Element One Advances Patent-Pending Technology for Real-Time Hydrogen Production from Naturally Occuring Rock Systems

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Element One is now positioned at the forefront of next-generation hydrogen production

Vancouver, April 14, 2026 - Element One Hydrogen and Critical Minerals Corp. (CSE: EONE) ("Element One" or the "Company") is pleased to announce the advancement of a patent-pending technology for enhanced real-time hydrogen production from naturally occurring rock systems, representing a significant step forward in the development of scalable, low-carbon natural hydrogen.

The technology, developed in collaboration with leading research partners, focuses on the in-situ formation of spinel oxide catalysts derived directly from metal-bearing rocks such as olivine. By leveraging naturally occurring iron and nickel within ultramafic and mafic formations, the process enables the formation of highly active catalytic materials that dramatically accelerate hydrogen generation through water-rock reactions.

Unlike conventional hydrogen production methods or naturally occurring serpentinization processes-which typically require high temperatures and extended timeframes-Element One's approach facilitates real-time hydrogen generation at moderate temperatures and pressures, opening the door to more practical and economically viable deployment.

Laboratory testing has demonstrated that nickel-doped spinel catalysts can increase hydrogen production by more than 1,000 times compared to traditional iron-based systems. Further enhancements were observed when this technology was combined with olivine-derived fluids, resulting in a strong synergistic effect between naturally sourced materials and engineered catalytic processes.

The technology is designed to be deployed in both subsurface in-situ ultramafic and above-ground mined rock environments, including utilization of engineered reactor systems. This integrated approach positions Element One to capitalize on abundant global ultramafic rock resources. The next step for the Company is to implement field testing of this technology in the very near future.

"This breakthrough represents a major milestone in unlocking the potential of natural hydrogen," said Tim Johnson, Chief Operating Officer of Element One Hydrogen. "By creating catalysts directly from the rocks themselves, we are significantly improving reaction efficiency while reducing the need for external inputs. This positions Element One at the forefront of next-generation hydrogen production technologies."

The Company believes this innovation has the potential to materially improve the economics of natural hydrogen development and supports Element One's broader strategy of identifying and advancing large-scale hydrogen opportunities across prospective geological settings.

Element One will continue to advance this technology through further testing, optimization, and field-scale validation in partnership with academic and industry collaborators.

About Element One Hydrogen & Critical Minerals Corp.
Element One Hydrogen & Critical Minerals Corp. (CSE: EONE) is a Canadian company focused on the exploration, development, and commercialization of natural hydrogen and critical mineral resources, as well as breakthrough hydrogen-generation technologies. The Company's projects include the Foggy Mountain critical minerals project as well as projects in Alaska and British Columbia that are prospective for hydrogen production through stimulation in the subsurface as well as critical and battery metals.

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