



July 13, 2017

Solitario Completes Acquisition of Zazu Metals and Its Interest in the Lik Zinc Project

DENVER, COLORADO & VANCOUVER, BRITISH COLUMBIA - Solitario Exploration & Royalty Corp. (NYSE MKT:XPL; TSX:SLR) ("**Solitario**") and Zazu Metals Corporation (TSXV:ZAZ) ("**Zazu**") are pleased to announce that Solitario has completed its acquisition of Zazu Metals Corporation ("Zazu") pursuant to the [plan of arrangement](#) ("Arrangement") previously announced on April 27, 2017. The Arrangement was approved by the Ontario Superior Court of Justice (Commercial List) on July 7, 2017, after overwhelming approval by both Solitario and Zazu shareholders on June 29, 2017 (see [Solitario's press release](#) dated June 29, 2017).

Key investment highlights of the Zazu acquisition include:

- The combination creates an exciting new zinc-focused company with two advanced high-grade zinc projects that more than triples the Company's measured, indicated and inferred zinc equivalent resources.
 - **Solitario goes from a company with just over 361 million pounds of attributable zinc-equivalent in the measured and indicated resource category to one with over 2.76 billion pounds of attributable zinc-equivalent.**
 - **The inferred resource category increases from approximately 970 million pounds of attributable zinc-equivalent to 1.7 billion pounds of attributable zinc-equivalent.**
- Reduces development risks as both projects are located in favorable jurisdictions with experienced zinc producing joint venture partners.
- Increases the Company's exploration potential upside.
- Reduces shareholder risk by diversifying Solitario's asset base.

Important upcoming news for Solitario will be the completion of the Bongará Zinc Project Preliminary Economic Assessment ("PEA"). The Company engaged SRK Consulting in January to complete the PEA, which is being jointly funded by Solitario and its joint-venture partner Minera Milpo ("Milpo"). Completion of the PEA remains on-track for the end of July 2017.

Chris Herald, President and CEO of Solitario stated, "The Zazu acquisition is transformational and highly accretive as it more than triples our total attributable high-grade zinc-dominant resources. This enhances our leverage to the current positive zinc price environment. With our large resource base and strong balance sheet, Solitario now stands apart from others in the emerging zinc developers' space."

Solitario welcomes Mr. Gil Atzmon and Mr. Joshua Crumb, to the Board of Directors of Solitario. Mr. Atzmon and Mr. Crumb, former members of Zazu's Board of Directors, bring valuable experience in the mining industry and the Lik project and we expect to benefit greatly from their addition to Solitario's Board of Directors. In addition, upon the completion of the Arrangement and to better reflect our focus on zinc assets, shareholders of Solitario voted in favor of a name change to Solitario Zinc Corp. The name change will become effective on July 17.

Solitario Company-wide Resources

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

Location (Cut-off)				Ag	% Zn-Equivalent	Zn-Equivalent
Indicated–Open Pit	Mt	% Zn	% Pb	Grams/t	Grade*	Millions Pounds
Lik South (5%)	16.85	8.0	2.7	50	11.9	4,432
Lik North (5%)	0.44	10.0	2.8	59	14.2	138
Indicated-Underground						
Lik South (7%)	0.69	8.0	3.2	51	12.4	188
Lik North (7%)	0.13	8.9	2.9	38	12.7	36
Sub-Total	17.29	8.1	2.7	50	12.0	4,795
Inferred-Open Pit						
Lik South (5%)	0.74	7.7	1.9	13	9.9	161
Lik North (5%)	2.13	8.9	2.9	46	12.9	604
Inferred Underground						
Lik South (7%)	0.51	7.0	1.6	11	8.7	98
Lik North (7%)	1.96	9.2	3.0	46	13.2	572
Sub-Total	5.34	8.7	2.7	38	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.)

Bongara Mineral Resource Estimate (100% basis) – June 5, 2014

Category				Ag	% Zn-Equivalent	Zn-Equivalent
	Mt	% Zn	% Pb	Grams/t	Grade	Millions Pounds

Measured	1.43	13.0	1.9	19	15.5	486
Indicated	1.35	12.5	1.7	17	14.7	439
Sub-Total	2.78	12.8	1.8	18	15.1	925
Inferred	9.07	10.9	1.2	12	12.4	2,488

Source: [The Mineral Resource Statement and Technical Report](#) for the Bongará Zn-Pb-Ag Deposit, Amazonas Department, Peru, was prepared on behalf of Solitario by SRK Consulting (U.S.) Inc. ("SRK"), an independent and internationally recognized mining engineering firm.

Notes:

1. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. There is no certainty that all or any part of the Mineral Resources estimated will be converted into Mineral Reserves;
2. Mineral resources are reported to a Net Smelter Return zinc-equivalent (ZnEq%) cut-off grade based on metal price assumptions, metallurgical recovery assumptions, mining costs, processing costs, general and administrative (G&A) costs, and NSR factors. Mining costs, processing, G&A, and transportation costs total US\$51.30/t. **Please see Solitario News Release dated June 23, 2014 for details.**
3. Resulting cutoff grades used in this resource statement were 4.1% ZnEq for sulfide, 5.0% ZnEq for oxide, and 4.5% ZnEq for mixed material types.
4. Zinc equivalency for reporting in situ contained metal resources above was calculated using: $ZnEq (\%) = Zn (\%) + 1.0 * PB (\%) + 0.03 * Ag (g/t)$.
5. Density was calculated based on material types and metal grades. The average density in the mineralized zone was 2.91 g/cm³ as a function of the zinc and lead sulfide mineral content.
6. Mineral Resources as reported are undiluted.
7. Mineral resource tonnage and contained metal have been rounded to reflect the precision of the estimate, and numbers may not add due to rounding.

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.

This release has been reviewed for accuracy by Walter Hunt, Chief Operating Officer of Solitario, who is a "qualified person" as that term is defined in NI 43-101.

About Solitario

Solitario is a U.S. based zinc exploration company traded on the NYSE MKT ("XPL") and on the Toronto Stock Exchange ("SLR"). With the Zazu acquisition, Solitario now holds a 50% operating interest in the Lik zinc-lead-silver deposit in Northwest Alaska, which is large tonnage, high-grade and potentially open pit. Teck Resources Limited is a 50% partner with Solitario in the Lik deposit, with Solitario acting as the project manager. Zazu completed a positive PEA on the Lik deposit in 2014.

Solitario's other core asset is a 39% interest in the advanced, high-grade, Bongará zinc project located in northern Peru. The project has a significant mineral resource and Solitario is fully carried to production by its joint venture partner Milpo, one of the largest zinc producers in Peru. Since inception of the Bongará joint venture in 2006, the Brazilian conglomerate Votorantim and its subsidiary, Milpo, have funded 100% of project expenditures. Milpo will earn a 70% interest in the project by continuing to solely fund all project expenditures and committing to place the project into production based upon a positive feasibility study. After earning 70%, and at the request of Solitario, Milpo has further agreed to finance Solitario's 30% participating interest for construction. Solitario will repay the loan facility through 50% of its net cash flow distributions.

Solitario also holds an 85% interest in the Chambara exploration project in Peru (Milpo holds the remaining 15%), a 7.5% equity interest in Vendetta Mining, two exploration properties in Peru, and one royalty in each of Peru, Brazil, the United States and Mexico.

Additional information about Solitario is available online at www.solitarioxr.com

The TSX and NYSE MKT have not reviewed and do not accept responsibility for the adequacy or accuracy of this release. No stock exchange, securities commission or other regulatory authority has approved or disapproved the information contained herein.

FOR MORE INFORMATION at SOLITARIO, CONTACT:

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Cautionary Language

None of the NYSE MKT, the Toronto Stock Exchange nor the TSX Venture Exchange have passed upon the merits of the proposed Arrangement and have neither approved nor disapproved the contents of this press release. None of the NYSE MKT, the Toronto Stock Exchange, the TSX Venture Exchange nor their regulation service providers accepts responsibility for the adequacy or accuracy of this release.

Forward-looking Statements

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. 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 Bongará; the potential for confirming, upgrading and expanding zinc, lead and silver mineralized material at Bongará; future operating and capital cost estimates may indicate that the stated resources may not be economic; estimates of zinc, lead and silver grades provided are not diluted mining grades and the predicted or actual mining grade could be substantially lower; estimates of recovery rates for the three types of mineralization, sulfide, oxide and mixed could be lower than estimated for establishing the cutoff grade; and other statements that are not historical facts; risks associated with our funding partner's (Votorantim Metais) ability to finance continued development and potential construction of the Bongará project. 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 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 Bongará and Lik projects, 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. These risks, uncertainties and other factors include, but are not limited to factors referenced in Solitario's other continuous disclosure filings, which are also available at www.sedar.com. Readers should not place undue reliance on these forward-looking statements. Solitario does not assume any obligation to update any forward-looking statements, except as required by applicable securities laws. 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.