



Solitario Resources Completes Highly Successful 2024 Drilling Campaign

DENVER, CO – February 18, 2025 - Solitario Resources Corp. ("Solitario") (NYSE American: **XPL**; TSX: **SLR**) is pleased to announce that its 2024 drilling program was a resounding success. Drilling results supports the notion that Solitario's 36,500-acre land position may be a mirror image of the prolific Homestake – Wharf gold system. Significant gold mineralization was discovered in four different widely-spaced areas.. Six of the eleven holes drilled intersected gold grades in excess of one gram per tonne ("g/t"), including the last drill hole (GC-011) that intersected 2.68 meters grading 4.69 g/t.

In the nearby historic Homestake-Wharf mining camp, with an overall gold endowment*¹ approaching 95 million ounces, there are six geologic environments in which gold was deposited. Drilling at Golden Crest intersected significant gold values in four of these deposit types, and strong indirect evidence that the fifth and sixth deposit types are present (see table below and schematic cross section [here](#)).

Chris Herald, President and CEO of Solitario, stated: *“This year’s results surpassed our highest expectations. Solitario’s multiple new greenfield discoveries have opened-up significant targets that are wide-open to expansion. As these sites are already permitted, we plan to offset these mineralized drill holes beginning in late-May. Priority areas for expansion include the Downpour zone where near-surface mineralization was intersected in all three drill holes, each averaging about 30 meters of 1.7 g/t gold; Lands End - GC-008 that intersected 41 meters at approximately 1.0 g/t in the lower Deadwood Formation; and GC-010, that intersected 11.33 g/t gold over 0.52 meters in a paleo-placer on top of the Precambrian Homestake Formation and 2.45 g/t gold over 0.43 meters in a Tertiary igneous breccia.*

We are equally excited to initiate the first ever drilling in the Ponderosa area situated immediately southeast of our Golden Crest claim block. Our strongest and most widespread surface gold anomalies occur within the Ponderosa permit application and include the Geyser, Sleeping Beauty, Holland, Wild Cat and Moonlight target zones. We anticipate utilizing a second drill rig at Ponderosa and are targeting a mid-summer start date. Forty-five (45) drilling platforms are included in the Ponderosa Plan of Operations to drill test these strong surface gold anomalies ([here](#)).”

Hole GC-011: Eleventh Hour

The last drill hole of the season, GC-011, was the furthest north drill hole in an area referred to as the Eleventh Hour zone. Strong gold mineralization was intersected within massive limestone of the Lodgepole Formation. The mineralization is thought to be situated within a feeder structure.

- **GC-011: 2.68 meters @ 4.69 g/t gold starting at 161.9 meters**

Golden Crest: Mirror Image of the Homestake-Wharf Gold System

Target Type	Homestake-Wharf Deposit Types	Size of Gold Endowment* ¹	Intersected In 2024 Hole	Drill Hole Number	Intercept (meters) Gold Grade (g/t)

1	Carbonate Replacement in Paleozoic Rocks	500,000	✓	GC-001 GC-002 GC-003 and	32.0 m @ 1.68 g/t 25.9 m @ 1.12 g/t* ² 26.4 m @ 2.56 g/t 11.7 m @ 0.60 g/t
2	Mineralized Structures In Paleozoic Rocks	50,000	✓	GC-011	2.7 m @ 4.69 g/t
3	Wharf-Style Mineralization Lower Deadwood Fm.	10,140,000	✓	GC-008 including	41.0 m @ 0.98 g/t 19.4 m @ 1.67 g/t
4	Paleo-placer Top of Precambrian	+2,000,000	✓	GC-010	0.5 m @ 11.33 g/t
5	Precambrian/Igneous Breccia Hosted Tertiary Mineralization	14,540,000	✓ (Indirectly)	GC-010	0.4 m @ 2.45 g/t
6	Precambrian Homestake Mineralization in Homestake Fm.	68,000,000	✓ (Indirectly)	GC-009 GC-010	Mineralization in these holes support the presence of Homestake-style gold

*¹ Endowment = Gold produced, estimated unrecovered in tailings, estimated remaining historic resources (not NI-43101 compliant); from sources that are thought to be reliable, but not independently verifiable. Solitario's land position does not cover any of the historic districts' gold endowment.

*² Composite thickness of three closely spaced intervals.

Drilling Statistics

Solitario completed 11 core holes in 2024 on the Golden Crest property (see drill hole location map [here](#)) totaling 4,345.7 meters. Assay results for all drill holes have now been received.

Core holes GC-001 to GC-003 intersected silicified and well mineralized evaporite collapse breccias in the Mississippian-aged Mission Canyon limestone (see News Release dated September 16, 2024). GC-004 through GC-007 showed anomalous gold and/or trace element values in the Paleozoic sedimentary rock formations, while hole GC-008 intersected a wide interval of well mineralized Lower Deadwood Formation (see news release dated December 9, 2024) indicating the potential for significant Wharf-style mineralization. GC-009 and GC-010 both intersected Precambrian Homestake Formation, the only known occurrence of this rock unit outside of the Homestake district. Additionally, GC-010 intersected high-grade paleo-placer gold between the Homestake Formation and much younger Lower Deadwood Formation, as well as mineralized diatreme intrusive breccia (see news release dated February 6, 2025). Drill hole GC-011 intersected a mineralized near-vertical structure in Paleozoic limestones.

Abundance of High-Quality Drilling Targets

Solitario has identified ten high priority surface targets (including the Ponderosa area) as shown in the table below. Two of the targets, Downpour and Eleventh Hour, were drilled this year. Five new targets are currently being permitted and are scheduled to be drilled in 2025. The other three 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. Solitario's future drilling will not only test the strong surface gold anomalies, but the underlying and highly prolific Lower Deadwood Formation, paleo-placer and Homestake banded iron formation mineralization.

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 35 million ounces in resources and 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 8.7% (excluding options) of the Company's 81.6 million shares outstanding. Solitario's cash balance and marketable securities stand at approximately US\$5.8 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; 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.