

Solitario Exploration & Royalty Corp. ("Solitario"; NYSE MKT: XPL; TSX: SLR) is pleased to announce today that its board of directors approved a share repurchase program that authorizes the Company to purchase up to 2.0 million shares of its outstanding common stock through December 31, 2016. All shares repurchased will be cancelled and reduce Solitario's current 39.2 million shares outstanding.

The timing and amount of any stock repurchased will be determined by the 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 purchase of any minimum number of shares and may be suspended, modified or discontinued at any time without prior notice. No purchases 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 the Company's working capital.

Chris Herald, President and CEO, 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."

2015 Review and Outlook for 2016

Solitario is embarking on a fresh start for our company and shareholders. We are excited about our newly defined corporate strategy presented below and the opportunities that abound in our financially stressed industry. We want to share with our shareholders our plans and objectives for 2016.

Mt. Hamilton Sale Paves the Way for a New Chapter

With the recent sale of our 80% interest in the Mt. Hamilton gold project to Waterton (see Solitario news release dated August 25, 2015), Solitario is now in a position to redefine its corporate goals moving forward. We received \$24 million in cash from the transaction and paid-off \$5.0 million in corporate debt to become debt-free. We begin the fourth quarter of 2015 with approximately \$18 million in cash.

As a note of interest, we invested approximately \$14 million into the Mt. Hamilton project since its acquisition in August 2010. We have estimated we will report a gain of approximately \$10 million on the transaction. This is an exceptional outcome during this period of nearly universal losses reported by most other mining companies that have sold assets within the past two years. Clearly, we acquired the right property under favorable terms and successfully enhanced its value in these challenging times.

We should also mention that Solitario's management team executed a similar strategy in 2006 when we sold our parent, Crown Resources, owner of the Buckhorn Mt. gold project, to Kinross Gold for proceeds in excess of \$150 million, benefitting Crown's shareholders. Solitario was a major beneficiary of this transaction netting approximately \$25 million in Kinross stock within the framework of that transaction.

A Strong Tradition as a Project Generator

Prior to the Mt. Hamilton acquisition, Solitario was historically a very successful project generator. We identified and acquired new properties, conducted early-stage exploration that demonstrated mineral potential and then joint ventured many of these projects with major mining companies, while retaining a significant carried interest. Over the years we have partnered with over a dozen intermediate to major mining companies on a number of projects involving multiple commodities (gold, silver, zinc, copper, lead, and platinum-palladium). One of these projects, our Bongará zinc project in Peru, remains under a carried joint venture arrangement with Milpo Mining, one of Peru's largest zinc producers. In total, Solitario's partners have expended over \$100 million on our joint venture projects.

Recapping Our Strengths and Defining Our New Direction

- Solitario is in a very strong financial position with approximately \$18 million in cash and no debt.

- Solitario is a proven project generator that has attracted major mining company interest and investment under favorable joint venture arrangements on multiple projects.

- Solitario management has taken two projects through resource expansion, feasibility and permitting, resulting in attractive transactions to the company and its shareholders.

• Solitario retains a fully carried 30% interest in the high-grade Bongará zinc project.

Our Future

Our future plans and objectives are simple - Solitario will continue its battle tested strategy of identifying and acquiring attractive, high-potential precious and base metal projects where we can add significant value through additional work. We believe that this is the best path for generating significant new shareholder value. With the current depressed commodity price environment and stressed balance sheets for both senior and junior mining companies, we believe it is an optimal time for the company to judiciously deploy its new found financial strength.

We want to remain flexible in our approach – we will focus on gold, silver and zinc, but will not rule out other metals or corporate opportunities. Our targeted geographic range will be the safe jurisdictions in the Americas, but with an emphasis in Peru, Mexico, Canada and the U.S. We plan to focus on relatively early-stage exploration projects that have some drilling and potentially a defined resource, but we will also look at select greenfield projects and/or advanced exploration projects where our feasibility and permitting experience may be beneficial. We will continue to evaluate royalty opportunities on advanced projects, but we believe current royalty acquisition costs in the industry are generally fully valued and do not offer the opportunity for multiple returns on investment.

We will be patient in not only finding the right project, but also the right terms for transactions that fit our technical and financial capabilities. Finally, we will be vigilant in maintaining a strong balance sheet and a low number of shares outstanding.

Bongará Update – Our Core Asset

Bongará is currently our core asset. It is an advanced exploration stage high-grade zinc project located in northern Peru. We are fully carried to production by our joint venture partner Milpo Mining. We are not required to contribute any funds prior to the completion of a feasibility study and our share of mine construction costs will be funded by a loan from Milpo and repaid from 50% of the net proceeds from production attributable to our 30% interest. Based on the high-grade zinc content of the defined resources, and the fact that the deposit remains open to expansion, we believe it is one of the best undeveloped zinc projects in the world.

Although the price of zinc fell significantly during 2015, our partner, Milpo Mining still elected to advance the project. Thus far in 2015, six more kilometers of access road have been completed, and an additional four kilometers is expected by the end of the year. This will complete the 35 kilometer access road from the main highway to the project site and represents a major milestone for the project. Significant progress was also made to further refine the resource estimate as well as additional engineering studies. Milpo is planning on 10 to 12 kilometers of drill access roads in 2016. These roads will be used for testing the extension of San Jorge zone to the south and the Karen-Milagros zone to the northeast.

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"). Solitario's Management and Directors hold approximately 7.6% (excluding options) of the Company's 39.2 million shares outstanding. Solitario's cash balance at the beginning of the fourth quarter was approximately US\$18 million. 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 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 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.

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