



November 30, 2016

Solitario to Initiate Preliminary Economic Study on its Bongara Zinc Project

Denver, Colorado: Solitario Exploration & Royalty Corp. (“Solitario,” NYSE MKT: **XPL**; TSX: **SLR**) today announced that it will be initiating a NI-43-101 Preliminary Economic Study (“PEA”) on its Bongará zinc project in northern Peru. This will be the first evaluation to estimate the potential economics of the Bongará project. The project hosts a significant high-grade zinc resource that is open to expansion in all directions. Previously reported (June 23, 2014) NI-43-101 resources are:

Table 1: Mineral Resource Statement for the Bongará Zn-Pb-Ag Deposit, Peru*

Category	Metric Tons	Grade				Contained Metal (millions)				
		Zn	Pb	Ag	ZnEq	Zn	Pb	Ag	ZnEq	
	Mt	%	%	g/t	%	(lbs)	(lbs)	(oz)	tonnes	(lbs)
Measured	1.43	13.02	1.85	19.3	15.45	410.0	58.3	0.884	0.221	486.5
Indicated	1.35	12.51	1.71	17.1	14.74	372.6	50.9	0.744	0.199	438.8
Measured + Indicated	2.78	12.77	1.78	18.2	15.10	782.5	109.2	1.628	0.420	925.3
Inferred	9.07	10.87	1.21	12.2	12.44	2,173.0	241.5	3.554	1.130	2,487.6

*SRK Consulting (U.S.), Inc., June 5, 2014 – Please see Table 1 Notes at the end of this news release

The project is 39%-owned by Solitario and 61%-owned by Compañía Minera Milpo S.A.A. (“Milpo”). A total of 486 core holes totaling 117,280 meters have been drilled on the project. Included in this drilling are 95 underground core holes totaling 15,144 meters that were drilled from a 700-meter long tunnel that Votorantim Metais (Milpo’s 80% owner) completed in 2013. Work to date has demonstrated that Bongará is a high-grade zinc deposit with an average resource grade in excess of 12% zinc equivalent, has a relatively large resource base with excellent expansion potential, and produces a clean high-grade concentrate.

Chris Herald, President and CEO of Solitario, stated, “We are excited to initiate this study as it will bring together a broad array of technical components to provide the first real look at project economics. We are now in the process of selecting an independent consulting engineering firm to initiate and complete the PEA on this high-grade zinc deposit. We hope to complete the PEA before the end of the second quarter of 2017.”

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

Terms of the Bongará Joint Venture

Currently, Solitario owns 39% of the Bongará project and Milpo owns 61%. Since inception of the joint venture in 2006, Votorantim and its 80%-owned subsidiary, Milpo, have funded 100% of project expenditures. Milpo can earn a 70% interest in the project by continuing to fund all project expenditures (except this PEA which is funded by Solitario and does not alter any of the terms of the joint venture) and committing to place the project into production based upon a positive feasibility study. After earning 70%, 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.

About Solitario

Solitario is an exploration and royalty company traded on the NYSE MKT ("XPL") and on the Toronto Stock Exchange ("SLR"). Solitario has a joint venture with Minera Milpo (a Peruvian zinc miner) on its high-grade Bongará zinc project in Peru and a 9.97% equity interest in Vendetta Mining. Solitario's Management and Directors hold approximately 7.6% (excluding options) of the Company's 38.7 million shares outstanding. Solitario's cash balance at end of the third quarter of 2016 was approximately US\$16 million. Additional information about Solitario is available online at www.solitarioxr.com

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Notes to Table 1 extracted from NI 43-101 Report: “Mineral Resources Bongará Zinc Project Amazonas Department, Peru”

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.
 - i. *Metal price assumptions considered for the calculation of metal equivalent grades are: Zinc (US\$/lb 0.95), Lead (US\$/lb 0.95) and Silver (US\$/oz 20.00),
 - ii. **Cut-off grade calculations assume variable metallurgical recoveries as a function of grade and relative metal distribution. Average metallurgical recoveries for sulfide and oxide respectively are: Zinc (93.1%, 73%), Lead (84.8, 0%) and Silver (55.6%, 0%)
 - iii. *** NSR factors for calculating cutoff grades were: $ZnEq\% = Zn\% * 1 + Pb\% * 0.74 + Ag\ g/t * 0.02$
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/cm^3 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 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. 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 and/or Milpo) ability to finance continued development and potential construction of the Bongará project. Important factors that could cause actual results to differ materially from those in the forward-looking statements include, among others, risks relating to fluctuations in the price of zinc; the inherently hazardous nature of mining-related activities; uncertainties concerning reserve and resource estimates; uncertainties relating to obtaining approvals and permits from governmental regulatory authorities and country risks of operations 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.

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.

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