

# CO<sub>2</sub> Mineralization for *in situ* Storage and *ex situ* Enhanced Metals Recovery



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Martin is a mining executive with experience in company leadership, mine project development, debt and equity financing, investor relations and corporate governance. Martin is a CPA, CA with over 20 years of progressive and diverse experience in the resources industry, ranging from exploration and development-stage juniors to large multinational producers.

## **Technology or focus area**

- Technologies for carbon capture, use, and storage, excluding biological/agricultural carbon management

## **Ideas, Interests, Concepts to be Explored**

- It has been established by research work on FPX Nickel's Baptiste Nickel Deposit that mine tailings will sequester carbon dioxide by either direct air capture or injection of concentrated carbon dioxide.
- The nickel mineralization at Baptiste is hosted in a serpentinite that contains the mineral brucite which naturally sequesters carbon dioxide to form carbonate minerals, a stable mineral phase that geologically stores the CO<sub>2</sub> for an indefinite period of time.
- The tailings (fine-grained waste material) that will be generated from mining will provide a substantial reservoir for capture and permanent, stable, storage of CO<sub>2</sub>. The potential scale of carbon sequestration is such that it could render the Baptiste mining operation carbon-neutral or carbon-negative.

# Baptiste – A Potential Carbon Neutral Mine

According to Dr. Ian Power (Professor, Trent University), Baptiste “offers a tremendous opportunity for developing a carbon-neutral mine”

- Baptiste mill waste (brucite) naturally sequesters CO<sub>2</sub>
- Generates a possible carbon benefit under the B.C. carbon tax
- Binding and cementation of tailings has numerous co-benefits that could influence mine design, operations, and closure

