



May 23, 2018

**SOLITARIO ANNOUNCES MAJOR DRILLING PROGRAM ON ITS
FLORIDA CANYON ZINC PROJECT, PERU**

Denver, Colorado: Solitario Zinc Corp. (“Solitario”) NYSE American: **XPL**; TSX: **SLR**) is pleased to announce that a significant drilling program for the Florida Canyon zinc project is scheduled to begin in the third-quarter of 2018, pending drilling permit approvals. Forty-one core holes totaling approximately 17,000 meters (56,000 feet) are planned. Florida Canyon (formerly called the Bongará Project) is held in a joint venture between Solitario and Nexa Resources (“Nexa”) NYSE: NEXA; TSX: NEXA), the world’s fourth largest zinc miner. Nexa is the manager of the project.

The drilling program has been designed to test highly prospective resource expansion opportunities identified by deposit modeling during preparation of the 2017 Florida Canyon PEA. Proposed drilling is focused on significant gaps and offsets in known high-grade zinc-sulfide mineralization within and contiguous with the presently defined resource.

An informative video found [here](#) describes in detail the drilling program and exploration potential within and surrounding the Florida Canyon deposit.

Drilling will test for extensions of high-grade zinc-sulfide mineralization in four different areas of the deposit. ([Map link to North Areas](#)) ([Map link to San Jorge](#))

Table 1: 2018 Drill Target Areas and Proposed Average and Total Meterage (Source: SRK, 2017)

Area	Planned Holes	Total Meterage	Avg. Hole Depth (m)	Comments
North Central	6	2,695	449	connecting sulfide mantos* with good continuity
Northeast	17	7,805	459	east and northeast extensions of high-grade Karen-Milagros sulfide mantos
Northwest	7	1,700	244	northerly extension of sulfide mantos and delineation of a vertical feeder structure
San Jorge	11	5,060	458	southern extension of main feeder structure, adjacent sulfide mantos and parallel veins
Total	41	17,260	402	

*Mantos are lenses of massive mineralization that replaces stratigraphic rock formations.

Chris Herald, President and CEO of Solitario, commented, "The second half of 2018 will be exciting times for Solitario and its shareholders. The objective of this drilling campaign is to add another 800 million pounds of zinc metal to the Florida Canyon resource base. Every drill hole is designed to intersect high probability extensions to known high-grade zinc mineralization. We are excited about the impact this drilling could have on project economics." For comparison purposes, Table Two below provides highlights of the last Florida Canyon drilling program completed in 2013 and serves to illustrate the high grade and thickness of Florida Canyon mineralization.

Table 2: Past Drilling Highlights from the Last Drilling Program in 2013

Drill Hole Number	Intercept* (meters)	Zinc %	Lead %	Zn + Pb %	Silver gpt
V-378	7.7	14.62	2.11	16.73	15.69
V-386	16.2	10.70	1.71	12.41	11.13
V-394	3.5	21.72	7.08	28.79	48.69
V-397	2.4	33.00	21.33	54.33	133.96
V-401	12.7	7.38	1.78	9.16	13.29
V-412	5.5	17.17	0.94	18.11	8.49
V-424	17.2	5.83	0.26	6.09	2.36
V-427	15.1	12.06	2.75	14.81	17.59
V-436	17.0	11.74	1.08	12.81	18.48
and	6.0	15.51	2.52	18.04	29.74
V-451	30.7	13.06	4.97	18.03	32.64
V-452	19.4	7.66	0.73	8.38	7.33
V-453	22.0	13.70	1.54	15.24	14.47

* True thicknesses have not been estimated for each individual intercept, but are generally thought to average about 70-80% of the actual drilled thicknesses.

Mr. Walt Hunt, COO for Solitario Zinc Corp., who is a qualified person as defined by National Instrument 43-101, has reviewed the drill hole information contained within this release. Samples are derived from 50% splits of HQ and NQ (2.5 and 1.9 inch) diameter core. Samples are then shipped via secured third-party land and air transportation companies and analyzed by ALS Chemex Inc., North Vancouver, Canada, an ISO9002 registered company.

Terms of the Florida Canyon Joint Venture and Funding of the 2018/2019 Drilling Program

Solitario and Nexa have agreed to jointly fund the estimated \$5.3 million total cost for the 2018/2019 drilling program with Nexa contributing 70% and Solitario funding 30%. Funding that Solitario contributes towards the 2018 drilling program will be fully credited towards repayment to Nexa of the construction loan facility it provides to Solitario (see below).

Solitario owns a 39% interest and Nexa owns a 61% indirect interest in the Florida Canyon project. 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 from production.

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 11.0 million shares (7.5% equity interest) of Vendetta Mining. Solitario’s Management and Directors hold approximately 9.2% (excluding options) of the Company’s 58.4 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: This news release uses the term Resources. 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 a 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 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.