



Solitario Reports 2022 Progress and Future Work Plans at Lik and Florida Canyon Zinc Projects

DENVER, CO – May 18, 2022 - Solitario Zinc Corp. (“Solitario”) (NYSE American: XPL; TSX: SLR) is pleased to update exploration and other associated activities on its Lik and Florida Canyon high-grade zinc projects and joint venture plans for the remainder of 2022.

Lik Zinc Project (Alaska: Joint Venture: 50% Solitario / 50% Teck Resources)

The Lik project (100% basis) hosts an Indicated Resource of 17.6 million tonnes grading 8.07% zinc, 2.68% lead and 50.1 grams per tonne silver and an additional 2.8 million tonnes of Inferred Resource grading 8.64% zinc, 2.73% lead and 38.9 grams per tonne silver. The project is situated approximately 17 kilometers (10.4 miles) northwest of Teck’s operating Red Dog mine, one of the world’s largest, highest grade and lowest cost zinc mines.

Solitario and its joint venture partner, Teck American Incorporated, a wholly owned subsidiary of Teck Resources Limited (TSX: TECK.A and TECK.B, NYSE: TECK) (“Teck”) recently approved a jointly funded budget for the 2022 Lik work program that consists of exploration drilling and gravity geophysics.

Three core holes totaling 650 meters (2,145 ft.) are planned at Lik during the summer field season to test for resource extensions on the northeast and northwest margins of the currently defined resource footprint, with the third hole on the southern margin. Of note, one of the planned drill holes will also test the potential for stacked mineralization. The Induced Polarization geophysical survey conducted on the Lik property in 2021 suggested that the mineralized horizon hosting the Lik deposit flattens to the west and could be at drillable depths in a valley floor situated approximately three kilometers to the west. The planned gravity geophysical survey will test for gravity anomalies potentially associated with buried zinc mineralization.

Teck Includes the Lik Deposit in its Zinc Satellite Initiative

On May 12, 2022, Teck announced the formation of its Zinc Satellite initiative to surface value from Teck’s portfolio of world-class zinc development assets. The Lik Zinc Project is one, among five projects selected for Teck’s value creating initiative. View Teck’s press release in its entirety [here](#). Teck is currently the world’s largest net zinc miner based on zinc production from Red Dog in Alaska and Antamina in Peru.

Florida Canyon Zinc Project (Peru: Joint Venture: 39% Solitario / 61% Nexa Resources)

The Florida Canyon project (100% basis) hosts an Indicated Resource of 2.4 million tonnes grading 10.62% zinc, 1.33% lead and 15.0 grams per tonne silver and an additional 14.9 million tonnes of Inferred Resource grading 9.63% zinc, 1/26% lead and 11.3 grams per tonne silver. Solitario’s joint venture

partner, Nexa Resources S.A. (NYSE: NEXA; TSX: NEXA) (“Nexa”), is focusing its 2022 work program in three critical areas to advance the project:

- The first is to finish an access road to several near-by communities that currently have no vehicle access. This effort is part of the joint venture’s social commitment to people and communities in the vicinity of the Florida Canyon project area. Several kilometers of new road have been completed, as well as significant upgrading of previously pioneered road. The road is expected to be completed before the end of the year.
- The second significant 2022 program is completion of a comprehensive metallurgical testing program focusing on sulfide dominant mineralization. Nearly five tonnes of previously drilled mineralized core will be subjected to a variety of tests to better estimate zinc, lead and silver recoveries, as well as the grade and quality of Florida Canyon concentrates that would be deliverable to smelters.
- Finally, drill hole permitting is well underway to significantly expand the area permitted for drilling activities for 2023 and beyond. The permit application will enlarge the area permitted for drilling by approximately 500 percent. Over 80 new drill hole sites are planned in areas to the south, east and southeast of the Florida Canyon deposit. Multiple drill holes can be completed from each site. These drill sites are located on trend with the Florida Canyon deposit to the south and a parallel trend a couple kilometers to the east. Both of these multi-kilometer trends have undrilled high-grade zinc mineralization at surface comparable to the surface mineralization at Florida Canyon.

Chris Herald, President and CEO of Solitario, commented, “With all the excitement surrounding the high-grade gold results on our Golden Crest gold project in South Dakota, many of our new shareholders may not realize the significant underlying value of our two high-quality zinc assets that are joint ventured with two of the leading zinc producers in the world.

The three major work programs at Florida Canyon are all critical to the future advancement and development of the project. In addition, the Lik project is clearly entering an exciting new phase with our 2022 drilling program. The drilling program is focused on potentially expanding the Lik resource in three different areas of the existing deposit, while the planned geophysical gravity survey could demonstrate significant new value potential for the project. We are extremely pleased that our two joint venture partners, Teck and Nexa Resources, remain committed to meaningful advancement to both of these large high-grade zinc projects. We look forward to sharing the results of these activities with our shareholders as work progresses.”

Background Information on the Lik and Florida Canyon Projects

Total Lik Mineral Resource: Tonnes and Grade

(Refer to SK-1300 Technical Report Summary for important resource estimation assumptions)

Location	Indicated Resources				Inferred Resources			
	Mt	% Zn	% Pb	g/t Ag	Mt	% Zn	% Pb	g/t Ag
Lik South	17.1	8.04	2.69	50.0	0.71	7.78	1.97	14.3

Lik North	0.51	8.95	2.46	52.9	2.09	8.93	2.98	47.2
Total	17.6	8.07	2.68	50.1	2.80	8.64	2.73	38.9

The Lik deposit is a large sediment-hosted zinc-lead-silver deposit in the Red Dog mining district that can potentially be mined by open pit mining methods. The Lik South deposit remains open down-dip, while, the Lik North deposit remains open down-dip and to the north. A total of about 38,000 meters (125,300 ft.) of drilling in 229 holes has been completed on the Lik property to date. The Lik property position consists of State of Alaska mining claims totaling 2,460 hectares (6,075 acres). Additional information is available in the Company's [2022 SK-1300 Technical Report Summary](#).

Total Florida Canyon Mineral Resource: Tonnes and Grade

(Refer to SK-1300 Technical Report Summary for important resource estimation assumptions)

Classification	Sum of Tonnes	Zn %	Ag g/t	Pb %
Measured	806,945	11.32	15.42	1.39
Indicated	1,634,702	10.28	14.87	1.31
Measured + Indicated	2,441,647	10.62	15.05	1.33
Inferred	14,858,733	9.63	11.28	1.26

The Florida Canyon deposit is a Mississippi Valley Type, carbonate-hosted high-grade zinc deposit. It is an advanced exploration project with approximately \$75 million in partner investments (526 drill holes; 134,416 meters). A [43-101 Preliminary Economic Assessment](#) demonstrates robust economics at \$1.20/lb. zinc price. The Florida Canyon resource is located within 16 contiguous mining concessions covering approximately 12,600 ha (31,100 acres). Surrounding the Florida Canyon resource area concessions are an additional 37 contiguous concessions covering approximately 27,900 hectares (68,940 acres) that are held within the Chambara joint venture with Nexa. Additional information is available in the Company's [2022 SK-1300 Technical Report Summary](#).

Terms of the Florida Canyon Joint Venture

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 a natural resource exploration and development company focused on high-quality Tier-1 gold and zinc projects. The Company is traded on the NYSE American ("XPL") and on the Toronto Stock Exchange ("SLR"). In addition to its Golden Crest project, Solitario holds 50% joint venture interest (Teck Resources 50%) in the high-grade, Lik zinc deposit in Alaska and a 39% joint venture interest (Nexa Resources holds the remaining 61% interest) on the high-grade Florida Canyon zinc project in Peru. Solitario is carried to production through its joint venture arrangement with Nexa. Solitario's

Management and Directors hold approximately 9.3% (excluding options) of the Company's 64.7 million shares outstanding. Solitario's cash balance and marketable securities stand at approximately US\$7.8 million. Additional information about Solitario is available online at www.solitariozinc.com.

Solitario has a long history of committed Environmental, Social and Responsible Governance ("ESG") of its business. We realize ESG issues are also important to investors, employees and all stakeholders, including communities in which we work. We are pledged to operate our business in a manner that supports environmental and social initiatives and responsible corporate governance.

Walter Hunt, COO of Solitario, is a Qualified Person under NI 43-101 and has approved the scientific and technical information related to the 43-101 Technical Report reports and the S-K 1300 Technical Report referred to in this press release.

FOR MORE INFORMATION ABOUT SOLITARIO, CONTACT:

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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 facts. 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. Solitario's Golden Crest land position does not cover any of the areas of historical gold production or historical unmined resources. Certain historical information concerning exploration and gold production in the Black Hills region has been obtained through both public and private sources and are believed to be substantially factual, but Solitario can give no assurances of the accuracy of such information. The existence of historic mines and resources adjacent to Solitario's land position do not necessarily support the existence economic mineral deposits on Solitario's land position. 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 a mining plan, if any, at any of its mineral properties; the potential for confirming, upgrading and expanding gold, 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 in the SK-1300 Technical Report Summary for the Florida Canyon zinc project and the SK-1300 Technical Report Summary for the Lik Project. 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, gold, lead and silver; the inherently hazardous nature of mining-related activities; uncertainties concerning reserve and resource estimates; availability of outside contractors, and other activities; uncertainties

relating to obtaining approvals and permits from governmental regulatory authorities; 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; risks relating to the impacts of Covid-19 or similar variants; 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 and any current reports on Form 8-K. 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.