



## **Solitario Significantly Expands Geyser Gold Target with New Multi-Gram Gold Assay Results – Remains Open in Two Directions**

DENVER, CO – March 18, 2024 - Solitario Resources Corp. (“Solitario”) (NYSE American: XPL; TSX: SLR) is pleased to report that it has significantly expanded, and better defined through infill rock sampling, the Geyser gold zone area on its Golden Crest project. Recently received assay results from reconnaissance rock sampling of outcrop, sub-crop and float from the 2023 field season yielded **gold values as high as 171.5, 108.0, 78.6 and 59.9 grams per tonne (“gpt”) gold.**

Geyser was previously reported as three separate zones: Geyser, Spur and Zig Zag. Results from the 2023 reconnaissance rock grab sampling program resulted in these three zones coalescing into a single zone that is now solely referred to as the Geyser Zone. The complete Geyser dataset from the 2022 and 2023 field seasons totals 515 rock grab samples. **Ninety-nine (99) of these samples have returned values in excess of 1.0 gpt gold, with 36 exceeding 10 gpt gold.**

Table 1 presents the 12 highest-grade rock grab samples collected during each of the 2022 and the newly reported 2023 field seasons.

**Table 1: Geyser Assay Highlights For Surface Grab Samples**

<b>Newly Reported Assay Results</b>		<b>Previously Reported Assay Results</b>	
<b>Sample Number</b>	<b>Gold (gpt)</b>	<b>Sample Number</b>	<b>Gold (gpt)</b>
7116*	<b>171.5</b>	2863	<b>94.2</b>
5429	<b>108.0</b>	2872	<b>47.9</b>
7006	<b>78.6</b>	2859	<b>43.0</b>
5666	<b>59.9</b>	2775	<b>37.1</b>
5635	<b>35.3</b>	2946	<b>36.4</b>
5634	<b>31.4</b>	2861	<b>36.0</b>
5636	<b>27.1</b>	2947	<b>29.0</b>
5439	<b>22.8</b>	2873	<b>26.5</b>
5737	<b>16.2</b>	2858	<b>24.6</b>
5620	<b>13.7</b>	2948	<b>24.0</b>
5146	<b>11.3</b>	2901	<b>23.8</b>
2977	<b>10.7</b>	2950	<b>20.6</b>

\*Sample 7116 is a 4.1-meter composite chip-channel. True thickness cannot be determined, as the amorphous outcrop did not have any characteristics to allow a true thickness estimate.

The Geyser Zone is V-shaped and is believed to represent two intersecting structural trends ([see attached map](#)). The west limb is a broad rectilinear zone that trends north-south and is 1,200 meter long and up to 600 meters wide. At its southern end, a distinct, structurally controlled zone branches off to the northeast for 1,100 meters forming the eastern limb of the V-shaped surface mineralization. This zone varies from 200 to 400 meters in width. A third, less-well defined

subzone exists east of this structure. The two primary limbs to the Geyser prospect are characterized by scattered, but widespread, high-grade gold values surrounded by large zones of lower-grade mineralization between 0.2 to 2.0 gpt gold. Previously reported Spur Trench 1 results, 0.82 gpt gold over a continuously sampled 234-meter trench in bedrock and sub-crop, exemplifies this lower-grade halo (see Solitario new release dated February 28, 2023).

Chris Herald, President and CEO of Solitario, stated: *“We believe Geyser has developed into one of the most exciting greenfields gold exploration targets in North America. Mineralization defined to date at Geyser displays a widespread distribution of very high-grade gold in surface samples, within an overall halo of lower-grade gold. We remain amazed at the strength of this 80-square kilometer hydrothermal gold system, and the fact that it remained undiscovered throughout the 150-year history of exploration and mining in the northern Black Hills.*

*We are confident that with continued surface exploration, this strongly mineralized area will continue to expand. We are still receiving assay results for rocks collected during 2023 and anticipate releasing additional results in the next several weeks.”*

### **Golden Crest Drill Hole Permitting and Project Overview**

The Geyser gold zone is located on Solitario’s new Ponderosa Plan of Operations (POO) which is located in the easternmost portion of Solitario’s consolidated Golden Crest property. The Ponderosa area is a non-contiguous group of mineral claims not covered by the original Golden Crest POO, but is a part of Solitario’s 100%-owned Golden Crest project area in South Dakota. The new Ponderosa POO proposes low-impact core drilling to test the Geyser gold zone and several other new gold targets.

In December 2023, the United States Forest Service (“USFS”) issued its final Environmental Assessment (“EA”) and Draft Decision and Finding of No Significant Impact (FONSI) on Solitario’s proposed Golden Crest drilling program. As a result of this decision, no additional environmental studies beyond USFS’s comprehensive EA is required. Currently, the USFS is finalizing its response to objections to their FONSI decision.

Solitario’s 100%-owned Golden Crest properties in South Dakota 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 (not SK-1300 or NI-4301 compliant). The project area is in a safe jurisdiction with highly developed infrastructure, an unbroken 150-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 Geyser rock assays are all surface rock grab/float samples consisting of near-bedrock float samples, and to a lesser extent, bedrock and sub-crop composite grab samples. All float samples are thought to be derived from the underlying bedrock within the immediate sampled 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. 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 exploration 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 61%) on the high-grade Florida Canyon zinc project in Peru. At Florida Canyon, 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 79.1 million shares outstanding. Solitario’s cash balance and marketable securities stand at approximately US\$8.7 million. Additional information about Solitario is available online at [www.solitarioresources.com](http://www.solitarioresources.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 committed to conduct our business in a manner that supports positive 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:**

Chris Herald, President and CEO  
Solitario Resources Corp.  
Tel. 303-534-1030 ext. 14

### **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.*