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SOLITARIO ANNOUNCES 2018 WORK PROGRAM, NEW PROPERTY ACQUISITIONS AND EXPLORATION OPPORTUNITIES ON ITS FLORIDA CANYON ZINC PROJECT, PERU

Denver, Colorado: Solitario Zinc Corp. (“Solitario”) NYSE American: **XPL**; TSX: **SLR**) is pleased to announce the planned 2018 work program, additional property acquisitions and newly defined exploration opportunities on its Florida Canyon Zinc Project in Peru. Florida Canyon is held in a joint venture between Solitario (39%-interest) and Nexa Resources (61%-interest (“Nexa”) NYSE: NEXA; TSX: NEXA). Highlights of the planned 2018 work program include completion of the access road into the mineralized portion of the project area and permitting that will allow new underground tunneling, surface drilling and other activities associated with the future development of the project.

The terrain at Florida Canyon is steep and all previous project access supporting surface and underground work programs was conducted by helicopter. The lack of road access restricted the scope of field activities to further advance the project. With the completion of the road, heavy equipment will be able to enter the project area and allow feasibility related activities to proceed efficiently. Important future activities that will be facilitated by the completion of the road are the construction of an underground tunnel into the Karen-Milagros high-grade zinc zone, detailed underground resource/reserve definition drilling, surface drilling designed to increase the project resource and additional feasibility/infrastructure-related studies. Work is scheduled to begin in May after the rainy season ends and continue until the road is completed.

Approximately 5,400 hectares (13,300 acres) of new concessions covering prospective geology and geochemistry were acquired by Nexa in late-2017 on the northern border of the Florida Canyon claim block. Earlier in 2017 Nexa filed for 6,500 hectares (16,100 acres) of new concessions. The consolidated Florida Canyon land position now stands at 48,700 hectares (120,300 acres). A current property map can be accessed here: <http://solitarioxr.com/art/20180206.jpg>.

Solitario recently engaged SRK to develop an exploration plan at Florida Canyon aimed at identifying low risk/high-probability of success resource expansion opportunities at Florida Canyon. The study focused on defining significant new high-grade zinc-sulfide mineralization immediately adjacent to the existing defined resource. The study delineated a program that has high-potential to expand the current resource by over 50% with a 41-hole, 17,000 meter drilling program. A link to a video describing the exploration potential within and surrounding the Florida Canyon deposit can be found here: <http://solitarioxr.com/FLCNvideo.php>

Chris Herald, President and CEO of Solitario, commented, “Completion of the access road into the mineralized area is critical to advancing the Florida Canyon project to a development stage. It is an important milestone as access has historically been the single biggest technical challenge to advancing the project. We also want to encourage our shareholders to view the Florida Canyon Exploration Opportunities video (see above link) to gain a better appreciation of the significant resource expansion opportunities that exist immediately adjacent to the currently defined resources at Florida Canyon. These targets present the potential to add significant tonnage and grade to the project’s current resources.”

Terms of the Florida Canyon and Chambara Joint Ventures

Solitario owns a 39% interest in the Florida Canyon project (formerly called the Bongará Project) and an 85% interest in the contiguous Chambara project. Nexa owns 61% and 15% of these two projects, respectively. Nexa can earn a 70% interest in the Florida Canyon project by continuing to 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, Nexa has further agreed to finance Solitario's 30% participating interest for construction through a project loan. Solitario will repay the loan facility through 50% of its net cash flow distributions for production on Florida Canyon joint venture properties. If Nexa earns a 70% interest in the Chambara JV and funds construction, then Solitario would repay any financing of Chambara initial capital construction from 80% of its net cash flow distributions.

About Solitario

Solitario is an emerging zinc exploration and development company traded on the NYSE American (“XPL”) and on the Toronto Stock Exchange (“SLR”). Besides Solitario’s joint venture with Nexa Resources on its high-grade Florida Canyon zinc project in Peru, Solitario also holds a 50% joint venture interest (Teck Resources Ltd. holds the other 50% interest) in the high-grade, open pitable Lik zinc deposit in Alaska, and a 9.6% equity interest in Vendetta Mining. Solitario’s Management and Directors hold approximately 9.2% (excluding options) of the Company’s 58.45 million shares outstanding. Solitario’s cash balance and marketable securities stand at approximately US\$14 million. Additional information about Solitario is available online at www.solitariozinc.com.

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Cautionary Note to U.S. Investors concerning estimates of Resources and Exploration Target Size: This news release uses the terms Resources and Exploration Target Size. The potential size of the Exploration Target is evaluated based on a proposed extension drilling program and its assumed success. An Exploration Target is not a Mineral Resource. Potential quantity and grade of an Exploration Target is conceptual in nature. There has been insufficient exploration to define a Mineral Resource in the areas of the proposed drilling program and it is uncertain if further exploration will result in the Exploration Target being delineated to a Mineral Resource. Exploration Targets and Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. The Company advises U.S. investors that while these terms are recognized and are in part 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 an Exploration Target Size, or Measured, Indicated or Inferred 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.

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 exploration or mining plans, if any; the potential for confirming, upgrading and expanding zinc, lead and silver mineralized material; future operating and capital cost estimates may indicate that the stated resources may not be economic; estimates of zinc, lead and silver grades of resources provided are predicted and actual mining grade could be substantially lower; estimates of recovery rates could be lower than estimated for establishing the cutoff grade; and other statements that are not historical facts could vary significantly from assumptions made herein. 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 and its joint venture partners' 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; 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. 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.