



May 5, 2016

SOLITARIO ANNOUNCES STRATEGIC 9.97% EQUITY INVESTMENT IN VENDETTA MINING

Denver, Colorado: Solitario Exploration & Royalty Corp. (“Solitario;” NYSE MKT: XPL; TSX: SLR) announces that it has made a strategic 9.97% equity investment in Vendetta Mining Corp. (“Vendetta”). Solitario purchased 7,240,000 units of Vendetta for total consideration of Cdn\$362,000. Each unit consists of one common share priced at Cdn\$0.05 per share and one full warrant with a two-year term and exercisable at Cdn\$0.10. The strategic investment was made pursuant to a non-brokered private placement by Vendetta totaling Cdn\$2.5 million. Solitario will own 9.97% of the outstanding shares of Vendetta post-financing and 11.21% on a fully diluted basis. Assuming exercise of all of the warrants by Solitario, and no other warrants or options are exercised, it would own 18.13% of the common shares of Vendetta.

Solitario intends to hold its securities of Vendetta for investment purposes. Solitario may, depending on market and other conditions, increase or change its beneficial ownership over the common shares of Vendetta or other securities of Vendetta through market transactions, private agreements, treasury issuances, exercise of convertible securities or otherwise.

A copy of the Early Warning Report for Solitario can be found under Vendetta's profile at www.SEDAR.com.

Vendetta has an option to acquire a 100% interest in the Pegmont lead-zinc-silver deposit located in the Mt. Isa region, Australia, one of the world’s greatest lead-zinc-silver mining areas. Vendetta reported a NI-43-101 compliant mineral resource for Pegmont in February 2014, the sulphide portion of which is presented below (Zones 1-4).

Mineral Resource Category*	Tonnes ('000s)	Lead %	Zinc %	Combined Lead + Zinc %	Ag grams/t
Indicated	757	6.66	2.69	9.35	11.87
Inferred	4,417	6.51	2.80	9.31	10.56

*Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. There is no certainty that any part of the Mineral Resources estimated will be converted into Mineral Reserves estimate

Additionally, 6,505 meters of drilling conducted by Vendetta in 2014, and not included in the aforementioned NI-43-101 resource, resulted in identifying two important new resource extension areas, the Burke Hinge Zone and Zone 5, both of which exhibit higher grade zinc mineralization. The Burke Hinge Zone is shallow and easily accessible for mining, while Zone 5 is slightly deeper and open in two directions. Vendetta’s 2016-2017 drilling program is focused on Zone 5 and the Burke Hinge Zone. Vendetta’s 2014 drilling highlights for these two new higher grade zinc zones are provided below:

2014 Zone 5 Drilling Highlights:

PVRD017	From 242.6 m	4.0 m grading	5.83% Pb and	11.34% Zn
PVRD010	From 160.4 m	4.2 m grading	6.29% Pb and	5.64% Zn
PVRD013	From 224.8 m	8.8 m grading	8.73% Pb and	3.99% Zn

2014 Burke Hinge Zone Highlights:

PMR018	From 82.0 m	5.0 m grading	6.86% Pb and	2.85% Zn
PMR019	From 63.0 m	6.0 m grading	8.48% Pb and	4.21% Zn
PMR021	From 61.0 m	9.0 m grading	5.58% Pb and	3.94% Zn

Chris Herald, President and CEO of Solitario commented, "We are delighted to become a significant shareholder of Vendetta. Vendetta's Pegmont project is a quality asset with outstanding potential for resource growth. It is situated in one of the world's best mining jurisdictions – North Queensland, Australia. Moreover, the mining infrastructure that exists both locally and regionally allows for expedited development in the future. This investment demonstrates our commitment and belief in the future of the zinc-lead market and strengthens our exposure to this sector. We look forward to assisting Vendetta in their corporate objectives to move this project forward."

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

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. Solitario's Management and Directors hold approximately 7.6% (excluding options) of the Company's 39.0 million shares outstanding. Solitario's cash balance at end of the first quarter of 2016 was approximately US\$17 million. Additional information about Solitario is available online at www.solitarioxr.com

FOR MORE INFORMATION AT SOLITARIO CONTACT:

Christopher E. Herald
President & CEO
(303) 534-1030

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. Cautionary Note to U.S. Investors concerning estimates of Resources: **This news release uses the terms "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 indicated or inferred resource exists, or is economically or legally minable. Such forward-looking statements include, without limitation, statements regarding the Company's intentions to repurchase shares of its common stock from time to time under the stock repurchase program, that any or all purchases will be in conformance with Rule 10(b)-18, the timing and amounts of any repurchases, the intended use of any repurchased shares, the source of funding for the stock repurchase program. It can give no assurance that these expectations will prove correct. Additional risk factors are 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.*