# Sierra Metals Announces Preliminary Economic Assessment Results for a 315% Output Expansion at its Cusi Mine in Mexico Yielding a 75% Internal Rate of Return

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TORONTO, June 18, 2018 /CNW/ - Sierra Metals Inc. (TSX: SMT) (BVL: SMT) (NYSE AMERICAN: SMTS) ("Sierra Me Company") is pleased to report the results of a Preliminary Economic Assessment ("PEA") regarding the Company's C located in Chihuahua State, Mexico. The PEA is based on technical inputs from various independent consulting groups SRK, Redco, Anddes, Kappes Cassiday and Flopac.

Based on the technical work from the various independent consultants, the PEA was compiled under National Instrume standards by Mining Plus Peru SAC. The full technical report will be filed on SEDAR within 45 days of this news release

Highlights of the PEA include:

- After-tax Net Present Value (NPV): US\$92.2Million at an 8% discount rate
- After-tax Internal Rate of Return (IRR): 75%
- After-tax Payback Period: 4.6 years
- Life of Mine Capital Cost: US\$104.5 Million
- Net After-tax Cash Flow: US\$150.6 Million
- Total Operating Unit Cost: US\$41.36/tonne
- Plant Processing Rate: Currently 650 tonnes per day (TPD) growing to 1,200 TPD by Q1 2019 and 2,700 TPD by
- Average Silver Recovery Rate 87%
- Mine Life: 9 years based on existing Mineral Resource Estimate
- Life of Mine Silver Production: 30 Million Ounces

Igor Gonzales, President and CEO of Sierra Metals commented: "The Company is very encouraged by the results of the they support the plan to profitably develop and grow the Cusi Mine in sustainable and staged steps from 650 TPD current, 200 TPD by Q1 2019, and further, to 2,700 TPD in 2021 based on consensus metal pricing.

Cusi will move to declare Mineral Reserves at the Mine, and this PEA represents the first step in that process. The Con incorporating an aggressive Capex program into the PEA of US\$11.5 million over the life of the mine, which includes ex drilling to increase the mineral resources at Cusi as well as convert the existing resources to reserves. Additionally, the reflects an aggressive development program designed to open a mineable reserve at depth and on strike. The Opex re production development, definition drilling programs, and other operational costs.

The current study focuses on the current Mineral Resource reported in the 43-101 Technical Report filed on February 1 does not include any drilling completed after August 31, 2017. The Company is continuing with its successful brownfield programs and expects to continue to grow the mineral resources at the Cusi Mine this year. We believe that this expans provides additional value to the company, as the PEA quantifies, but could also leverage the value of future resource a New silver ounce discoveries would be incorporated into production plans earlier than if the Company maintained curre levels."

He concluded, "We are continuing with our strategy to increase shareholder value and grow the reserve and resource to Company. We successfully completed brownfield exploration programs at all three mines and increased the mineral resources during the past two years. Additionally, we implemented a successful operational improvement program in P have completed an effective turn-around program in Mexico, and we have already seen returns on this well-spent capit upon these successes, we are working to complete, in addition to the Cusi PEA, scoping studies at both the Yauricocha Mines, which will maximize value and profitability through the implementation of automation and possible throughput in which will further drive growth and benefit all shareholders in the future."

#### Mineral Resource Estimate

The Property is in the Cusihuarachi District of Chihuahua State, Mexico, approximately 135 km southwest of Chihuahua Epithermal mineralization has been mined in the area since its discovery in the early 1800's. Mineralization is bound be regionally significant northwest trending faults; Eight mineralized zones are recognized at the property, mineralized zon 10 meters across and include; silicified faults, veins, and breccias. Seven epithermal veins are recognized at the propertypically range between 0.5 and 2.0 meters wide, dip steeply, extend 100 to 200 meters along strike, and extend up to depth. Vein orientations range between northeast and northwest.

This PEA considers depleted measured, indicated and inferred resources reported on February 12, 2018, by SRK and of August 31st, 2017. These resources are not demonstrated to be economically viable. The results of this PEA are ind conceptual potential and are not definitive.

Table 1-1: Summary of resource reported by SRK, February 12, 2018 (Effective August 31, 2017)

Class	Area	AgEq (g/t)	Ag	Au	Pb	Zn	Tonnes (000's)
			(g/t)	(g/t)	(%)	(%)	
Measured	SRL	268	225	0.13	0.55	0.68	362
Measured		268	225	0.13	0.55	0.68	362
Indicated	Promontorio	241	213	0.08	0.37	0.44	1097
Indicated	Eduwiges	293	198	0.26	1.35	1.32	928
Indicated	SRL	296	242	0.32	0.62	0.64	1435
Indicated	San Nicolas	195	176	0.13	0.21	0.22	414
Indicated	San Juan	208	189	0.13	0.2	0.21	121
Indicated	Minerva	222	198	0.4	0.09	0.05	57
Indicated	Candelaria	386	366	0.14	0.17	0.28	46
Indicated	Durana	224	219	0.06	0.05	0.02	97
Indicated		267	217	0.21	0.64	0.66	4195
Inferred	Promontorio	218	185	0.1	0.35	0.62	308
Inferred	Eduwiges	229	115	0.09	1.78	1.79	147
Inferred	SRL	216	158	0.22	0.55	1.04	658
Inferred	San Nicolas	181	161	0.14	0.21	0.23	340
Inferred	San Juan	200	186	0.04	0.15	0.27	44
Inferred	Minerva	149	143	0.05	0.08	0.06	5
Inferred	Candelaria	185	125	0.16	0.62	1.17	128
Inferred	Durana	124	115	0.01	0.17	0.09	3
Inferred		207	158	0.16	0.54	0.84	1633

(1) Mineral resources are reported (2) Minhestate **ce**sources ere reported. Minaral **p**ppources **Bissule**nptions **Optesidered geo**derces (Meerves **Bolinattion** \*\* ØA **Bra**kq **production production BREB**ABIIGN **EXECUTIVE Burnets** gical Base Manptions, **ENSEM**iptions **Exect**ified **Exect**ified **Exect**ified **AGRAGAGI The**sts **16655/18**63/t), **Baltis**) Rates ns **Cente**ral **Church**, **And Shos**trative MBB3.00). ¢üt6\$\$3.74/t). àssays were capped where appropriate.

Note: Mining has continued since the publication of this resource and resources have not been subsequently depleted.

Sierra Metals commissioned various specialist groups (Table 1-2) to evaluate how, on a conceptual level, mining, mineral processing, and tailings management could be adapted at the property to achieve a sustainable and staged increase in mine production and mill throughput from 650 TPD, to 1,200 TPD by Q1 2019, and 2,700 TPD by mid-2021.

Table 1-2: Groups involved in development for conceptual plan considered in the PEA

		2
Group	Concept	Report
SRK Consulting (U.S), Inc.	Resource Estimation	SRK, 2017
Redco Mining Consultants	Increase mine output to 2,700 TPS	Redco, 2018
Sierra Metals (SM)	Increase Mal Paso Plant Capacity to 1,200 TPD	Sierra, 2018
Ingenieria Carillo (IC)	Engineering associated with increased Mal Paso plant capacity	
Kappes Cassiday and Associates (KCA)	Preliminary design of 1,500 TPD plant at	KCA, 2018
	Cusihuariachi	
Anddes Consulting (AC)	Expansion of tailings storage capacity	Anddes, 201
Flopac	Tailings Storage up to Q1-2020	Flopac

## Mining Methodology

To determine how mine output could be increased, Sierra Metals commissioned Redco Mining Consultants ("Redco') to undertake a scoping study, considering; existing development and infrastructure, geotechnical characteristics, geological controls and mineralization style. The study (Redco, 2018) determined that mechanized bench and fill mining could be used to achieve sustainable production of 2,700 TPD. Improved productivity would be associated with improved safety as the requirement for man time spent in stopes is significantly reduced.

Head-grades are expected to reduce from the current 201 g/t Ag to 161 g/t Ag @ 1,200 TPD and 145 g/t Ag @ (2,700 TPD). Redco estimates that a US\$104.5 million capital investment throughout the life of mine is required to mechanize the Cusi Mine and achieve a 2,700 TPD production rate.

As part of their scoping study, Redco considered plans for ventilation and dewatering on a very general scale. Sierra Metals recognize that further and more detailed ventilation and dewatering plans are required to support the overall conceptual mine design.

#### **Mineral Processing**

The Mal Paso Plant, located 44 kilometers from the Cusi Mine, uses a conventional crushing-milling-flotation circuit to recover mineral and to produce commercial quality Lead/Silver and Zinc concentrates. Mineral is delivered from the mine to the plant in 20-tonne trucks.

Mineral processing and the recovery of the mineral is demonstrated, and silver recoveries are established at 87%.

The Mal Paso Plant increased throughput from 450 TPD at the beginning of 2018 to 650 TPD currently. In line with proposed increases in mine output, the processing capacity at Mal Paso will increase to 1,200 TPD in 2019, and a new plant with a capacity of 1,500 TPD is proposed at Cusihuariachi, to come online mid-2021 which would bring total capacity to 2,700 TPD.

The Company undertook an internal review to determine how the Mal Paso plant could be adjusted to increase throughput to 1,200 TPD. This study identified bottlenecks in the existing plant, how to overcome these bottlenecks, and how to achieve the desired throughput at Mal Paso. Sierra Metals have begun to purchase the pieces of equipment and project that the remaining pieces of equipment will be purchased and

#### installed before Q1 2019.

An independent processing plant of 1,500 TPD, operating complementarily to Mal Paso which currently runs at 650 TPD with planned growth to 1,200 TPD by Q1 2019, will be required to process 2,700 TPD. Sierra Metals commissioned Kappes Cassiday and Associates (KCA) to produce a conceptual design for a modular plant to process 1,500 TPD at Cusihuariachi from mid-2021. The modular plant is designed to be easily scalable in 1,500 TPD increments.

The proposed plant at Cusihuariachi is significantly closer to the Cusi Mine than the Mal Paso Plant, KCA estimate that this would translate to an operational saving of US\$4/tonne. A further saving of US\$1/tonne, related to mineral processing, is envisaged by KCA. This combined US\$5/tonne operational saving, the equivalent of US\$2.7 million/year. (i.e. 1,500 TPD x 360 days x US\$5/tonne) would be offset against projected Capital requirements of US\$30 million.

#### **Tailings Capacity**

Tailings produced at Mal Paso are currently stored in two conventional tailings storage facilities. As of February 2018, planned and permitted raises to existing tailings facilities would provide 520,000 cubic meters of storage capacity, the equivalent of one year and seven months storage at a production rate of 1,200 TPD.

Sierra Metals recognize that increasing tailings storage capacity is critical to achieving and sustaining increased rates of production.

At the new Cusihuriachi site, Anddes Consulting (AC) has evaluated the merits of nine new potential tailings storage facilities as identified by Sierra Metals. Also, at the Mal Paso site, a further four sites were reviewed and based on preliminary work these sites are undergoing more detailed evaluation ahead of final selection and detailed engineering. The four sites at Mal Paso offer varying storage capacities between 600,000 cubic meters and 2.5 million cubic meters.

The proposed plant at Cusihuariachi would require the development of a new tailings facility separate from those used at Mal Paso. A potential site for a dry-stack (>75% solids) tailings storage facility has been identified and is undergoing preliminary investigations. Conceptually, the identified site would provide storage for 5.4 million tonnes of tailings, the equivalent of 11 years capacity operating at 1,500 TPD.

#### **Economic Analysis**

The PEA calculates a Base Case after-tax NPV of US\$92.2 million, with an after-tax IRR of 75% using a discount rate of 8%. The total life of mine capital cost of the project is estimated to total US\$104.5 million. The payback period for the Life of Mine (LoM) capital is estimated at 4.6 years. Operating costs of the life of mine total US\$259.3 million, equating to an operating cost of US\$41.36 per tonne milled.

PEA Highlights	Unit	Value
Base case of \$1,283/oz Gold, \$18.30/oz Silver, \$0.93/lb. Lead, \$1.15/lb. Zinc		
Net Present Value (After Tax 8% Discount Rate)	US\$ M	92.2
Internal Rate of Return	IRR	75%
Mill Feed	Tonnes (Mt)	6.27
Peak Mining Production Rate	t/year	972,000
LOM Project Operating Period	Years	9
Total Life of Mine (LoM) Capital Costs	US\$ M	104.5
Net After – Tax Cashflow	US\$ M	150.6
Total Operating Unit Costs	US\$/t	41.36
LOM Gold Production (Payable)	Oz	19,706
LOM Silver Production (Payable)	MOz	30
LOM Lead Production (Payable)	t	28,256
LOM Zinc Production (Payable)	t	19,160

# **Quality Control**

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

Gordon Babcock, P.Eng., Chief Operating Officer and a Qualified Person under National Instrument 43-101 & ndash; Standards of Disclosure for Mineral Projects.

Americo Zuzunaga, MAusIMM CP (Mining Engineer) and Vice President of Corporate Planning is a Qualified Person and chartered professional qualifying as a Competent Person under the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves.

Augusto Chung, FAusIMM CP (Metallurgist) and Consultant to Sierra Metals is a Qualified Person and chartered professional qualifying as a Competent Person on metallurgical processes.

#### About Sierra Metals

<u>Sierra Metals Inc.</u> is Canadian based growing polymetallic mining company with production from its Yauricocha Mine in Peru, and its 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."

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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 related to the Company (collectively, "forward-looking information"). Forward-looking information includes, but is not limited to, statements with respect to the Company's operations, including the anticipated developments in the Company's operations in future periods, the Company's planned exploration activities, the adequacy of the Company's financial resources, and other events or conditions that may occur in the future. Statements concerning mineral reserve and resource estimates may also be considered to constitute forward-looking statements to the extent that they involve estimates of the mineralization that will be encountered if and when the properties are developed or further developed. These statements relate to analyses and other information that are based on forecasts of future results, estimates of amounts not yet determinable and assumptions of management. 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, risks inherent in the mining industry including environmental hazards, industrial accidents, unusual or unexpected geological formations, floods, labour disruptions, explosions, cave-ins, weather conditions and criminal activity; commodity price fluctuations; higher operating and/or capital costs; lack of available infrastructure; the possibility that future exploration, development or mining results will not be consistent with the Company's expectations; risks associated with the estimation of mineral resources and the geology, grade and continuity of mineral deposits and the inability to replace reserves; fluctuations in the price of commodities used in the Company's operations; risks related to foreign operations; changes in laws or policies, foreign taxation, delays or the inability to obtain necessary governmental permits; risks relating to outstanding borrowings; issues regarding title to the Company's properties; risks related to environmental regulation; litigation risks; risks related to uninsured hazards; the impact of competition; volatility in the price of the Company's securities; global financial risks; inability to attract or retain qualified employees; potential conflicts of interest; risks related to a controlling group of shareholders; dependence on third parties; differences in U.S. and Canadian reporting of mineral reserves and resources; potential dilutive transactions; foreign currency risks; risks related to business cycles; liquidity risks; reliance on internal control systems; credit risks, including risks related to the Company's compliance with covenants with respect to its BCP Facility; uncertainty of production and cost estimates for the Yauricocha Mine, the Bolivar Mine and the Cusi Mine; and other risks identified in the Company's filings with Canadian securities regulators and the U.S. Securities and Exchange Commission ("SEC"), which filings are available at www.sedar.com and www.sec.gov, respectively.

This list is not exhaustive of the factors that may affect any of the Company's forward-looking information. Forward-looking information includes statements about the future and are 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 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.

#### Note Regarding Reserve and Resource Estimates

All reserve and resource estimates reported by the Company are calculated in accordance with the Canadian National Instrument 43-101 - Standards of Disclosure for Mineral Projects and the Canadian Institute of Mining and Metallurgy Classification system. These standards differ significantly from the requirements of the SEC. The differences between these standards are discussed in our SEC filings. Mineral resources which are not mineral reserves do not have demonstrated economic viability.

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