Quantum Critical Metals' Marcy Kiesman on Advancing Gallium and Rubidium in the Critical Minerals Race

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In a world where even tiny amounts of rare materials can power major technologies, even the most ordinary rock can become strategically important.

That is the wager Marcy Kiesman is making — not in a policy paper or a Silicon Valley pitch deck, but in the plainspoken cadence of a mining executive who still talks like someone who remembers what it's like to carry a hammer into the woods. In a recent InvestorNews.com interview with host Darren Cudmore, Kiesman, the CEO and a director of Quantum Critical Metals Corp. (TSXV: LEAP | OTCQB: ATOXF | FSE: 86A1), positioned her company as a kind of junction box for the age of electrification and machine intelligence: a Canadian explorer trying to advance a portfolio that includes Québec's NMX East Gallium-Rubidium-Cesium project, the Discovery Gallium-Rubidium-Cesium polymetallic project in Québec, British Columbia's Victory Antimony project, and the newly acquired Prophecy Germanium-Gallium-Zinc project, among others — the sort of ingredient list that reads like a graduate seminar but is increasingly being treated like industrial policy.

Kiesman's origin story is less "boardroom" than "bushwhack." "I actually come from a finance background," she told Cudmore, before describing a childhood in Prince Rupert spent pilfering her father's carpentry hammer to "go and bang mica off rocks in the bush because mica was so pretty and fun to play with." Then

the line that made the past snap into the present: “Which is kind of ironic how now I’m still playing with mica a good 50 years later.”

The company, too, has been recast for its moment. For years it was known as Durango Resources — a name that evokes prospectors, not processors — until the rebrand to Quantum Critical Metals, a change that became effective in March 2025 and came with a new ticker: LEAP. In the interview, Kiesman described the rename as both logistical grind and strategic gamble. It took time, she said, because “we didn’t really know what we wanted to change the name to,” and because “critical metals weren’t as popular a year ago as they are today.” The word “leap” wasn’t just marketing; she said it was a nod to the early-’90s TV show *Quantum Leap* and to a posture she wants the company to embody — “future forward-looking things” in an industry that often moves like it’s still paging through the last cycle’s playbook.

The heresy she keeps returning to is mica — not as waste, but as host. “We’re… finding mica, using it as an ore mineral rather than just a gangue mineral,” she said, framing the company’s work as a search not merely for a deposit, but for an extractable pathway. She spoke about “finding new ways of extracting gallium,” arguing that “gallium having mica as its host is also a new thing that no one’s really paid attention to before.”

Cudmore, playing the role of curious every-investor, admitted what many listeners were likely thinking: “I can barely spell rubidium or gallium… let alone know anything about it.” Kiesman didn’t try to shame the question; she leaned into it. “You are not alone in this,” she said, describing investors who “have no idea what all this stuff is,” and the reflex to measure everything against the familiar talismans of the sector. But she also offered a sharper provocation: “I put them on a sliding

scale with gold… I think a lot of people would have their jaws hit the floor because they don't realize the cost of these things." And then, the reminder that the real bottleneck is not always the rock: "The trick with most of the critical minerals is processing and trying to figure out how to extract everything out and get it into a useful format."

It's hard to overstate how quickly that word — *processing* — has migrated from metallurgical back rooms into geopolitics. Kiesman told Cudmore there is "definitely a supply constraint," citing gallium as a case in point and saying "over 90% of the market is from processing and is all from China." Industry and government research broadly echoes the concentration she described: U.S. Geological Survey analysis has noted that, since 2014, more than 90% of primary gallium production has been in China, and other recent analyses have put China's share of low-purity gallium extremely high as well. The point, in her telling, is not an abstract trade statistic; it's the jolt you feel when a supply chain becomes a lever. "Now that we are not getting it from China, it's caused a huge issue," she said — and she framed her own pivot to mica as a response.

Rubidium, in her view, is the next chapter. "Rubidium is pretty much going to be the future of quantum computing," she said, arguing that "there's nobody here [in North America] that produces rubidium right now." If the interview had a recurring pulse, it was her insistence that what looks obscure in a commodity table becomes obvious when you consider what modern life is made of. She ran down the consumer litany — "our computers, our telephones, our TVs" — and then brought it to the present tense: "having AI on hand to ask Grok or ChatGPT or Google or Alexa." In Kiesman's telling, the more the culture chants *AI*, the more the periodic table starts to look like a constraint.

In that spirit, Quantum's partnerships matter as much as its claims. Kiesman described teaming with Nusano, a Utah-based company she called "physics-based," and a collaboration that she acknowledged sounds odd on paper: "So, a physics company with a junior exploration company – it's all kind of a weird mix." But the company's stated plan is straightforward: under a memorandum of understanding announced in late 2025, Quantum would supply material from its Canadian projects to Nusano's Utah facility for refining, with the parties also evaluating the joint development of a dedicated refining hub in Utah. In a world where the West has spent years talking about reshoring – and far less time building the plants – the idea of "a refining hub" is not a throwaway phrase; it's the whole fight.

Geography, in Kiesman's story, is less romance than logistics – snow, bugs, permits, and the constant arithmetic of distance. In British Columbia, she described ground "in and around Smithers and Burns Lake" in a neighborhood known for copper, with the added lure of polymetallic potential. In Québec, she emphasized the company's NMX East project, describing it as "next to the Whabouchi lithium mine," in the broader Nemaska area where the micas, she says, "are carrying these metals." (Quantum's own project materials describe NMX East as adjacent to the Whabouchi Mine – a Nemaska Lithium property – in Québec's Eeyou Istchee James Bay region.)

And then there is silver – the metal that even non-miners can picture, suddenly re-entering the "critical" conversation not just as jewelry or coinage but as circuitry and infrastructure. In a January 14, 2026 news release about Quantum's Babine South property in British Columbia, the company reported high-grade silver results from surface sampling, including re-assay confirmation of grades up to **308 oz/t (9,580 g/t) Ag**. Kiesman's statement in that release was written for investors but carried a broader thesis: "Silver has moved firmly into the global

spotlight as demand accelerates across AI and quantum computing, the defense sector, and the build-out of modern power infrastructure.” The release also described 2025 surface sampling returning silver values ranging from **0.35 to 36.97 oz/t Ag**, with anomalous zinc (up to **1.35%**) and lead (up to **0.37%**), and it laid out next steps including expanded mapping, targeted sampling, and an induced polarization survey to refine drill targets for the 2026 exploration season — while also underscoring the industry’s standard caution that grab samples are selective and “do not constitute a mineral resource or reserve.”

Kiesman’s offhand comment in the interview — “now Trump has made it critical down in the US” — turns out to have an unusually literal policy rhyme. In November 2025, the U.S. Department of the Interior, through the U.S. Geological Survey, published the final 2025 list of critical minerals and added ten new minerals, including **silver**, citing economic and national security considerations and supply-chain risk. Whatever one thinks of lists, they have consequences: they signal what kinds of projects get attention, what kinds of processing gets subsidized, and what kinds of supply chains get treated as vulnerabilities rather than mere inconveniences.

Money, inevitably, is where the narrative narrows to the practical. Cudmore pressed her on financing: “You raised, I think, two or three raises last year. How are you for raising going forward?” Kiesman answered like someone mapping a sequence of proofs. The company, she said, is working on “building a small-scale pilot to prove up our mica flotation and the removal of gallium and rubidium… on a small scale,” so they can show proof of concept “on a larger scale than just the lab.” Drill permits are in motion for Nemaska, she said, but not yet approved, and “that will definitely need financing because it’s going to be a big program.” She also described a more

opportunistic shortcut — “using somebody else’s mica and running some processing on that” — as a way to advance the processing story without carrying the full cost of drilling first.

When the conversation turned to grants, Kiesman’s answer tilted south, toward the American state that has become a kind of improbable supporting character in the critical-minerals story: Utah. “In Canada, we actually haven’t located any grants yet,” she said, but “the US has multiple grants that we can apply for,” pointing to the Department of Energy and the Department of Defense as potential sources. She described working through a group called 47G — “an aerospace and defense ecosystem” — and the collaborative, hive-like culture she says it cultivates.

If the interview had a moment that cut against the usual corporate polish, it came when Cudmore asked about relationships with Indigenous communities. Kiesman didn’t claim perfection; she claimed persistence. “The hardest part is always trying to get a hold of somebody,” she said — “you will just get radio silence.” In British Columbia, she said, sometimes the tactic is blunt: “if you just go and literally show up on the doorstep, eventually they just got to let you in.” In Nemaska, she described a community she considers “very well organized,” and she spoke about sourcing First Nations contractors where possible because “the more jobs that we can have locally, the better off we all are.” Then she returned, as she often did, to method — not merely what is mined, but how. Her aspiration is a process gentle enough to sell not as mitigation but as design: “I don’t think you’re going to get a more environmentally friendly way of doing things than what we do, right to the tailings level,” she said, describing Québec mica that, in her telling, needs only “crushing in water.” But even in Canada, where winter is a constant and distance is a tax, the most immediate operational constraint can still be painfully small, and Kiesman offered it with a laugh: “at least you don’t have to

worry about getting devoured by bugs, because I can tell you one thing is for certain: the bugs absolutely love me.”

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