



Solitario Discovers New Gold Bearing Areas on its Golden Crest Project; Reports Highest Gold Grade to Date; Expands Land Position

DENVER, CO – November 8th, 2021 - Solitario Zinc Corp. (“Solitario”) (NYSE American: XPL; TSX: SLR) is pleased to announce that it has discovered two new areas containing significant gold mineralization at surface on its Golden Crest project. Based on these results, and its ongoing exploration program, Solitario has expanded its mineral claim position from approximately 18,500 acres to 21,340 acres of mineral rights located in western South Dakota.

These mineral claims comprise a strategic land holding along the western extension of the Homestake-Wharf mining complex that has produced well in excess of 50 million ounces of gold with another 20-30 million ounces in historical resources. The project area is in a safe jurisdiction with highly developed infrastructure, an unbroken 145-year record of continuous gold mining, a skilled mining workforce and a history of high-grade, underground mineable gold deposits.

Assay results of surface grab samples from four new areas of the Golden Crest project are presented in this news release. Two of the four newly sampled areas (see table below) returned significant gold values, while the other two had anomalous gold. This round of assay results includes the highest assay value obtained from the surface to date - 8.13 grams of gold per tonne (“gpt”) in grab sample number 6055020. Two other samples from the Downpour target contained 5.90 gpt and 1.65 gpt gold. The average grade of all nine samples collected from the Downpour area was 1.86 gpt gold.

Downpour Prospect		Log Jam Prospect	
Sample Number	Gold (parts/billion)	Sample Number	Gold (parts/billion)
6055020	8,130	6055034	26
6055021	5,900	6055035	364
6055022	447	6055036	524
6055023	1,650	6055037	24
6055024	197		
6055025	309		
6055026	6		
6055038	70		
6055039	26		

Chris Herald, President and CEO of Solitario, stated: “When we began our exploration work earlier this year at the Golden Crest project, our thesis was that a large gold endowment could exist at depth in limestone covered terrain west of the Super Giant Homestake-Wharf gold complex. Our work to date fully supports this hypothesis. Collecting multi-gram gold samples in the shadow of a +70-million-ounce gold district, with virtually no evidence of any past exploration, is truly remarkable. Solitario intends to move forward with more advanced exploration efforts, including a drill program for 2022, pending completion of permitting. We firmly believe that the Golden Crest project could emerge into one of the most important greenfield exploration projects in North America.”

Initial sampling has now been conducted over thirteen prospect areas of the Golden Crest project. Five of the prospect areas have rock samples containing multi-gram gold, another three prospects have samples containing between 0.1 to 1.0 grams gold/tonne and the other five sampled areas contained rock samples with detectable gold between 10 and 100 ppb. Two gold trends have been identified to date: 1) The Whirlwind, Matchstick and Treasure Fault prospects (“WMT”) define a 6.5-kilometer north-south arcuate trend with significant gold values; and 2) The Downpour-Log Jam trend, about four kilometers east of the WMT trend, is still being defined, but appears to have significant expansion potential. A summary table of gold in rock grab samples assayed to date by prospect area is provided below:

Prospect	No of Samples	Au ppb (max)	Au ppb (avg.)*
Buena Vista	24	3246	215
Yellow Jacket	26	132	33
Shoofly	33	64	14
Treasure Vault	44	3990	516
Matchstick	119	3700	254
Whirlwind	152	7990	382
Citadel	60	30	13
11th Hour Gulch	12	10	7
Maurice	10	349	85
Lockout	6	61	25
Downpour	9	8130	1859
Log Jam	4	524	235
Dustbowl	7	62	62

* of samples with detectable gold

Sampling Methodology, Chain of Custody, Quality Control and Assurance

All surface rock samples were collected or supervised by project geologists, including chain of custody. Samples were select grab samples that display alteration, usually silicification and hydrothermal brecciation. These samples were derived mainly from residually weathered rock fragments, sub-crop, and less commonly, outcrop. The significance of these samples is limited to determining whether or not gold or trace elements usually associated with gold, are present within rocks affected by hydrothermal alteration fluids and does not verify economically mineable mineralization at depth. Samples were analyzed by Skyline Assayers & Laboratories in Tucson, AZ, a laboratory accredited in accordance with the standards of ISO 17025:2017. The samples were crushed, pulverized and sample pulps were analyzed using industry standard fire assay methods. A certified reference sample or duplicate was inserted at least every 20th sample.

Walter Hunt, COO of Solitario, is a qualified person as defined by NI 43-101, Standards of Disclosure for Mineral Projects, responsible for approving the scientific and technical information contained in this news release.

About Solitario

Solitario is an emerging zinc and gold exploration and development company 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, open-pit table 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’s Management and Directors hold approximately 9.3% (excluding options) of the Company’s 58.9 million shares outstanding. Solitario’s cash balance and marketable securities stand at approximately US\$5.6 million. Additional information about Solitario is available online at www.solitariozinc.com.

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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 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. Solitario’s Golden Crest land position does not cover any of the areas of historical gold production or historical unmined resources, but are thought to be on trend with these known areas of mineralization. Certain historical information concerning exploration and gold production in the Black Hills region has been obtained through both public and private sources and are believe to be substantially factual, but Solitario can give no assurances of the accuracy of such information. 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 Lik or Florida Canyon; 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 for 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 PEA. 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; 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; 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.