current 3,780 tpd to 5,500 tpd in 2024. A breakdown of unit operating costs is presented below:

Unit Operating Cost	US\$ per tonne milled	2021 - 2023	2024+
Mining	\$	33.32	28.97
Processing	\$	8.45	8.78
G&A	\$	5.84	5.25
Total	\$	47.61	43.00

OPEX and CAPEX Breakdown by Year

Item	Total	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
OPEX (USD/t)	44.0	50.2	47.5	45.8	43.2	44.4	45.2	44.4	41.7	38.1	40.6	56.2
CAPEX (M USD)*	312.1	42.1	50.3	61.4	24.7	33.4	26.9	19.7	16.3	20.5	5.6	11.2

*Includes Closure Costs

Mineral Resource Statement

The Yauricocha Mine is located in the Allis district, Yauyos province, department of Lima, approximately 12

kilometers west of the Continental Divide and 60 kilometers south of the Pachacayo railway station. Polymetallic mineralization has been mined at Yauricocha for more than 50 years. Mineralization is genetically and spatially related to the Yauricocha stock; six skarn bodies host mineral resources around the margins of the stock. Near surface mineral is exhausted but significant mineral resources are reported at depth.

The PEA is based upon the following updated Mineral Resource Statement.

Consolidated Yauricocha Mine Mineral Resource Statement as of 31 March 2021 - SRK Consulting (Canada), Inc. ⁽¹⁾ (2)
(7) (8) (9)

Classification	Volume (m3) '000 (Kt)	Tonnes (Kt)	Density (t/m3)	Ag (g/t)	Au (g/t)	Cu (%)	Pb (%)	Zn (%)	As (%)	Fe (%)	NSR (USD/t)	Ag (Moz)	Au (Koz)	Cu (Mlb)	Pb (Mlb)	Zn (Mlb)
Measured	1,262	4,241	3.36	59.41	0.58	1.08	0.92	2.62	0.19	25.02	131	8.1	79.3	100.8	86.2	243
Indicated	2,929	10,069	3.44	37.07	0.50	1.17	0.51	1.88	0.13	25.89	109	12.0	161.1	259.9	113.0	417
Measured + Indicated	4,191	14,310	3.41	43.69	0.52	1.14	0.63	2.10	0.15	25.86	116	20.1	240.4	360.7	199.2	660
Inferred	3,337	11,566	3.47	29.04	0.44	1.40	0.32	1.03	0.07	26.38	103	10.8	161.8	358.1	82.7	267

Notes

(1) Mineral Resources have been classified in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum Definition Standards on Mineral Resources and Mineralized material, whose definitions are incorporated by reference in 43-101.

(2) Mineral Resources are reported inclusive of Mineralized material. Mineral Resources are not Mineralized material and have demonstrated economic viability. All figures are rounded to reflect the relative accuracy of the estimates. Silver, gold, silver, copper, lead, zinc, arsenic (deleterious) and iron assays were capped / cut where appropriate.

(3) The consolidated Yauricocha Resource Estimate is comprised of Measured, Indicated and inferred material in the M Central, Cuerpos Pequeños, Cuye, Mascota, Esperanza and Cachi-Cachi mining areas.

(4) Polymetallic Mineral Resources are reported at Cut-Off values (COV) based on estimated 5500 tpd operating costs and Smelter Returns (NSR) based on estimated 5500 tpd metallurgical recoveries and 2021 smelter contracts.

(5) Metal price assumptions used for polymetallic feed considered CIBC November 2021 long term consensus pricing (US\$1,598.21/oz), Silver (US\$21.02/oz), Copper (US\$3.39/lb), Lead (US\$0.91/lb), and Zinc (US\$1.10/lb).

(6) Lead Oxide Mineral Resources are reported at COV's based on 2016 actual metallurgical recoveries and 2021 smelter contracts. No mining of Lead Oxide materials has occurred since 2016.

(7) Metal price assumptions used for lead oxide feed considered CIBC November 2021 long term consensus pricing (US\$1,598.21/oz), Silver (US\$21.02/oz) and Lead (US\$0.91/lb).

(8) The mining costs are based on estimated 5500 tpd costs and are variable by mining method.

(9) The unit value COV's are variable by mining area and proposed mining method. The marginal (incremental) COV ranges from US\$31.7 to US\$36.7 for a 5,500t/d operation.

Quality Control

All technical data contained in this news release has been reviewed and approved by:

Americo Zuzunaga, FAusIMM CP (Mining Engineer) and Vice President of Corporate Planning is a Qualified

Person under National Instrument 43-101 - Standards of Disclosure for Mineral Projects.

About Sierra Metals

[Sierra Metals Inc.](#) is a diversified Canadian mining company focused on the production and development of precious and base metals from its polymetallic Yauricocha Mine in Peru, and Bolivar and Cusi Mines in Mexico. The Company is focused on increasing production volume and growing mineral resources. Sierra Metals has recently had several new key discoveries and still has many more exciting brownfield exploration opportunities at all three Mines in Peru and Mexico that are within close proximity to the existing mines. Additionally, the Company also has large land packages at all three mines with several prospective regional targets providing longer-term exploration upside and mineral resource growth potential.

The Company's Common Shares trade on the Bolsa de Valores de Lima and on the Toronto Stock Exchange under the symbol "SMT" and on the NYSE American Exchange under the symbol "SMTS".

For further information regarding Sierra Metals, please visit www.sierrametals.com.

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Forward-Looking Statements

This press release contains "forward-looking information" and "forward-looking statements" within the meaning of Canadian and U.S. securities laws (collectively, "forward-looking information"). Forward-looking information includes, but is not limited to, statements with respect to the date of the 2020 Shareholders' Meeting and the anticipated filing of the Compensation Disclosure. Any statements that express or involve discussions with respect to predictions, expectations, beliefs, plans, projections, objectives, assumptions or future events or performance (often, but not always, using words or phrases such as "expects", "anticipates", "plans", "projects", "estimates", "assumes", "intends", "strategy", "goals", "objectives", "potential" or variations thereof, or stating that certain actions, events or results "may", "could", "would", "might" or "will" be taken, occur or be achieved, or the negative of any of these terms and similar expressions) are not statements of historical fact and may be forward-looking information.

Forward-looking information is subject to a variety of risks and uncertainties, which could cause actual events or results to differ from those reflected in the forward-looking information, including, without limitation, the risks described under the heading "Risk Factors" in the Company's annual information form dated March 18, 2021 for its fiscal year ended December 31, 2020 and other risks identified in the Company's filings with Canadian securities regulators and the United States Securities and Exchange Commission, which filings are available at www.sedar.com and www.sec.gov, respectively.

The risk factors referred to above are not an exhaustive list of the factors that may affect any of the Company's forward-looking information. Forward-looking information includes statements about the future and is inherently uncertain, and the Company's actual achievements or other future events or conditions may differ materially from those reflected in the forward-looking information due to a variety of risks, uncertainties and other factors. The Company's statements containing forward-looking information are based on the beliefs, expectations and opinions of management on the date the statements are made, and the Company does not assume any obligation to update such forward-looking information if circumstances or management's beliefs, expectations or opinions should change, other than as required by applicable law. For the reasons set forth above, one should not place undue reliance on forward-looking information.

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