



Solitario Discovers New Area of Significant Multi-Gram Gold and Silver Mineralization; Increases South Dakota Land Position to Over 33,000 acres

DENVER, CO – November 16, 2022 - Solitario Zinc Corp. (“Solitario”) (NYSE American: XPL; TSX: SLR) is pleased to report that it has discovered a new area of high-grade gold and silver mineralization at surface and has significantly expanded its land position in South Dakota. Assay results on the new property for eight samples range from 1.1 grams per tonne (“gpt”) gold to 94.2 gpt gold. The average gold content of these samples is 29.8 gpt and the average silver mineralization is 71.1 gpt. The new high-grade gold prospect is named Geyser and sampling to date covers an area approximately 90 x 60 meters.

Presented in the table below are all the new rock grab sample assay results for the Geyser prospect area located entirely within the newly acquired Ponderosa Property east of the Golden Crest Claim block discussed in previous releases. These results can be viewed on a Google Earth image on the attached [Geyser Zone Image](#).

Select Rock Grab Sample Assay Results for the Geyser Prospect

Geyser		
Sample #	Gold gpt	Silver gpt
2857	20.3	57.2
2858	24.6	12.3
2859	43.0	113.0
2860	2.0	98.0
2861	36.0	59.4
2862	1.1	100.0
2863	94.2	86.7
2864	17.3	47.1
Avg. for 8 samples	29.8	71.7

¹Reconnaissance rock grab/float samples are selective in nature, and therefore reported mineralization and assay results may not be representative nor reflect economic viability

Chris Herald, President and CEO of Solitario, stated: “*Although it is still very early days in Solitario’s evaluation of the Ponderosa Property and the Geyser Prospect, it is clear that the extremely high-grade nature of mineralization at Geyser rivals that of the Downpour area at Golden Crest. It is interesting to note that the initial samples collected at the Downpour discovery started out with a smaller footprint than Geyser, but with additional work has grown in size to*

cover an area over 800 meters long and up to 500 meters wide (see Solitario news release dated November 3, 2022).

However, Geyser differs from Downpour in two significant characteristics. First, Geyser mineralization is hosted within a structural zone; and second, its geochemical signature is different, with one attribute being the higher-grade silver content. A significant number of additional samples have been collected in the Geyser area, extending hundreds of meters in all directions. We look forward to releasing the results of these samples as they become available.”

Solitario Increases its Land Position

With the acquisition of the Ponderosa Property, Solitario increased its South Dakota land position from approximately 28,000 to 33,280 acres totaling over 1,700 mining claims.

Sample Type, Sampling Methodology, Chain of Custody, Quality Control and Assurance

The reported Geyser rock assays are all surface rock grab/float samples and were not collected from a bedrock source. However, these samples are thought to be derived from the underlying bedrock in the immediate area. All sampling reported in this release was supervised by project geologists, including chain of custody. Rock samples are reconnaissance select grab samples that display alteration, usually silicification and hydrothermal brecciation.

The significance of these results is limited to determining whether gold, or trace elements usually associated with gold, are present within rocks affected by hydrothermal alteration fluids and assay results may not be representative of, nor verify economically mineable mineralization. Samples were analyzed by ALS Laboratories in Reno, NV, a laboratory accredited in accordance with the standards of ISO 17025:2017. The samples were crushed and 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.

Drill Hole Permitting and Project Overview

Drill hole permitting continues to advance on Solitario’s Golden Crest Property since its initiation in February 2022, when a Plan of Operations was filed with the U.S. Forest Service. Environmental baseline studies, in support of permitting documents required for drilling, are nearly complete. The final Environmental Assessment work for core drilling is scheduled to be completed in the second quarter of 2023.

Solitario’s 100%-owned South Dakota properties collectively total over 33,000 acres and constitute strategic land holdings along the western and southwestern extensions of the Homestake-Wharf mining district that has produced approximately 52 million ounces of gold and contains another 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.

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 South Dakota property holdings, Solitario holds a 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 62 million shares outstanding. Solitario’s cash balance and marketable securities stand at approximately US\$5.0 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. Importantly, we selected joint venture partners that not only value the importance of ESG issues in the conduct of their business on our joint venture projects but are leaders in the industry in this important segment of our business.

For More Information Please 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 numerous 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. 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. 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.