



August 31, 2017

SOLITARIO INITIATES METALLURGICAL TESTING TO INCREASE SILVER RECOVERY AT ITS LIK ZINC PROJECT, ALASKA

Denver, Colorado: Solitario Zinc Corp. (“Solitario”) NYSE American: **XPL**; TSX: **SLR**) is pleased to announce that it has initiated metallurgical testing to determine the potential to recover silver at its recently acquired Lik zinc project in Alaska. The Lik resource, besides being a high-grade zinc deposit, contains a significant silver inventory that averages about 50 grams per tonne silver. Metallurgical testing to date has focused on the recovery of zinc and lead with virtually no work conducted on silver recovery.

In the 2014 Lik PEA, the economic model assumed less than 5% silver recovery in the zinc and lead concentrates combined. With approximately 29.1 million ounces of silver in the Indicated Resource category, and another 6.5 million ounces in the Inferred Resource category, there is potential for a significant benefit to project economics if silver recoveries can be improved. Solitario has engaged RDI Resource Development Inc. to manage the metallurgical test work. This initial phase of test work is estimated to be completed in the fourth quarter of 2017.

Chris Herald, President and CEO of Solitario, commented, “We are excited about the potential to increase the recovery of a significant portion of this large inventory of silver contained in the high-grade Lik zinc deposit. The metallurgical program will involve a series of tests to determine if silver can be recovered either within a floatation product or by standard cyanidation methods. We believe there is only upside potential to this test program as the current economic modeling of the project estimated less than 5% payable silver recoveries.”

Lik Mineral Resource Estimate (100% basis) – December 31, 2013

Location (Cut-off)				Ag	Contained Ag	% Zn-Eq.	Zn-Eq.
Indicated–Open Pit	Mt	% Zn	% Pb	g/t	Millions of Oz.	Grade*	Millions lbs.
Lik South (5%)	16.85	8.0	2.7	50	27.1	11.9	4,432
Lik North (5%)	0.44	10.0	2.8	59	0.8	14.2	138
Indicated-Underground							
Lik South (7%)	0.69	8.0	3.2	51	1.1	12.4	188
Lik North (7%)	0.13	8.9	2.9	38	0.2	12.7	36
Sub-Total	18.11	8.1	2.7	50	29.1	12.0	4,795
Inferred-Open Pit							
Lik South (5%)	0.74	7.7	1.9	13	0.3	9.9	161
Lik North (5%)	2.13	8.9	2.9	46	3.2	12.9	604
Inferred-Underground							
Lik South (7%)	0.51	7.0	1.6	11	0.2	8.7	98

Lik North (7%)	1.96	9.2	3.0	46	2.9	13.2	572
Sub-Total	5.34	8.7	2.7	38	6.5	10	1,436
CIM Definitions were followed for Mineral Resources							
Mineral Resources were estimated using an average long-term zinc price of \$1.20/lb., lead price \$1.20 per pound and silver price of \$27/oz.							
A density value of 3.5 g/cubic cm.							

***Zinc-Equivalent Grade based upon the following metal prices: \$1.00 Zn, \$0.90 Pb and \$20 Ag**

Source: Preliminary Economic Assessment Technical Report – Zazu Metals Corporation, Lik Deposit Alaska, USA dated April 23, 2014 and effective March 3, 2014, prepared by Robert L. Matter and Tony Loschiavo, P. Eng. (JDS Energy and Mining, Inc.), Neil Gow, P. Gee. (Roscoe Postle Associates, Inc.) and Michael Travis, PE (Travis Peterson Environmental Consulting, Inc.)

Florida Canyon Zinc Project – Zinc Price Sensitivity Chart Correction

The Company also wishes to correct the “*Florida Canyon Zinc Project (100% Basis, US\$) Zinc Price Sensitivity*” chart provided in its news release dated August 2, 2017. The corrected Pre-Tax and After-Tax numbers only pertain to those numbers related to a zinc price of \$1.40. The corrected chart is provided below with the corrected numbers in bold.

Florida Canyon Zinc Project (100% Basis, US\$)										
Zinc Price Sensitivity (Pb: \$1.00/lb, Ag: \$16.50/oz)										
Zn Price	\$1.00		\$1.10		\$1.20		\$1.30		\$1.40	
	Pre-Tax	After-tax	Pre-Tax	After-tax	Pre-Tax	After-tax	Pre-Tax	After-tax	Pre-Tax	After-tax
FCF (\$millions)	408	267	535	352	662	437	788	521	914	605
NPV8% (\$millions)	187	96	263	147	339	198	414	248	490	298
IRR	24.5%	17.0%	29.7%	21.0%	34.5%	24.7%	38.9%	28.1%	43%	31.3%

All other numbers provided in the above referenced chart were correct in the August 2, 2017 release and all numbers provided in the filed Florida Canyon Technical Report are correct. This news release has been reviewed and approved by Walter H. Hunt, COO, a Non-Independent QP for Solitario under National Instrument 43-101 (“NI 43-101”).

About Solitario

Solitario is an emerging zinc exploration and development company traded on the NYSE American (“XPL”) and on the Toronto Stock Exchange (“SLR”). Besides Solitario’s joint venture with Milpo on its high-grade Florida Canyon zinc project in Peru, Solitario also holds a 50% joint venture interest (Teck Resources Ltd. holds the other 50% interest) in the high-grade, open pitable Lik zinc deposit in Alaska, and a 7.6% equity interest in Vendetta Mining. Solitario’s Management and Directors hold approximately 9.2% (excluding options) of the Company’s 58.45 million shares outstanding. Solitario’s cash balance and marketable securities stand at approximately US\$15 million. Additional information about Solitario is available online at www.solitariozinc.com

FOR MORE INFORMATION AT SOLITARIO, CONTACT:

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Cautionary Note to U.S. Investors concerning estimates of Resources: This news release uses the terms “Measured, Indicated and Inferred Resources.” The Company advises U.S. investors that while these terms are recognized and required by Canadian regulations, the SEC does not recognize the terms. U.S. investors are cautioned not to assume that any part or all of Measured or Indicated Mineral Resources will ever be converted into Reserves. Inferred Resources have a great amount of uncertainty as to their existence, and great uncertainty as to their economic and legal feasibility. It cannot be assumed that all or any part of an Inferred Mineral Resource will ever be upgraded to a higher category. Under Canadian rules, estimates of Inferred Mineral Resources may not form the basis of feasibility or pre-feasibility studies, except in rare cases. U.S. investors are cautioned not to assume that any part or all of a *measured, indicated or inferred* resource exists, or is economically or legally minable.

Cautionary Statement Regarding Forward Looking Information

This press release contains forward-looking statements within the meaning of the U.S. Securities Act of 1933 and the U.S. Securities Exchange Act of 1934, and as defined in the United States Private Securities Litigation Reform Act of 1995 (and the equivalent under Canadian securities laws), that are intended to be covered by the safe harbor created by such sections. Forward-looking statements are statements that are not historical fact. They are based on the beliefs, estimates and opinions of the Company's management on the date the statements are made and address activities, events or developments that Solitario expects or anticipates will or may occur in the future, and are based on current expectations and assumptions. The Company would like to specifically caution the reader that the preliminary economic assessments (“PEA(s)”) of the Florida Canyon and Lik projects that supports the technical feasibility or economic feasibility of the Florida Canyon and Lik zinc deposits, including the marketability of the concentrate, mining methods, cost, recoveries of metals and any other technical aspects related to the Florida Canyon or Lik deposit, are preliminary in nature and there is no certainty that the PEA will be realized. Forward-looking statements involve a number of risks and uncertainties. Consequently, there can be no assurances that such statements will prove to be accurate and actual results and future events could differ materially from those anticipated in such statements. Such forward-looking statements include, without limitation, statements regarding the Company's expectation of the projected timing and outcome of engineering studies; expectations regarding the receipt of all necessary permits and approvals to implement a mining plan, if any, at Florida Canyon and Lik; the potential for confirming, upgrading and expanding zinc, lead and silver mineralized material; future operating and capital cost estimates may indicate that the stated resources may not be economic; estimates of zinc, lead and silver grades of resources provided are predicted and actual mining grade could be substantially lower; estimates of recovery rates for could be lower than estimated for establishing the cutoff grade; and other statements that are not historical facts could vary significantly from assumptions made in the Preliminary Economic Assessments; risks associated with our partners' (Milpo and Teck Resources Ltd.) ability to finance continued development and potential construction of the Florida Canyon and Lik projects could have a materially negative impact on the timing of project development, and such project development may never occur. Although Solitario management believes that its expectations are based on reasonable assumptions, it can give no assurance that these expectations will prove correct. Important factors that could cause actual results to differ materially from those in the forward-looking statements include, among others, risks relating to risks that Solitario's and its joint venture partners' exploration and property advancement efforts will not be successful; risks relating to fluctuations in the price of zinc, lead and silver; the inherently hazardous nature of mining-related activities; uncertainties concerning reserve and resource estimates; availability of outside contractors in connection with Florida Canyon and Lik, and other activities; uncertainties relating to obtaining approvals and permits from governmental regulatory authorities and country risks of operations, both inside and outside of the United States; the possibility that environmental laws and regulations will change over time and become even more restrictive; and availability and timing of capital for financing the Company's exploration and development activities, including uncertainty of being able to raise capital on favorable terms or at all; as well as those factors discussed in Solitario's filings with the U.S. Securities and Exchange Commission (the “SEC”) including Solitario's latest Annual Report on Form 10-K and its other SEC filings (and Canadian filings) including, without limitation, its latest Quarterly Report on Form 10-Q. The Company does not intend to publicly update any forward-looking statements, whether as a result of new information, future events, or otherwise, except as may be required under applicable securities laws.