Sun Summit Defines a 12 Kilometre Trend of Porphyry-Related Copper-Gold Targets at the JD Project, Toodoggone District, North Central B.C.

05.02.2025 | Newsfile

Vancouver, February 5, 2025 - Sun Summit Minerals Corp. (TSXV: SMN) (OTCQB: SMREF) is pleased to provide a review of multiple porphyry-related copper-gold targets across the 15,000 hectare JD project. The targets define a 12 km trend of strong porphyry-related hydrothermal alteration that is structurally and topographically below significant epithermal-related, gold-silver systems (e.g., Finn to Creek corridor).

The high-priority targets along the JD Porphyry Trend demonstrate the strong-prospectivity for porphyry-related copper-gold mineralization across the JD project. The Company has started planning a significant exploration program set to commence in early summer 2025. The program will focus on evaluating the strongest porphyry targets as well as further investigating the high-grade and bulk-tonnage gold potential along the Finn to Creek Corridor.

Key Highlights:

- A significant 12 kilometre trend of under-explored porphyry targets: The McClair, Belle and Fericrete targets along the JD Porphyry Trend strongly support the high-prospectivity for porphyry-related copper-gold mineralization across the JD project.
- Significant exploration program in preparation for 2025: Planning is underway for an aggressive program at JD in 2025 which will include significant drill testing of high-priority targets as well as further geochemical and geophysical surveys across areas lacking coverage.

"The JD project has significant and unlocked potential for porphyry-related copper and gold mineralization," stated Niel Marotta, CEO of Sun Summit Minerals. "The northern extent of the Toodoggone district has long been known for its strong epithermal gold prospectivity, however, the recent discovery by Amarc and Freeport 14 kilometres south of our land position at JD confirmed our long-standing view that the northern parts of the district have exceptional porphyry potential. We have defined a 12 km trend of high-priority and largely drill ready porphyry targets that we plan to advance in our upcoming 2025 exploration program."

JD Porphyry Trend

The JD Porphyry Trend is largely centred on the McClair Creek gossan which extends for over 10 km along the banks of McClair Creek (Figure 4a). Outcropping rocks along McClair Creek comprise strongly altered andesitic volcanics, monzonite intrusive rocks and porphyritic dykes (quartz-feldspar porphyries). Based on regional geological mapping, the JD Porphyry Trend traverses a prospective contact between Black Lake intrusive rocks and Toodoggone Fm volcanic rocks (Figure 1). The JD Porphyry Trend represents a similar regional geological setting as the recently discovered AuRORA porphyry system by Amarc Resources and Freeport, 14 km to the south (Figure 1). The AuRORA discovery was made by systematically drill testing coincident high-chargeability and multi-element soil geochemical anomalies[4]. The AuRORA target is also associated with a strong magnetic-high anomaly identified in regional geophysical datasets[5]. Priority targets along JD Porphyry Trend are similarly based on magnetic-high anomalies (Figure 2) coincident with strong chargeability-highs (e.g., McClair and Fericrete). The significant Belle magnetic-high lacks IP geophysical coverage (Figures 2 and 3) but plans are underway to fill that gap in the 2025 field season.

The two southern priority porphyry targets along the JD Porphyry Trend are associated with the McClair Creek gossan and include the McClair and Belle targets (Figures 2 and 3).

Figure 1. Map of the Toodoggone District showing the location of the JD Project in relation to other development and exploration projects. Regional BCGS geology is also shown[5].

To view an enhanced version of this graphic, please visit:
https://images.newsfilecorp.com/files/6142/239654_7aed09dab4c23906_001full.jpg

Figure 2. Map of the JD Project showing the broad JD Porphyry Trend highlighted by discreet magnetic-high anomalies[3].

To view an enhanced version of this graphic, please visit:
https://images.newsfilecorp.com/files/6142/239654_7aed09dab4c23906_002full.jpg

McClair Porphyry Target: The McClair porphyry system was discovered in 2013[1]. Three holes tested for porphyry copper mineralization associated with intermediate sulfidation, epithermal-related base metal-rich mineralization of the Finn Zone. The holes were collared 1,000 metres east and ~350 metres below the Finn Zone (Figure 5b). All three holes intersected significant porphyry related hydrothermal alteration, covering a strike length of 850 metres. The dominantly phyllic (quartz + sericite + pyrite) and argillic assemblages overprinting early potassic (k-feldspar+biotite) and propylitic (epidote-chlorite) alteration, with anomalous copper mineralization, is interpreted to be related to a proximal mineralized porphyry system. All phases of alteration are crosscut by strong anhydrite-gypsum veins and stock-work zones.

Hole JD-13-025 bottomed in 1.4 metres of 0.46% copper hosted in a potassically altered monzonite intrusion at 229 metres down-hole (Figure 4c). Hole JD-13-028, 500 metres south of JD-13-025, intersected strong porphyry-related alteration highlighted with an interval of intrusive breccia containing clasts of potassically altered monzonite cut by quartz-chalcopyrite-molybdenite stockwork. Two follow-up holes were drilled in 2018 by Freeport, one from the same pad as JD-13-025 but with a westerly azimuth and one north of JD-13-025. Both Freeport holes intersected strong hydrothermal alteration. The bottom of JD-13-025 and the clasts in JD-13-028, together with strong alteration in all holes, suggest the presence of a proximal mineralized porphyry system.

Figure 3. Map of the JD project showing historical IP chargeability data (400m depth plan) across the McClair porphyry target[2]. The limits of the 3.0 km open-ended anomaly will be evaluated with additional IP surveying in 2025.

To view an enhanced version of this graphic, please visit:
https://images.newsfilecorp.com/files/6142/239654_7aed09dab4c23906_003full.jpg

The five historical exploration holes at McClair tested only a small portion of an IP (Induced Polarization) chargeability-high anomaly identified in 2013 and significantly expanded in 2017 and 2018[2] (Figure 3). The open-ended chargeability anomaly is largely coincident with a multi-element (copper-gold-silver-tellurium) soil geochemical anomaly and an 800 by 800 metre magnetic anomaly identified in a previous airborne geophysical survey (Figure 2). Additional targeting within the broad McClair porphyry alteration zone will focus on defining the centre of the system by further drilling the coincident high-chargeability and high-magnetic anomalies.

Belle Porphyry Target: The Belle porphyry target lies west of the McClair Creek gossan over an area largely concealed by glacial till (Figure 4a). The centre of the target comprises a 1.5 by 1 km strong magnetic high anomaly identified in historical airborne geophysical surveys (Figure 2). Volcanic and intrusive rocks (monzonite and quartz-feldspar porphyries) proximal to the magnetic-high along the banks of McClair Creek are pervasively altered with texturally-destructive argillic and phyllic assemblages with local zones of strong epidote-chlorite alteration. The Belle porphyry target is situated 2 kms to the south of a recently identified multi-element (copper-zinc-silver) soil geochemical anomaly. The target lacks IP coverage and work in 2025 will comprise IP geophysical surveying and expanding the Belle soil grid south to cover the target area (Figure 3).

Figure 4. McClair Creek gossan and McClair Creek porphyry target, A. photo looking south down McClair creek showing parts of the 10km long McClair Creek gossan. The Belle Porphyry target is situated above the

gossan on a till covered plateau, B and C. core photos from historical hole JD-13-025 showing strong high-temperature porphyry-related alteration and mineralization. The interval shown in C is from the last run in the hole, bottomed in 0.46% Cu over 1.4 metres, D and E. core photos from historical hole JD-13-028 highlighting mineralized porphyry clasts in a intrusive breccia (D) and strong potassic and overprinting propylitic alteration with copper mineralization (E). Abbreviations: chl = chlorite, bio = biotite, ahy = anhydrite, cpy = chalcopyrite, py = pyrite, qtz = quartz, epi = epidote, mgt = magnetite.

To view an enhanced version of this graphic, please visit:
https://images.newsfilecorp.com/files/6142/239654_7aed09dab4c23906_004full.jpg

Fericrete Porphyry Target

Two holes in 2024 were drilled northeast of the Creek Zone targeting the southwest extent of the Fericrete target (Figure 5a). The target is 3.2 km west of the McClair target. Outcropping, clay altered andesite is associated with a broad magnetic-low and a coincident high-chargeability and resistivity anomaly (see November 18th, 2024 news release). The 2024 holes were designed to test for epithermal-related gold-base metal mineralization as well as deeper and concealed porphyry-related copper and gold mineralization.

Figure 5. Photographs showing the Fericrete and McClair targets, A. Fericrete gossan looking northwest showing the location of holes CZ-24-006 and JD-24-007 (see November 18th, 2024 News Release), note this gossan is hosted in volcanic rocks that are stratigraphically below outcropping epithermal veins on the nearby ridgetops, B. McClair target looking southwest showing the location of five historical drill holes that targeted a broad chargeability high anomaly below the Finn Zone. The chargeability anomaly is open to the north and south. See references below for details on the drillholes.

To view an enhanced version of this graphic, please visit:
https://images.newsfilecorp.com/files/6142/239654_7aed09dab4c23906_005full.jpg

The volcanic and intrusive rocks intersected in both holes (JD-24-006 and JD-24-007) contain zones of early-potassic and/or propylitic alteration (epidote-chlorite-pyrite) overprinted by local intervals of strong silicification with sooty pyrite (phyllic alteration) and locally intense anhydrite-carbonate veins and stockwork zones. Based on observed lithology, alteration assemblages and mineralization styles in both holes, it is interpreted that the drilling intersected a potential zone of hydrothermal telescoping. A possible vector to a concealed porphyry center is interpreted to be to the northeast, coincident with a strong magnetic-high anomaly (Figure 2).

Planning for 2025

Planning is ongoing for the next phase of exploration at the JD project, set to begin spring 2025. Exploration is anticipated to include step-out drilling at the Creek Zone, confirmation and step-out drilling at the Finn Zone as well as initial and follow-up drill tests at high-priority porphyry targets including the Fericrete and McClair Porphyry targets. Additional geophysical and geochemical surveys will also be completed across the Belle porphyry target and other target areas lacking coverage.

National Instrument 43-101 Disclosure

This news release has been reviewed and approved by Sun Summit's Vice President Exploration, Ken MacDonald, P. Geo., a "Qualified Person" as defined in National Instrument 43-101 Standards of Disclosure for Mineral Projects of the Canadian Securities Administrators. He has not been able to verify the historical exploration data disclosed, including sampling, analytical and test data, underlying the technical information in this news release since such data is historical and the original drill core is not readily available. Some technical information contained in this release is historical in nature and has been compiled from public sources believed to be accurate. The historical technical information has not been verified by Sun Summit and may in some instances be unverifiable dependent on the existence of historical drill core and grab samples.

Community Engagement

Sun Summit is engaging with First Nations on whose territory our projects are located and is discussing their interests and identifying contract and work opportunities, as well as opportunities to support community initiatives. The Company looks forward to continuing to work with local and regional First Nations with ongoing exploration.

About the JD Project

The JD Project is located in the Toodoggone mining district in north-central British Columbia, a highly prospective deposit-rich mineral trend. The project covers an area of over 15,000 hectares and is in close proximity to active exploration and development projects, such as Thesis Gold's Lawyers and Ranch projects, TDG Gold's Baker-Shasta projects, Centerra's Gold's Kemess East and Underground projects, as well as the past-producing Kemess open pit copper-gold mine.

The project is 450 kilometres northwest of the city of Prince George, and 25 kilometres north of the Sturdee airstrip. It is proximal to existing infrastructure in place to support the past-producing Kemess mine, including roads and a hydroelectric power line.

The JD Project is in a favourable geological environment characterized by both high-grade epithermal gold and silver mineralization, as well as porphyry-related copper and gold mineralization. Some historical exploration, including drilling, geochemistry and geophysics, has been carried out on the property, however the project area is largely underexplored.

About Sun Summit

Sun Summit Minerals (TSXV: SMN) (OTCQB: SMREF) is a mineral exploration company focused on expansion and discovery of district scale gold and copper assets in British Columbia. The Company's diverse portfolio includes the JD Project in the Toodoggone region of north-central B.C., and the Buck Project in central B.C.

Further details are available at www.sunsummitminerals.com.

References

1. McBride, S. and Leslie, C. (2014), 2013 Geological, geophysical and diamond drilling report on the JD Property, Assessment Report Indexing System, Report 34762, https://apps.nrs.gov.bc.ca/pub/aris.

2. Wetherup, S. (2019), Assessment report mapping, induced-polarization surveying and drilling, JD Property, Assessment Report Indexing System, Report 38203, https://apps.nrs.gov.bc.ca/pub/aris.

3. Strickland, D. (2022), 2022 Assessment report on the JD Property, Assessment Report Indexing System, Report 40386, https://apps.nrs.gov.bc.ca/pub/aris.

4. Amarc Resources January 17th, 2025 News Release, amarcresources.com

5. MapPlace 2, British Columbia Geological Survey, gov.bc.ca/, Regional Geology and Magnetics

Link to Figures

Figure 1:
https://wp-sunsummitminerals-2024.s3.ca-central-1.amazonaws.com/media/2025/02/2025-02-05-SMN-Figure-1.jpg

Figure 2:

https://wp-sunsummitminerals-2024.s3.ca-central-1.amazonaws.com/media/2025/02/2025-02-05-SMN-Figure-2-scaled

Figure 3:
https://wp-sunsummitminerals-2024.s3.ca-central-1.amazonaws.com/media/2025/02/2025-02-05-SMN-Figure-3-scaled

Figure 4:
https://wp-sunsummitminerals-2024.s3.ca-central-1.amazonaws.com/media/2025/02/2025-02-05-SMN-Figure-4-scaled

Figure 5:
https://wp-sunsummitminerals-2024.s3.ca-central-1.amazonaws.com/media/2025/02/2025-02-05-SMN-Figure-5.jpg

On behalf of the board of directors

Brian Lock

For further information, contact:

Niel Marotta
Chief Executive Officer
info@sunsummitminerals.com

Matthew Benedetto
Simone Capital
mbenedetto@simonecapital.ca

Tel. 416-817-1226

Forward-Looking Information

Statements contained in this news release that are not historical facts may be forward-looking statements, which involve risks, uncertainties and other factors that could cause actual results to differ materially from those expressed or implied by such forward-looking statements. In addition, the forward-looking statements require management to make assumptions and are subject to inherent risks and uncertainties. There is significant risk that the forward-looking statements will not prove to be accurate, that the management's assumptions may not be correct and that actual results may differ materially from such forward-looking statements. Accordingly, readers should not place undue reliance on the forward-looking statements. Generally forward-looking statements can be identified by the use of terminology such as "anticipate", "will", "expect", "may", "continue", "could", "estimate", "forecast", "plan", "potential" and similar expressions. Forward-looking statements contained in this press release may include, but are not limited to, potential mineralization, exploration plans, and engagement with First Nations communities. These forward-looking statements are based on a number of assumptions which may prove to be incorrect which, without limiting the generality of the following, include: risks inherent in exploration activities; the impact of exploration competition; unexpected geological or hydrological conditions; changes in government regulations and policies, including trade laws and policies; failure to obtain necessary permits and approvals from government authorities; volatility and sensitivity to market prices; volatility and sensitivity to capital market fluctuations; the ability to raise funds through private or public equity financings; environmental and safety risks including increased regulatory burdens; weather and other natural phenomena; and other exploration, development, operating, financial market and regulatory risks. The forward-looking statements contained in this press release are made as of the date hereof or the dates specifically referenced in this press release, where applicable. Except as required by applicable securities laws and regulation, Sun Summit disclaims any intention or obligation to update or revise any forward-looking statement, whether as a result of new information, future events or otherwise, except as required by applicable securities laws. All forward-looking statements contained in this press release are expressly qualified by this cautionary statement.

Neither the TSX Venture Exchange nor its Regulation Services Provider (as that term is defined in the policies of the TSX Venture Exchange) accepts responsibility for the adequacy or accuracy of this release.

To view the source version of this press release, please visit https://www.newsfilecorp.com/release/239654