

Quantum Critical Metals' Marcy Kiesman on Using AI to Advance Critical Minerals Exploration in Canada

written by InvestorNews | October 9, 2025

October 9, 2025 – In an era when artificial intelligence is reshaping nearly every industry, [Quantum Critical Metals Corp.](#) (TSXV: LEAP | OTCQB: ATOXF) is taking a bold step to merge machine learning with mineral exploration. “Everything is getting automated—faster, better, smarter,” said CEO and Director **Marcy Kiesman**. “We’re trying to use AI in every aspect we can in the mining field.” From mapping mineralized zones to correlating geological data, the company’s technology-first approach is designed to accelerate discoveries of key critical minerals essential to the energy transition.

At the heart of this strategy is **Quantum’s NMX East Project** in the James Bay region of Québec—home to a suite of priority metals that includes gallium, lithium, niobium, rubidium, and tantalum. “We’ve just recently flown two airborne surveys on our NMX East project,” Kiesman said. “The anomaly we detected is similar in amplitude, strike, shape, and size to that of our neighboring Nisk deposit owned by [Power Metallic Mines Inc.](#) (TSXV: PNP | OTCQB: PPNF)—which is fantastic news for Quantum and its shareholders.” The project sits just ten kilometers outside of Namaska and adjacent to Nemaska Lithium’s Wabouchi deposit, placing Quantum squarely within one of Canada’s most active critical minerals corridors.

The company’s **October 2025 [update](#)** confirmed the completion of a second MAG-TDEM airborne survey, revealing deep bedrock

conductors consistent with nickel-PGE mineralization. “It’s encouraging for shareholders,” Kiesman said at the time, “that a magnetic anomaly on the NMX East Property is similar in amplitude, strike, shape, and size to the anomaly found at the neighboring Nisk deposit.” Drill permits are now being prepared, and the next phase will target both the pegmatite zones and a newly identified ultramafic package at the southern end of the property.

Quantum’s exploration philosophy extends beyond conventional geology. “We upload most of our reports into AI systems to find correlations between our projects and neighboring projects,” Kiesman explained. “We also use AI to differentiate the different rock types on the project and to statistically locate the areas of greatest interest—to make our exploration faster on the ground.” Metallurgical work is currently underway to determine the most efficient method for extracting critical minerals from mica—the key mineral carrier at NMX East. “The areas of the rock with high mica concentrations also had high gallium—around 186 grams per tonne gallium, compared to 40 grams per tonne when averaged with the rest of the rock,” she said. “We’re honing in on these micas.”

Beyond Québec, Quantum is advancing the Victory Antimony Project and other copper and silver assets in northern British Columbia, with assay results pending from recent grab samples. The company also [joined](#) the 47G Institute, a U.S.-based aerospace and defense innovation network, as part of its strategic outreach to supply the Pentagon and allied industries with non-Chinese sources of critical minerals. “They have turned out to be amazing contacts for Quantum,” Kiesman said. “The U.S. has put in place a timeline of 2027 to ban Chinese products, so they are actively searching for other sources of these materials. Luckily, we have some of these materials.” As the company deepens its work across its expanding portfolio—including the

NMX East Gallium-Rubidium-Cesium Project, the Discovery polymetallic project, and the newly acquired Prophecy Germanium-Gallium-Zinc Project—Quantum Critical Metals is positioning itself at the intersection of technology, exploration, and national strategy. “We really want to start drilling more of our pegmatites and ultramafic package,” Kiesman said. “We’ll likely do the drill program for everything all at once to make it more efficient.”

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