

## ScoZinc Announces Project Update and Results of Improved Economic Study for Restarting Operations

COOKS BROOK, Nova Scotia, Dec. 24, 2018 -- ScoZinc Mining Ltd. (TSX-V: SZM) (“ScoZinc” or the “Company”) is pleased to announce that the report for the updated Preliminary Economic Assessment (“PEA”) on its wholly-owned ScoZinc Zinc-Lead Mine in Nova Scotia, Canada is available on SEDAR. The report shows the results of additional technical and economic optimization studies to update the February 2018 PEA. Project returns remain very robust as increased throughput, lower Canadian dollar assumption and lower initial capital largely offset lower metal price assumptions.

The updated PEA, was completed by a team of independent experts and ScoZinc personnel and assisted by management. Compared with the February 2018 PEA, the update includes the following:

- Revised mill process plan to incorporate a recently purchased SAG mill, which allows for higher throughput
- Fine-tuned mill performance parameters incorporating historical daily records
- A more detailed monthly life-of-mine (LOM) plan and production schedule
- Updated and refined capital and operating costs
- Additionally, changes in market conditions and outlook in late 2018 warranted revisions to some of the Base Case assumptions incorporated into the revised PEA; particularly a downward revision to metal prices and the Canadian dollar (CAD) to US dollar (USD) exchange rate.

“We are encouraged by the results of the updated PEA which supports the near-term restart of an historic zinc-lead mine in Nova Scotia. The incorporation of our recently acquired SAG mill into this economic study, coupled with our refined mine plan based on a 3,000 tpd throughput, greatly improves the economic returns of an already robust operation”, commented Joseph Ringwald, President and CEO. “With restart capital in the order of CAD \$27 million (including working capital), the involvement of MRI Trading AG with CAD \$15 million offtake debt and equity financing for the restart, ScoZinc is well-positioned to be one of Canada’s next base metal producers.”

The following table shows the new forecast Base Case project economics using **USD \$1.15 per pound for zinc, USD \$0.95 per pound for lead and an exchange rate of 0.77 (CAD to USD)**:

Metric	Updated PEA - Dec 2018
After-Tax NPV (at 5%)	CAD \$106.5 M
After-Tax NPV (at 8%)	CAD \$91.4 M
After-Tax Internal Rate of Return	77.4%
Annual Average Earnings Before Interest, Taxes, Depreciation and Amortization for life-of-mine	CAD \$34.1 M
C1 Cash Cost per pound of zinc for life-of-mine (after credits for lead)	USD \$0.60
Total Cost of production per pound of zinc for life-of-mine (including operating, capital and sustaining costs after credits for lead)	USD \$0.71
Payback of capital	1.50 years
Mill Processing Rate (tonnes per day)	3,000
Life of Mine	6.4 years
Total operating cost per tonne milled for the life-of-mine	CAD \$60.12
Total cost per tonne mined (all materials)	CAD \$2.99
Restart Capital (including Working Capital)	CAD \$26.8 M
Zinc Price	USD \$1.15
Lead Price	USD \$0.95
Exchange Rate (CAD to USD)	0.77
Total Payable Metal Produced for the life-of-mine (Million lbs)	Zinc: 325 Lead: 185

The PEA is preliminary in nature and includes Inferred mineral resources that are considered too geologically speculative to be subject to economic considerations that would enable them to be categorized as mineral reserves. There is no certainty that the forecast results stated in the PEA will be realized. For a full description of known risks that could materially affect potential development of the ScoZinc zinc-lead project, see Selwyn’s Annual Information Form March 30, 2012 under the heading “Risk Factors” which are incorporated by reference herein and are available on [www.sedar.com](http://www.sedar.com) under the ScoZinc Resources profile. In addition, ScoZinc needs to raise approximately \$30 million to fund the restart of the ScoZinc Mine.

The table below shows updated forecast highlights compared to the February 2018 PEA using the same metal prices and exchange rate (**USD \$1.25 per pound for zinc, USD \$1.05 per pound for lead and CAD to USD exchange rate of 0.81**). This detailed update is based on a higher production rate achievable with the acquired SAG mill and results in improvements to the internal rate of return, payback and annual earnings while reducing the capital requirements for restart.

Metric	December 2018	February 2018
After-Tax NPV (at 5%)	CAD \$124.2 M	CAD \$127.9 M
After-Tax NPV (at 8%)	CAD \$107.9 M	CAD \$107.7 M
After-Tax Internal Rate of Return	102.4%	63.7%
Annual Average Earnings Before Interest, Taxes, Depreciation and Amortization for life-of-mine	CAD \$38.6 M	CAD \$31.1 M
C1 Cash Cost per pound of zinc for life-of-mine (after credits for lead)	USD \$0.60	USD \$0.59
Total Cost of production per pound of zinc for life-of-mine (including operating, capital and sustaining costs after credits for lead)	USD \$0.71	USD \$0.72
Payback of capital	1.17 years	1.9 years
Mill Processing Rate (tonnes per day)	3,000	2,600
Life of Mine	6.4 years	7.7 years
Total operating cost per tonne milled for the life-of-mine	CAD \$60.11	CAD \$54.77
Total cost per tonne mined (all materials)	CAD \$2.99	CAD \$3.05
Restart Capital (including Working Capital)	CAD \$25.5 M	CAD \$31.1 M
Zinc Price	USD \$1.25	USD \$1.25
Lead Price	USD \$1.05	USD \$1.05
Exchange Rate (CAD to USD)	0.81	0.81
Total Payable Metal Produced for the life-of-mine (Million lbs)	Zinc: 324 Lead: 184	Zinc: 323 Lead: 184

### Metal Prices and Economic Sensitivity

Base Case metal prices for this updated PEA have been set to life-of-mine values of USD \$1.15 per pound for Zinc and USD \$0.95 per pound for Lead and an exchange rate of 0.77 (CAD to USD). The following table illustrates the impact on the forecast project economic measures with variations in zinc and lead prices with the base assumptions unchanged as metal prices are adjusted.

#### Base Case (USD \$1.15 per pound Zinc, USD \$0.95 per pound Lead, 0.77 CAD to USD Exchange Rate)

Zinc/Lead Price USD \$/lb	NPV Pre-Tax <sup>1</sup>		NPV After-Tax <sup>1</sup>		IRR %		Payback (Years)	Average Annual EBITDA
	NPV 5%	NPV 8%	NPV 5%	NPV 8%	Pre-Tax	After-Tax		
0.95/0.75	31.1M	22.2M	29.9M	21.2M	20.1%	19.7%	5.6	12.7M
1.05/0.85	84.6M	70.2M	68.6M	56.8M	49.1%	45.6%	3.3	22.0M
<b>1.15/0.95</b>	<b>138.0M</b>	<b>118.2M</b>	<b>106.5M</b>	<b>91.4M</b>	<b>82.7%</b>	<b>77.4%</b>	<b>1.5</b>	<b>31.2M</b>
1.25/1.05	191.5M	166.2M	143.9M	125.2M	120.7%	112.7%	1.0	40.5M
1.35/1.15	264.2M	231.4M	194.2M	170.5M	176.1%	161.8%	0.8	49.7M
1.45/1.25	317.7M	279.3M	231.2M	203.7M	222.4%	201.1%	0.7	59.0M

<sup>1</sup> NPV in Canadian Dollars (CAD)

The following table illustrates the impact on the forecast project economic measures with variations in exchange rate with the base assumptions unchanged.

Exchange Rate	NPV Pre-Tax <sup>1</sup>		IRR %	NPV Pre-Tax <sup>1</sup>		IRR %	Payback (Years)
	NPV (5%)	NPV (8%)		NPV (5%)	NPV (8%)		
0.73	166.0M	143.3M	102.1%	126.1M	109.2M	95.8%	1.25
0.75	151.7M	130.4M	92.0%	116.1M	100.1M	86.2%	1.42
<b>0.77*</b>	<b>138.0M</b>	<b>118.2M</b>	<b>82.7%</b>	<b>106.5M</b>	<b>91.4M</b>	<b>77.4%</b>	<b>1.50</b>
0.79	125.1M	106.6M	74.1%	97.4M	83.2M	69.3%	1.75
0.81	112.8M	95.6M	66.2%	88.7M	75.3M	61.8%	2.00
0.83	101.1M	85.1M	58.9%	80.4M	67.6M	54.9%	2.25

<sup>1</sup> NPV in Canadian Dollars (CAD)

### Refined Plan and Capital and Operating Costs

The updated PEA, completed by a team of independent consultants in collaboration with ScoZinc personnel and management, includes the sequential development of two open pit operations on the Main deposit followed by the development of the Northeast deposit. Three months of pre-production mining will be carried out prior to mill start-up in order to provide a stockpile of lower-grade ore for plant commissioning as well as access to higher grade areas in the pit as mill throughput increases over the first three months. Both pits are located in close proximity to the mill. A small underground operation ranging from 250 to 500 tpd, will be mined beginning in Year 5 to provide high-grade mineralization for blending with the open pit feed.

The economic evaluation is based on a mineral resource inventory from production records and the updated mineral resources as stated in the technical report dated August 24, 2012 (see SEDAR filing dated August 24, 2012).

The zinc-lead mill feed will be processed in the existing ScoZinc mill by standard flotation methods to produce clean, high-grade zinc and lead concentrates. Modifications to the existing mill, some of which are underway, include an external jaw crusher, a SAG mill, new filter presses and decommissioning of the fine ore bin, screen deck and cone crusher.

The ScoZinc asset, including the existing mill, has undergone significant refurbishment and improvements since ScoZinc assumed ownership of the property in June 2011. ScoZinc has undertaken more than CAD \$10.0 million in engineering, definition drilling, permitting, mill and mine infrastructure refurbishment and surface rights acquisition. An additional estimated CAD \$26.8 million (including working capital) is required for refurbishment and modernization to increase the mill throughput to 3,000 tpd, pre-stripping of waste material in the Main pit, other start-up costs, and contingency.

The capital and operating costs included in the updated PEA were provided by recent mining and drill and blast contractor tenders, updated costs from equipment and consumables suppliers (October 2018), conservative parameters from historical mill and production records, and escalated cost estimates from the previous studies and quotes.

## **Mining**

Detailed mine planning for both pits and underground was carried out on a monthly basis for the entire mining schedule.

Mining commences in the pre-production period at approximately 34,000 tpd (total material) eventually reaching an estimated 47,000 tpd. Feed of material to the mill averages about 990,000 tonnes per annum (or 3,000 tpd) for an average of 328 operating days per year. The average strip ratio for the LOM open pits is expected to be 13.0:1 (including pre-stripping). About 66% of the approximately 84 million tonnes of waste material is expected to be removed without blasting, including soils that will be used for reclamation. All of the open pit ore (about 6.4 million tonnes) is expected to require blasting. Open pit mine dilution and mining losses are assumed to be 7.5% and 5%, respectively. In-pit diluted mineral resources are 6,433,000 tonnes grading 3.12% zinc and 1.59% lead.

The underground operation is based on modified cut and fill mining with uncemented backfill, producing up to 500 tpd of high-grade mill feed. Development of the underground to access higher grade zones requires a capital investment of about \$10.6 million, primarily in Year 5, and assumed to be funded via operating cash flow. Diluted and recoverable underground mineral resources are estimated at 283,000 tonnes grading 6.98% zinc and 3.49% lead. This material will be blended with open pit and stockpile feed to the mill over approximately two years beginning in the second half of Year 5 of the LOM plan.

## **Metallurgy**

The restart plan provides for modifications to the mill, including redesign and replacement of the crushing circuit, primary screen, thickeners and concentrate filters. Additionally, a semi-autogenous (SAG) mill has been purchased. Some of this equipment is on site and ready for installation. These modifications, together with improved plant availability, will allow estimated average mill feed rates of 990,000 tonnes per annum or 3,000 tpd. The projected feed grades for the LOM average 3.12% zinc and 1.59% lead. The projected metallurgical performance, based on historical data, provides for a zinc concentrate grade of 57.0% zinc at 85.1% LOM recovery and a lead concentrate grade of 71.0% lead at 84.6% LOM recovery.

Metallurgical testwork completed in the first half of 2018 demonstrated the benefit of incorporating a SAG mill to the processing circuit. It allows higher mill feed while eliminating historical bottleneck challenges in the mill. A used SAG mill was located, inspected, tested and purchased. Engineering has been completed for installation of the mill.

## **Concentrate Marketing and Transport**

Based on historical concentrate sales, ScoZinc concentrates are expected to be readily marketable, grading 57% and 71% for zinc and lead respectively, with no penalties. Previous concentrate shipments from the ScoZinc mine were shipped to Europe and Asia. ScoZinc has its own storage and concentrate loading facility at Sheet Harbour, Nova Scotia, approximately 80 kilometers from the mine, with a capacity of 8,500 tonnes, or 1.5 times the expected shipment size.

In April 2018, ScoZinc executed a term sheet with MRI Trading AG for the life of mine zinc and lead concentrates which include debt and equity terms for the restart of mining operations (see news release dated April 3, 2018). The terms are incorporated into this economic analysis.

## **Infrastructure**

The mine has ample grid power and water supply to accommodate the expansion to 3,000 tpd. Paved roads lead to the mine property and there is nearby access to rail.

## **Environment, Community Relations, and Permitting**

ScoZinc operations have enjoyed strong support from local communities and the Nova Scotia government. Permitting of the Main pit and Southwest Expansion Area remains in place with the granting of a 10-year renewal of ScoZinc's Industrial Approval in September 2017 and a 2-year extension to the Environmental Assessment Approval in October 2018. Existing permits will need to be amended to accommodate further expansion of the Main pit, the start-up of the Northeast pit and underground mining to achieve the approximate seven-year mine life projected in the updated PEA. This will commence with

project restart and is expected to take less than two years to complete.

Staffing for the restart of operations will commence once financing is secured. Senior personnel have been involved in the technical work to date and will assume leadership roles for the operation. At full production, the mine is expected to employ approximately 155 personnel, of which 75 would be ScoZinc employees and 80 would be contractor employees. The neighbouring communities provide a good source of skilled workers and many former employees remain interested in rejoining operations at ScoZinc.

### **Project Opportunities**

The current mine plan and economic model do not include the Getty Deposit located west of the Southwest Expansion. Definition drilling of the near surface portion of the Northeast deposit is expected to convert Inferred mineral resources into Measured and Indicated categories similar to the results achieved in 2012 on the Main deposit, which realized a more than 50% increase to the mineral resources at that time. An expansion of Measured and Indicated in-pit mineral resources is expected to favourably impact transition from the Northeast deposit to the Getty deposit in the latter years of the current mine plan. Addition of the Getty deposit and expanded mineral resources is expected to add more than three years to the current mine life.

The significant mineral claim holdings in close proximity to ScoZinc operations and the potential for district scale distribution of mineralization, provides a long-term opportunity for the ScoZinc operation. Geophysical and geochemical surveys carried out on mineral claims from 2012 to 2016 have resulted in the identification of exploration targets with the potential to host economic mineralization

### **Qualified Persons**

This news release has been reviewed and approved by Mr. Michael Petrina and Mr. Jason Baker, independent consultants involved in the preparation of the Preliminary Economic Assessment.

### **About ScoZinc Mining Ltd.**

ScoZinc is an established Canadian-based zinc and lead exploration and development company that owns the ScoZinc Mine near Halifax, Nova Scotia. The Company has no debt. The Company has 5,266,045 common shares outstanding which are traded on the TSX Venture Exchange under the symbol "SZM".

### **For more information, please contact:**

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### **CAUTIONARY NOTES**

The Company confirms that it has not made a production decision with respect to the Project. The Company has not completed a feasibility study or established the economic viability of the Project or proposed operations on the Project, and no mineral reserves have been established for the Project that would support a production decision. Projects which are put into production without first establishing mineral reserves and completing a feasibility study have historically had a higher risk of economic or technical failure.

This News Release includes certain "forward-looking statements". All statements other than statements of historical fact included in this release, including without limitation statements regarding the future plans and objectives of ScoZinc, are forward-looking statements that involve various risks and uncertainties. These forward-looking statements include, but are not limited to, statements with respect to information that is based on forecasts of future operational or financial 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" or "does not expect", "is expected", "anticipates" or "does not anticipate", "plans", "estimates" or "intends", or stating that certain actions, events or results "may", "could", "would", "might" or "will" be taken, occur or be achieved) are not statements of historical fact and may be "forward-looking statements." Forward-looking statements are subject to a variety of risks and uncertainties that could cause actual events or results to differ from those reflected in the forward-looking statements.

There can be no assurance that forward-looking statements will prove to be accurate and actual results and future events could differ materially from those anticipated in such statements. Important factors that could cause actual results to differ materially from ScoZinc's expectations include, among others, the ability of ScoZinc to receive the necessary regulatory approvals to complete the Offering, risks related to international operations, the actual results of current exploration activities, conclusions of economic evaluations and changes in project parameters as plans continue to be refined as well as future prices of metals, as well as those factors discussed in the section entitled "Risk Factors" in ScoZinc's Management's Discussion and Analysis. Although ScoZinc has attempted to identify important factors that could cause actual results to differ materially, there may be other factors that cause results not to be as anticipated, estimated or intended. There can be no assurance that such statements 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 statements.