



Solitario Resources Intersects 11.55 and 2.45 G/T Gold in Two Important New Styles of Gold Mineralization at Golden Crest; Homestake Banded Iron Formation Intersected in Two Holes

DENVER, CO – February 6, 2025 - Solitario Resources Corp. (“Solitario”) (NYSE American: XPL; TSX: SLR) is pleased to announce important new drilling results on its Golden Crest Project. Two distinctly different styles and ages of gold mineralization were encountered in drill hole GC-010. The lower interval in GC-010 intersected 11.55 grams per tonne (“g/t”) gold over 0.52 meters. This high-grade interval represents paleo-placer gold mineralization (see definition below) positioned between older Precambrian and younger Paleozoic-aged rock formations (Lower Deadwood). The importance of this newly discovered style of gold mineralization is that it supports the existence of Homestake-style Precambrian-aged mineralization in the vicinity of this intercept.

The second mineralized interval in GC-010 occurred several meters above the paleo-placer interval. It graded 2.45 g/t gold over 0.43 meters and consisted of rock flour diatreme breccia that is not pyritized or silicified. The gold grade is thought to be carried by small, pulverized matrix fragments from the Precambrian basement that were forcefully injected into the Lower Deadwood Formation. This also suggests the potential for significant basement-hosted mineralization nearby within our claim block.

Precambrian Homestake Banded Iron Formation (“BIF”) was intersected in both GC-009 and GC-010. This is the only area outside of the immediate Homestake district that Homestake BIF has been identified. The Homestake BIF hosts the entire 68-million-ounce gold endowment of the Homestake mine situated about 15 kilometers east of these drill holes.

Chris Herald, President and CEO of Solitario, stated: *“We always thought that we would intersect a variety of styles of Tertiary-aged mineralization at Golden Crest, but the paleo-placer intercept was a big surprise. We believe the only way this high-grade paleo-placer could have formed was the existence of a Homestake-style Precambrian deposit situated relatively near GC-010 during Cambrian times that was eroded and formed this paleo-placer gold deposit. This opens up a whole new mega-gold target at Golden Crest, but perhaps more importantly, it gives us a tool to vector in on a Homestake target. In the historic Homestake district, moderate to high-grade gold mineralization spread out over approximately ten square kilometers in a laterally distributed alluvial fan. The grade and thickness of gold mineralization increased the closer you were to the actual Precambrian deposit, which was the origin for the gold in this type of deposit.*

Paleo-placer gold mineralization represented an important gold source during the early Homestake production. Historic records estimate approximately 1.2 million ounces of high-grade gold were produced, and another 10 million ounces is believed to have been eroded from the Homestake ledges prior to the deposition of the Lower Deadwood Formation. When you consider the high-grade paleo-placer intercept, the well mineralized diatreme breccia, and the occurrence of rare Homestake BIF in the area, these are the ingredients that point towards the presence of significant Homestake-style mineralization on our Golden Crest property - truly fertile exploration terrain that we are excited to begin drill testing later this year.”

GC-010 Drill Hole Assay Results

Hole	From m	To m	Interval m* ¹	Formation	Gold g/t	Mineralization Style
GC-010	391.59	392.01	0.43	Tertiary bx	2.45	Tertiary diatreme breccia
	394.66	395.18	0.52	Basal cg	11.33	Cambrian Paleo-placer* ²

*¹ - True thickness cannot be estimated based on this single drill hole; Azimuth 208°; Dip 75°

*² - Paleo-placer gold deposits are formed and transported by water processes that occurred millions of years ago and were then covered by younger rocks. These deposits are typically ancient riverbeds, beaches, or slopes. The Homestake paleo-placer is considered an ancient alluvial placer.

2024 Drilling Program Review

Solitario completed 11 core holes on the Golden Crest property totaling 4,345.7 meters in 2024. Assay results for the first ten holes have been received and released. Results for GC-11 are expected to be released within two weeks. Core holes GC-001 to GC-003 were well mineralized and previously reported (see News Release dated September 16, 2024). Significant mineralization was intersected in the Lower Deadwood Formation in hole GC-008 (see News Release dated December 9, 2024). GC-004 through GC-007, and GC-009, showed anomalous gold and/or pathfinder element values in the Paleozoic sedimentary rock formations and demonstrates that gold-bearing hydrothermal fluids have significantly altered the carbonate and clastic formations over a vertical extent of up to 400 meters and laterally an area of 80-square kilometers at surface. We believe with further drilling we can vector into zones hosting potentially economic mineralization.

Golden Crest Future Drill Hole Plans

Solitario has identified ten high priority surface targets as shown in the table below. Two of the targets, Downpour and Eleventh Hour, were drilled in 2024. Four new targets are currently being permitted and are scheduled to be drilled in 2025. The other four high-priority targets may undergo future permitting following further review. In addition to the ten currently defined high-priority targets, Solitario has identified another dozen promising target areas that require additional surface exploration work. Furthermore, Solitario's future drilling has the potential to intersect the highly prolific Homestake Formation, situated below the Lower Deadwood formation.

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 NI43-101 compliant and not located on Solitario's property). 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.

Top 10 Targets	Year Discovered	Size (acres)	# Samples +1 g/t Au	# Samples +5 g/t Au	Permitted on Golden Crest POO	Permitting in Progress on Ponderosa POO	Remains to be Permitted
Geyser	2022	280	102	45		✓	
Downpour	2021	20	46	25	✓		
Sleeping Beauty	2023	260	30	7		✓	
Holland	2023	197	22	10		✓	
Wildcat	2023	95	12	10		✓	
Top Dollar	2023/24	15	7	6			✓
Wild Rose	2023	140	34	11			✓
Eleventh Hour	2021	45	63	20	✓		
Iris	2024	178	22	2			✓
Moonlight	2024	337	4	1			✓

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

All Golden Crest exploration core samples have been prepared and analyzed at the American Assay Laboratories in Reno, Nevada, which is independent from Solitario. Thorough QA/QC protocols are followed on the Project, including insertion of duplicate, blank and standard samples in the assay stream for all drill holes. Core is placed and marked in boxes and then collected directly from the drill rig, logged, photographed, split into two samples, and half of each sample submitted directly to American Assay Labs through secure chain of custody protocols. All activities prior to shipment are directly supervised by Solitario geologists. Samples are pulverized from a 250g sample to 85% passing 75 mesh. Approximately 225g of pulp sample is prepared for fire assay. Assays are based on a 30g fire assay aliquot for gold with Atomic Absorption finish. If the gold value from Atomic Absorption is >10g/t, an additional 30g of pulp sample is fire assayed for gold using a gravimetric finish.

Qualified Person

The scientific and technical information contained in this news release has been reviewed and approved by Sandor Ringhoffer, CPG, SME RM, a geologic consultant of Solitario, who is a qualified person as defined by NI 43-101, Standards of Disclosure for Mineral Projects.

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%) in 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 8.1% (excluding options) of the Company’s 81.6 million shares outstanding.

Solitario's cash balance and marketable securities stand at approximately US\$6.0 million. Additional information about Solitario is available online at 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 conducting our business in a manner that supports positive environmental and social initiatives and responsible corporate governance. Importantly, we work with 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 of 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 an exploration or 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 health pandemics or epidemics or similar occurrences and or natural disasters;; 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.