

Solitario Exploration & Royalty Corp. ("Solitario"; NYSE MKT: XPL; TSX: SLR) is pleased to announce today that its board of directors has appointed John Labate, age 67, to the board of directors. Mr. Labate was also appointed to serve as the Audit Committee chairman. Mr. Labate has over 30 years' experience in the mining industry and has held senior financial management positions in mining and technology companies.

Mr. Labate is currently the Chief Financial Officer of Gold Resource Corporation (NYSE-MKT: GORO) and has served in that capacity since May 2015. Prior to that, Mr. Labate served as a consultant in accounting and finance matters in the mining industry as well as Chief Financial Officer for [Golden Star Resources Ltd.](#), a gold mining company (NYSE MKT: GSS; TSX: GSC) and Constellation Copper Corporation, Crown Resources Corporation and Applied Optical Technologies. Mr. Labate received a bachelor's degree in Accounting from San Diego State University.

Chris Herald, President and CEO of Solitario, stated: "We are very pleased that John has accepted a position on our board and will lead the Audit Committee. His management experience in accounting and regulatory issues in the mining industry both in the US and Canada will be a valuable addition to our board."

Solitario also announced that John Hainey will resign as a director and Chairman of its Audit Committee effective December 31, 2016. Chris Herald stated: "On behalf of the Board and Solitario employees, we want to thank John for his more than 20 years with Solitario, including his invaluable service in leading the Solitario Audit Committee. We are thankful to John for his contributions to Solitario's success and wish him all the best going forward."

Share Repurchase Program extended to December 31, 2017

Solitario announced today that its board of directors has approved the extension of its existing share repurchase program through December 31, 2017. The share repurchase program, as initially approved in October 2015, authorized Solitario to repurchase up to 2.0 million shares of its outstanding common stock and was set to expire on December 31, 2016. As of December 20, 2016, Solitario has repurchased 613,000 shares under the plan at an average price of US\$0.507 per share. Under the program, as now extended, Solitario will have the ability to repurchase up to the remaining 1,387,000 available shares under the plan through December 31, 2017. All shares repurchased will be cancelled and will reduce Solitario's current 38.7 million shares outstanding. The timing and amount of any stock repurchased will be determined by Solitario's Company's management in the open market or in privately negotiated transactions based on market conditions and other factors, including price, regulatory requirements and capital availability, and in compliance with applicable state and federal securities laws. Repurchases may also be made under Rule 10(b)-18. The program does not require the repurchase of any minimum number of shares and may be suspended, modified or discontinued at any time without prior notice. No repurchases will be made outside of the United States, including shares trading on the Toronto Stock Exchange. Payment for shares repurchased under the program will be funded using Solitario's working capital.

Chris Herald stated: "The share repurchase program demonstrates our commitment to creating, enhancing and returning value to shareholders. We believe our current stock value does not reflect the value of our current cash position, our carried interest in the high-grade Bongará zinc project, and our past success in identifying, acquiring and enhancing precious and base metal properties with solid technical work."

About Solitario

Solitario is an exploration and royalty company. Solitario has a joint venture with Minera Milpo (a Peruvian zinc miner) on its high-grade Bongará zinc project in Peru. Solitario is traded on the NYSE MKT ("XPL") and on the Toronto Stock Exchange ("SLR"). Additional information about Solitario is available online at www.solitarioxr.com.

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 Solitario'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 Solitario's intentions to repurchase shares of its common stock from time to time under the stock repurchase program, that any or all repurchases 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. Solitario 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.

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