



## **Solitario Discovers Multi-Gram Spur Gold Zone South of Geysers; Geysers-Spur Gold Zones Open in All Directions**

DENVER, CO – January 18, 2023 - Solitario Zinc Corp. (“Solitario”) (NYSE American: XPL; TSX: SLR) is pleased to report that it has received results from a new high-grade gold area, called Spur, south of the recently announced Geysers Gold Zone. The combined Geysers-Spur Gold Zone represents a significant expansion to the original Geysers high-grade area (November 16 and December 7, 2022 news releases). The broadened area remains open to expansion in all directions with many peripheral assays pending. It is important to note the Geysers-Spur Gold Zone is more than 4.0 kilometers from our previously announced high-grade Downpour Gold Zone, all of which are a part of Solitario’s 33,000-acre land holdings in South Dakota. Also, final Downpour channel sample assay results were received and increased the length of high-grade mineralization in two of the trenches (see [Downpour Target Trench Results Map](#)).

New surface sampling results, as well as previously reported results can be viewed on the attached [Geysers-Spur Zone Map](#). New sampling highlights include:

- The new Spur assay results have expanded the footprint of gold mineralization to an area measuring approximately **650 x 225 meters** from the previously reported oval-shaped area measuring 225 x 125 meters.
- Fourteen new select grab surface samples **averaged 6.8 grams per tonne (“gpt”) gold** within the expanded footprint. This new high-grade zone, called Spur, measures approximately **150 x 120 meters**.
- Initial trenching assay results yielded a **continuous mineralized zone 24 meters long, averaging 1.11 gpt gold**. These results correlated well with the two nearest surface grab rock samples of 1.2 gpt gold, situated to the north, and 0.9 gpt gold sample to the south.
- Assay results are pending for a much larger area surrounding the Geysers-Spur Zone.
- At Downpour, 3.0 meters grading 15.4 gpt gold were added to Trench 1 bringing the total length to **36 meters grading 17.6 gpt gold** and 3.6 meters grading 25.6 gpt gold were added to Trench 5 bringing the total length to **15.6 meters grading 17.1 gpt gold**.

**Chris Herald, President and CEO of Solitario, will give a 30-minute corporate presentation focusing on the significance of these recent Geysers-Spur results on Tuesday, January 24, from 2:00 p.m. to 2:30 p.m. EST. The webcast may be accessed through the Company’s website. The replay will be available within 24 hours after the presentation.**

**LIVE WEBCAST LINK:**

<https://us02web.zoom.us/j/81167061052?pwd=KzJWQU1GMXgveXFGaTlkVUR3NGVzUT09>

Chris Herald, President and CEO of Solitario, stated: *“These two new high-grade discoveries, the Geyser and adjacent Spur Zone, display average surface grab sample grades of 28.6 and 6.8 gpt gold, respectively. The combined mineralized surface area now measures 650 x 225 meters and remains open in all directions. We anticipate the Geyser-Spur Zone will continue to expand as we receive new assay results peripheral to these reported samples.*

*It is also very encouraging to see the strong correlation of assay grades between our surface grab samples and our initial trenching results at Geyser-Spur. The first eight three-meter trench samples (a continuous 24-meter trench) averaged 1.1 gpt gold and the two nearest surface samples graded 1.2 and 0.9 gpt gold. At Downpour, our high-grade select surface grab samples also had great correlation with trench samples. We look forward to releasing additional assay results as they become available. Finally, drill hole permitting continues to progress and we are still on schedule for a second quarter 2023 completion date for the Environmental Assessment.”*

### **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 complete. The final Environmental Assessment evaluation 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.

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

The reported Spur and Geyser rock assays are all surface rock grab/float samples and were generally not collected from a bedrock source. However, these samples are thought to be derived from the underlying bedrock in the immediate area. The eight Spur Zone trench samples were mostly from weathered disaggregated rock fragments, all believed to be locally derived. 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.

### **About Solitario**

Solitario is a natural resource exploration 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 9.1% (excluding options) of the Company’s 65 million shares outstanding. Solitario’s cash balance and marketable securities stand at approximately US\$5.1 million. Additional information about Solitario is available online at [www.solitariozinc.com](http://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.*