

XX XXXX 2023

XXX
XXXXXX – address
XXXXXXXXXX
XXXXXXXXXX

Re: Proposed UBC research visit to study geology and carbon storage potential

Dear XXX,

Thank you for the phone call and discussion on XXdateXX.

My name is Katrin, and I am part of a research group at the University of British Columbia (UBC) that studies the potential of carbon dioxide (CO₂) storage in rocks as a mitigation method for fighting climate change. Specifically, rocks called serpentinite. For some time, Professor Greg Dipple and our team have been researching serpentinites as they contain high amounts of magnesium that can bind safely with CO₂, forming new natural carbonate minerals that are permanent and stable over thousands to million years.

A carbon storage method that is already operating in Iceland is called the Carbfix technology that imitates and accelerates natural processes, as vast quantities of CO₂ are naturally stored in rocks. It is a proven method based on scientific research and has been operating in basaltic rocks since 2012 (see www.carbfix.com) with high public acceptance at the local and broader community scale. The technology consists of dissolving CO₂ in water – forming sparkling water of sorts – and then injecting it into the subsurface to more than 350 m depth, where it reacts with the rocks and forms carbonate minerals.

As part of my PhD research, I am assessing the feasibility in British Columbia of the Carbfix method into serpentinite rocks. The first part of this work is to identify suitable sites for research. The site XXX, located XX km from XXX, has suitable geology and access, and so is a potential site for my research.

I would like to discuss my research ideas with you and also talk about how to work with your Nation. Initially, I would like to visit the area to assess the carbon storage potential sometime in summer 2023. Possible fieldwork would comprise of field observations of outcrops and geography and taking 10-20 kg of representative rock and water samples for analyzing in the laboratory. Additionally, we would like to identify locations and assess the natural rate of groundwater flow through the rocks.

The implications of this work may be that we can collect data to support a potential future pilot-scale project capturing CO₂ and safely storing it as carbonate minerals. This bigger project could bring together technical developments from researchers at UBC, public geoscience (Geoscience BC), and world-renowned expertise in sequestering carbon (Carbfix).

I would like to arrange an in-person, phone or video meeting to discuss research ideas and how to work with your community's staff or leadership.

Sincerely,

A handwritten signature in black ink, appearing to read "Katrin St." with a stylized flourish at the end.

Katrin Steinthorsdottir, MSc. ([She/Her/Hers](#))

PhD candidate. Earth, Ocean and Atmosphere Sciences

University of British Columbia

UBC is located on the unceded traditional lands of the x^wməθk^wəyəm (Musqueam) nation.

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