



## **Solitario Cuts 234 Meters of 0.82 GPT Gold and 27 Meters of 3.22 GPT Gold in Trenches at Spur and Zig Zag Gold Zones; Open in Multiple Directions**

DENVER, CO – February 28, 2023 - Solitario Zinc Corp. (“Solitario”) (NYSE American: XPL; TSX: SLR) is pleased to report that it has received additional assay results from trenching and surface rock sampling at the Spur Gold Zone and from a recently discovered gold-rich area to the east called Zig Zag. The Geysler, Spur and Zig Zag zones are new surface gold discoveries made during the 2022 field season on Solitario’s Golden Crest project in South Dakota. Highlights of newly released assays include:

- **Spur Trench 1: 234 meters grading 0.82 grams per tonne (“gpt”) gold** consisting of a continuous channel of 78-three-meter samples predominantly from bedrock and open at both ends of the trench (the first 24 meters of this trench were previously reported).
- **Zig Zag Trench 1: 27 meters grading 3.22 gpt gold** consisting of a continuous channel of 9-three-meter samples predominantly from bedrock and open at both ends of the trench.
- **Seventeen new widely-spaced select high-grade grab samples with assays above 5.0 gpt gold**, including two from the new Zig Zag Gold Zone, are reported in this release and significantly expand the currently delineated higher-grade area. These surface sample assays include: **5.6, 5.9, 7.5, 8.1, 9.5, 11.3, 13.4, 14.3, 14.5, 15.7, 16.8, 16.9 17.0 20.6, 24.0, 29.0, and 36.4 gpt gold.**
- The combined Geysler-Spur-Zig Zag Gold Zone now encompasses an area approximately **800 x 700 meters with a significant population of multi-gram gold values** in trench and surface rock grab samples. This large area of moderate-to-high-grade gold values remains open to expansion in all directions.

These newly reported trenching and grab sample assay results, as well as previously reported results, can be viewed on the attached [Geysler-Spur-Zig Zag Map](#).

Chris Herald, President and CEO of Solitario, stated: *“We continue to discover and enlarge new areas displaying strong gold values at surface and anticipate this trend will continue. Spur Trench 1 assay results are exceptional, especially the consistency of mineralization over a length of 234 meters. The average grade of the 78 three-meter sample intervals (0.82 gpt gold) is not carried by a couple of high-grade gold values, but rather nearly half of the intervals are greater than 0.50 gpt gold with the three highest 3-meter intervals grading 7.05, 3.25 and 3.07 gpt gold. It’s the same story at Zig Zag (27 m @ 3.22 gpt gold) where seven out of the nine three-meter samples are greater than 2.6 gpt gold.*

*The combined mineralized surface area of the Geysler-Spur-Zig Zag zone now measure more than half of a square kilometer and remains open in all directions. Multiple samples containing >10*

*gpt exist at the northern, western and eastern limits of exploration. Amazingly, if Golden Crest is similar to known mineralization in the Homestake-Wharf district to the east, the best mineralization lies in the host rocks (Deadwood Formation) below the stratigraphy exposed at surface at Golden Crest. We anticipate the Geyser-Spur-Zig Zag Zone will continue to expand as we conduct additional work in 2023.”*

### **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 politically 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.

### **Reclamation and Best Practices:**

Solitario is committed to a “Best Practices” policy for all of its exploration activities, whether on private or public lands. For example, all proposed drill hole locations as part of the current Plan of Operations, will be located adjacent to or on existing logging roads or other logging related surface disturbances. In this way drill hole sites will minimize or eliminate new surface disturbance on public land. Drilling proposed under the Plan of Operations and analyzed in the EA will be conducted in accordance with the provisions of the Decision document issued by the USFS and all state permits granted for the proposed actions.

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

The reported Spur and Geyser rock samples are mainly surface 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 sampled area. Trenching at Spur and Zig Zag was conducted using handheld non-mechanized tools. The Spur and Zig Zag Zones trench samples were mostly from bedrock and disaggregated weathered bedrock with a minor soil component. All sampling reported in this release was supervised by project geologists, including chain of custody. Reported rock samples often include reconnaissance select grab samples that usually display 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. 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\$4.8 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 select 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.*