

Element One Advances Twin Sisters Magnesium and Targets Hydrogen Field Tests

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[Element One Hydrogen & Critical Minerals Corp.](#) (CSE: EONE) is evaluating a potential U.S. magnesium supply opportunity at Twin Sisters in Washington State, following assays of up to 28.46% magnesium. In a recent InvestorNews interview with host Tracy Hughes, Brad Kitchen, President, CEO and Director, explained how access to existing quarry material could support the company's development plans while its hydrogen research progresses. The strategy combines a proposed magnesium operation with efforts to generate hydrogen from rock and explore for naturally accumulated hydrogen.

At Twin Sisters, eight samples [returned](#) magnesium values ranging from 26.39% to 28.46%, alongside nickel values of 2,660 to 3,305 parts per million. Element One's memorandum of understanding with Millbank Materials provides the right to purchase up to 50,000 tonnes of material annually, with an option to increase that amount to 100,000 tonnes. Kitchen said sourcing material from an established operator could reduce the work required to develop a new mine and associated infrastructure. "They just deliver it effectively to our front door," he said.

Asked which magnesium product Element One intends to bring to market first, Kitchen was direct: **"We will be producing magnesium oxide."** He described a proposed closed-loop process designed to recover valuable minerals while limiting waste, with nickel and silica also discussed as potential products. Kitchen sees the Washington State opportunity as a possible earlier source of revenue while the company develops its hydrogen

business. His objective is to reach cash flow within approximately two years, a management target that remains dependent on successful development.

The next step at Twin Sisters is to establish recoveries and product quality through testing with Revora Materials Inc. in New York. In its [September 25 update](#), Element One said the work would evaluate mineral separation, processing inputs and costs using Revora's IonMet electrochemical platform. Recovery rates, product specifications and economic viability have yet to be established, and the company had made no decision to construct a pilot or commercial facility. The feedstock volumes contemplated by the MOU therefore describe potential access to material, rather than forecast production.

Element One's hydrogen research centres on accelerating reactions in ultramafic rocks, which contain minerals that can participate in hydrogen-generating processes. Kitchen said laboratory work with Dr. Greeshma Gadikota and her team at Columbia University is focused on improving hydrogen extraction rates and refining the conditions needed for those reactions. Under a two-year sponsored research agreement [announced](#) in May, Element One committed US\$1.67 million to research into hydrogen stimulation and the potential co-recovery of critical metals. The agreement provides that Columbia retains ownership of inventions and research results generated under the program, subject to Element One's option to negotiate licenses to certain resulting inventions or information.

Moving that research into the field is the next objective. "Our target is to be field testing for the summer or fall of next year," Kitchen said, referring to 2027 and noting that permitting would influence the schedule. He identified three projects in British Columbia and one in Alaska as possible locations for testing, while describing work to develop a system

for delivering the hydrogen-generating solution into the rock. Kitchen also outlined a potential application near mines or data centres, where locally generated hydrogen could eventually supply energy close to the point of demand. Alongside that research, Element One is pursuing exploration for naturally accumulated hydrogen through its letter of intent with France-based Mantle8. Kitchen said a nine-day reconnaissance program in British Columbia was intended to identify four or five prospective areas and help determine the projects to include in a definitive agreement, which he hoped to complete before the end of 2026. An October 13 company [update](#) confirmed that reconnaissance with Mantle8 was underway in the province's interior. The interview outlined the milestones ahead: testing whether Twin Sisters material can yield commercially viable magnesium products and preparing the hydrogen research for field trials.

To access the complete InvestorNews interview, [click here](#)

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