



Solitario Resources Intersects New Discovery of Significant Wharf-Style Gold Mineralization at Golden Crest - Hole Ends in Multi-Gram Gold

DENVER, CO – December 9, 2024 - Solitario Resources Corp. (“Solitario”) (NYSE American: XPL; TSX: SLR) is pleased to announce its most compelling drilling results to date on its Golden Crest Project. Significant gold mineralization was intersected over a substantial thickness in the lower Deadwood rock formation in drill hole GC-008. The entire lower Deadwood formation was mineralized with an average gold grade of approximately 1.0 gram per tonne (“gpt”) over its entire 41.0-meter length. **Importantly, gold grades were increasing with depth, with the last two meters of core averaging 3.4 gpt, the highest grades encountered before the hole was terminated due to technical drilling difficulties.**

The lower Deadwood formation hosts the majority of Tertiary gold mineralization in the historic Homestake-Wharf gold district situated several miles east of Solitario’s land position. **GC-008 represents the first mineralization ever discovered in Lower Deadwood outside of the historic district.** Gold content and distribution in GC-008 are provided in the table below and an assay cross section of the core hole can be viewed [here](#).

Golden Crest Project: GC-008 – New Wharf-Style Gold Discovery

DDH Hole	Interval	Thickness*²	Gold Grade
GC-008*¹	(meters)	(meters)	(grams/tonne)
	322.5 to 363.5	41.0	1.0
Including	344.2 to 363.5	19.4	1.7
Including	344.2 to 349.9	5.7	2.2
Including	355.1 to 363.5	8.4	2.1
Including* ³	361.5 to 363.5	2.0	3.4

*¹280° azimuth -65° inclination

*²True thickness cannot be estimated based on this single drill hole.

*³Last two intervals in hole – hole ended at 363.5 meters.

Chris Herald, President and CEO of Solitario, stated: *“I cannot overstate the importance of these assay results. GC-008 represents a new Wharf-style discovery and is our most significant gold intercept to date. GC-008 was our first drill hole to test a major structural zone that has been traced on Solitario’s property position well over 12 kilometers in length and approximately 500 meters wide. This exceptionally large structural/stratigraphic zone appears to be a very fertile mega-target that only has one drill hole and is open ended in all directions, including depth. This structural zone is suspected to have deep roots and is believed to be an important conduit to Tertiary-aged gold mineralization. GC-008 was designed to test this zone at the most receptive stratigraphic horizon – the lower Deadwood Formation.*

The historic Wharf district has an estimated total gold endowment of over 10 million ounces (produced, remaining historic resources and unrecovered gold in tailings and heap leach; all non-NI 43-101 compliant

estimates). *Approximately half of this endowment occurred as high-grade mineralization, often over an ounce per tonne, and the other half was lower grade averaging about a gram per tonne. The lower grade mineralization formed a large halo around the higher-grade structures. We believe this intercept represents the lower-grade halo surrounding potentially high-grade structures.”*

Solitario completed 11 core holes on the Golden Crest property totaling 4,345.7 meters in 2024. Assay results for the first eight holes have been received. Core holes GC-001 to GC-003 were well mineralized and previously reported (see News Release dated September 16, 2024). GC-004 through GC-007 showed anomalous gold and trace 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 this year. 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.

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			✓

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.

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. The samples are 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\$6.5 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:

Chris Herald, President and CEO
Solitario Resources Corp.
Tel. 303-534-1030 ext. 1

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.