



Solitario Adds Critical Metals Project to Its Property Portfolio; 2026 Drilling Planned at Cat Creek Project

DENVER, CO – October 21, 2025 - Solitario Resources Corp. (“Solitario” or the “Company”) (NYSE American: XPL; TSX: SLR) is pleased to announce that it has secured drilling permits for its Cat Creek critical metals project in Colorado. The Cat Creek project represents a high-quality undrilled molybdenum-rhenium porphyry system.

The Cat Creek project was originally discovered by Anaconda Copper (formerly one of the largest mining companies in the world) in the early 1980’s. Anaconda conducted significant surface exploration, including detailed geologic mapping, geochemical sampling and an Induced Polarization (“IP”) geophysical survey. The project was slated for drilling in mid-1983, but due to the sale of Anaconda by its parent, Atlantic Richfield (ARCO), all company-wide exploration activities were shut down in early 1983. The property was never drill tested and no further exploration activities were subsequently conducted on the property. Anaconda’s project database was never publicly released.

Solitario signed a lease to acquire a 100%-interest in the property in 2023 and has conducted confirmatory surface exploration. Both Federal and State permitting has been completed allowing for core drilling to begin mid-summer 2026.

Molybdenum (“Mo”), besides being considered a strategic metal, is one of the most valuable industrial metals. It currently sells for approximately \$25.00 per pound. Molybdenum’s unique alloying properties for steelmaking – high-strength, hardness, heat resistance, corrosion protection and lubrication, make it indispensable to multiple industries such as oil and gas, aerospace, multiple defense applications, nuclear energy and the construction and automotive industries.

Rhenium (“Re”) has recently been classified as a Critical Metal by the U.S government. It is used extensively in the defense and aerospace industries because of its extremely high melting temperature, hardness and remarkable resistance to wear and corrosion. Some of its more critical uses are in jet/rocket engines, gas turbines for the power industry, and in advanced weapon systems. It is an extremely rare metal in nature and currently sells for about \$4,200 per kilogram (\$4.20 per gram), roughly 2.5 times the value of silver.

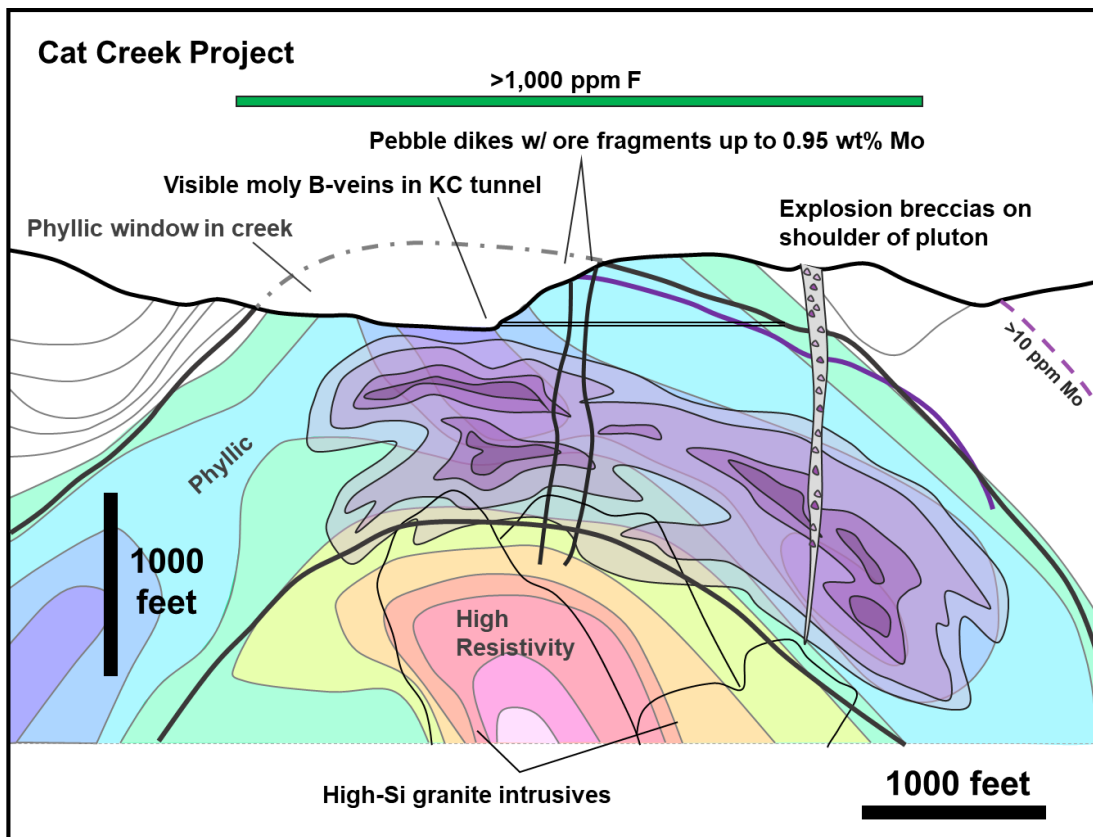
Chris Herald, President and CEO of Solitario, stated: *“Although the Golden Crest gold project has been, and remains, our primary focus, we have been quietly advancing the Cat Creek project for the past two years and are excited to able to drill test this large-scale drill target next year. With the current interest in domestic Critical and Strategic Metals in the U.S., Cat Creek is an important new addition to our property portfolio.*

Colorado is home to two of the three largest primary molybdenum mines in the world, Freeport-McMoran’s operating Climax and Henderson mines. Cat Creek is situated less than 150 miles south of these two mines, and 80 miles north of the historically important

Questa molybdenum mine (currently closed). Together, these three mines define a prolific molybdenum corridor with Cat Creek being in the middle of this important trend."

In addition to the Cat Creek's molybdenum potential, this system appears to be exceptionally well endowed with rhenium. Virtually all worldwide rhenium production comes as a by-product of molybdenum mines. Sampling to date indicates that molybdenum-rich rocks at surface are also rhenium enriched, averaging approximately 30 gpt Re, versus average Re grades of approximately 0.5 gpt Re for most molybdenum mines (normalized to a 0.10% Mo grade)."

Anaconda's IP geophysical survey revealed a strong circular-shaped conductive body at depth underlain by a very resistive body. This mushroom-shaped geophysical pattern, as shown below, is consistent with a potentially mineralized underlying porphyry system approximately 800 meters in diameter and comparable to other large productive molybdenum systems..



Molybdenum-rhenium mineralization, although not common across the entire property, occurs at surface in several locations within a porphyry intrusive complex. Significant areas of intense clay-pyrite alteration are centered over a rhyolite, latite and monzonite porphyry complex. High-grade

values of rhenium are associated with molybdenum mineralization comprising of quartz-molybdenite stockwork veins. .



Explosion breccia of quartz-molybdenite vein fragments and rhyolite



Pebble dike with quartz vein fragments

Qualified Person

The scientific and technical information contained in this news release has been reviewed and approved by Walter Hunt, a qualified person as defined by Canadian instrument 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, zinc and molybdenum projects. Solitario's 100%-owned Golden Crest properties in South Dakota constitute strategic land holdings along the western and southwestern extensions of the world-class Homestake-Wharf mining district that has produced approximately 52 million ounces of gold. The project area is located 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.

The Company is traded on the NYSE American ("XPL") and on the Toronto Stock Exchange ("SLR"). In addition to its Cat Creek and 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 8.0% (excluding options) and Newmont Corporation owns 9.3% of the Company's 90.9 million shares outstanding. Solitario's cash balance and marketable securities stand at approximately US\$8.0 million. Additional information about Solitario is available online at www.solitarioresources.com.

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. Technical data from the Cat Creek project was derived primarily from historic Anaconda files thought to be accurate, but have not verified by QAQC quality controls as defined by NI 43-101, Standards of Disclosure for Mineral Projects. 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. 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 gold, silver, zinc, lead, and molybdenum; 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 and reports 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.