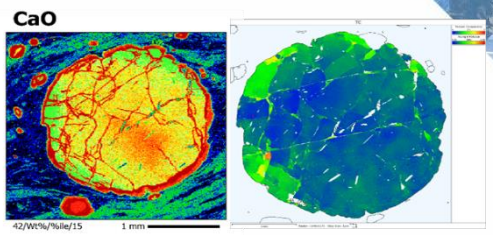
Micro-Analytics for Mineral Chemistry

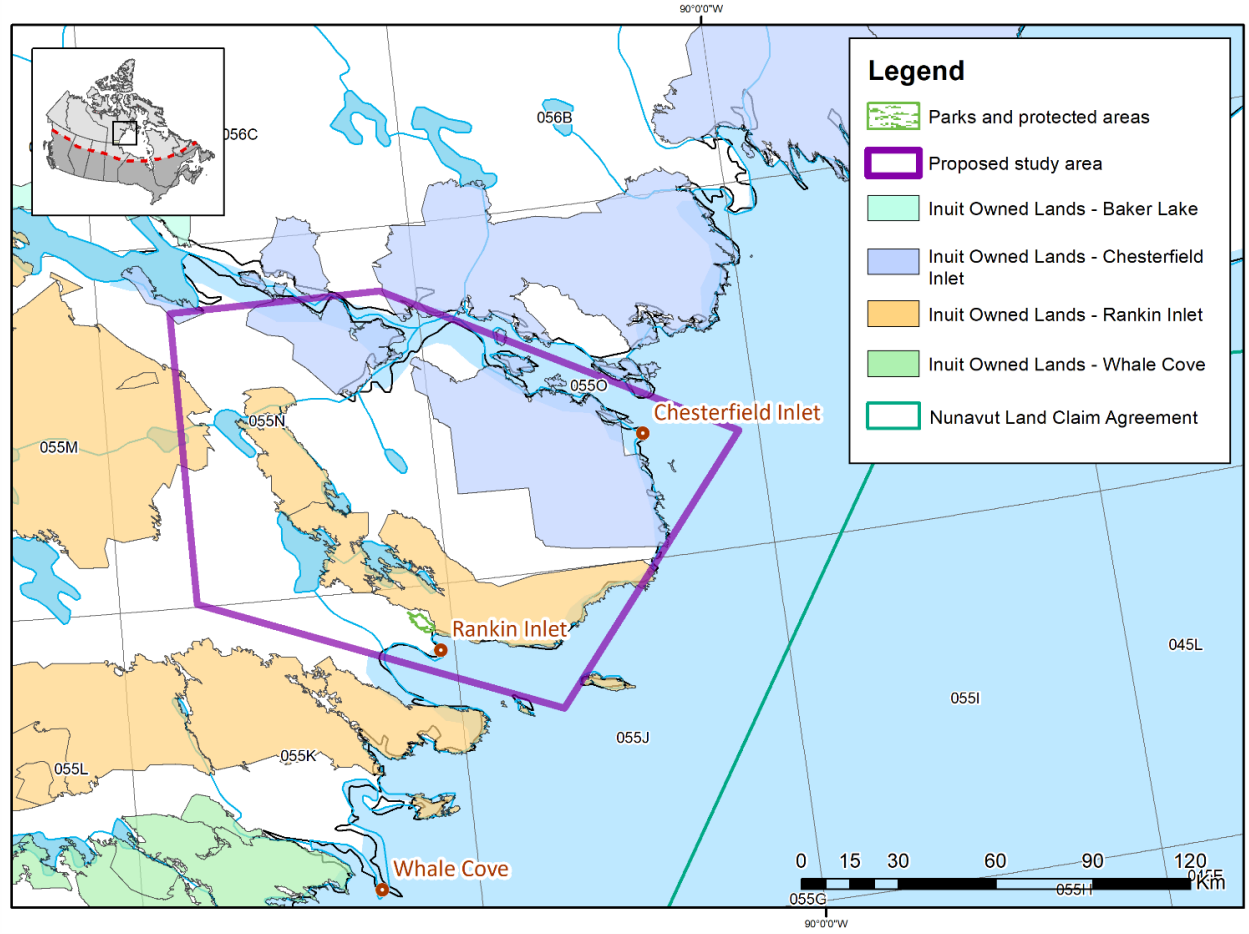


Sample of garnet as depicted by two lab analysis techniques: the distribution of quicklime (left) and deformation of the rock (right).

This activity proposes to develop new ways to measure how metals and minerals move in areas with faults – naturally occurring fractures in bedrock. The researchers are examining previously collected samples from Yukon, in an area that is a boundary between two geological zones, and propose to collect more samples in the Rankin Inlet area. The boundary is around 60km north of Rankin Inlet and shows a divide of different rock types to the north and south.

The team of 5 researchers, with a wildlife monitor, proposes to conduct sampling for two and a half weeks in July. They would be set out by helicopter from Rankin Inlet, and conduct short hikes along the boundary area collecting fist-sized rock samples, taking photos, and taking measurements.

These new research tools would allow researchers to understand how elements and precious metals move over time along the boundaries of different geological zones in the landscape. Understanding this kind of movement could assist in mineral exploration strategies and help identify locations of carving stones and other building materials.



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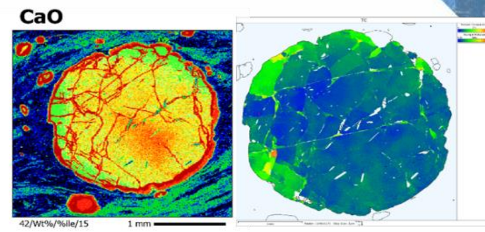

ᐆᑦᑑᑎ ᓯᑎᔪᑦ ᐊᐅᐸᓗᒃᑐᑦ ᐅᔭᕋᐃᑦ ᑎᑎᕋᐅᔭᖅᑕᐅᔪᑦ ᒪᕿᔾᓄᑦ ᒪᕿᒃ ᖃᐅᔨᓴᕽᕚᒃ ᖃᐅᔨᓴᕈᑏᒃ ᑎᑭᑉᐸᓪᓕᐊᔪᑦ ᓴᐅᓂᒃᓴᖅ ᐃᓚᒃᓴᐃᑦ (ᓴᐅᒥᐊᓂ) ᐊᒻᒪ ᐊᓯᙳᖅᐸᓪᓕᐊᔪᖅ ᐅᔭᖅ (ᑕᓕᖅᐱᐊᓂ).

ᑖᓇ ᐱᓕᕆᐊᕐᒍᔪᖅ ᐃᒪᓐᓇᐅᕐᑯᔨᕗᖅ, ᓴᖅᑭᑎᑦᑎᓂᐊᕐᓗᓂ ᓄᑖᓂᒃ ᐊᑐᖅᑕᐅᔪᓐᓇᖅᑐᓂᒃ ᐆᒃᑐᕋᖅᓯᓂᐊᕐᓗᓂ ᖃᓄᖅ ᑕᒪᒃᑯᐊ ᓴᕠᕋᔭᐃᑦ ᐅᔭᕋᖕᓂᐊᕈᒃᓴᐃᓪᓗ ᓅᐸᖕᒪᖖᑕ ᓇᔪᕽᕙᖕᒋᑕ – ᓄᓇᒥᙱᖅᑐᓂᒃ ᓇᒡᕖᖅᑐᖃᖅᐸᓪᓕᐊᕙᖕᓂᖕᖁᓄᑦ ᖃᐃᖅᓲᖖᒥ. ᖃᐅᔨᓴᖅᑏᑦ ᖃᐅᔨᓴᖅᐳᑦ ᑲᑎᑕᐅᓵᓚᐅᖅᑐᓂᒃ ᖃᐅᔨᓴᖖᒃᓴᓂᒃ ᔩᑳᒥᙱᖅᑐᓂᒃ, ᑭᒡᓕᖃᖅᓗᓂ ᒪᕿᒃ ᓄᓇᒦᑦᑐᑦ ᐊᑯᓂᕐᒋᓂᒃ, ᐊᒻᒪ ᖃᐅᔨᓴᖖᒃᓴᓂᒃ ᑲᑎᖅᓯᐃᒃᑳᓂᕈᒪᐸᓗᑎᒃ ᑲᕐᒋᖅᑲᓂᐅᑉ ᖃᓂᒌᔭᓂ. ᑭᒡᓕᒋᔭᖕᖓ 60 ᑭᓚᒦᑕᓂᒃ ᐅᖕᖓᓯᒃᑎᒋᔪᖅ ᑲᕐᒋᖅᑲᓂᐅᑉ ᐅᐊᖕᓇᖕᖓᓂ ᑕᑯᒃᓴᐅᑎᑦᑎᐸᓗᓂ ᐊᕙᒃᓯᒪᔪᑦ ᐊᔾᔨᒌᙱᑦᑐᓂᒃ ᐅᔭᖅᑲᓂᒃ ᐅᐊᖕᓇᐅᑉ ᐊᒻᒪ ᓂᒋᕐᒧᑦ.

ᑕᓪᓕᒪᑦ ᖃᐅᔨᓴᖅᑏᑦ, ᐆᒪᔪᓂᒃ ᖃᐅᔨᓴᖅᑎᖃᖅᓗᑎᒃ, ᑐᒃᓯᕋᖅᑐᑦ ᐱᓕᕆᐊᒃᓴᖃᕐᓗᑎᒃ ᖃᐅᔨᓴᕈᑎᒃᓴᓂᒃ ᒪᕿᒃ ᓇᐸᕐᒧᓪᓗ ᓴᓇᑦᑕᐃᓖᑦ ᔪᓚᐃᒥ. ᐱᒋᐊᕋᔭᖅᑐᑦ Hᐃᓕᑳᑉᑕᒃᑯᑦ ᑲᖏᖅᖠᓂᕐᒥᑦ, ᐊᒻᒪ ᐱᓱᓗᕋᕐᓗᑎᒃ ᑭᒡᓕᒋᔭᖕᖓᑕ ᑭᒡᓕᖕᖓᒍᑦ ᑲᑎᖅᓯᐃᓗᑎᒃ ᐅᔭᖅᑲᓂᒃ ᖃᐅᔨᓴᕝᕆᒃᓴᓂᒃ, ᐊᕐᔨᓕᐅᓇᓗᑎᒃ, ᐊᒻᒪ ᐆᒃᑐᕋᕐᓗᑎᒃ.

ᑖᒃᑯᐊ ᓄᑖᑦ ᖃᐅᔨᓴᕈᑎᒃᓴᑦ ᖃᐅᔨᓴᖅᑎᓂᒃ ᑐᑭᓯᔾᔪᑕᐅᔪᓇᕐᓂᐊᖅᐳᑦ ᖃᓄᖅ ᐃᓗᓕᖕᒋᑦ ᐊᒻᒪ ᓴᕠᕋᔭᐃᑦ ᐃᖕᒋᕋᓲᖑᖕᒪᖕᒋᑕ ᑭᒡᓕᖕᒋᑦ ᐊᔾᔨᒌᙱᑦᑐᑦ ᓄᓇᒦᑦᑐᑦ ᓄᓇᐅᑉ ᓴᓂᒨᖑᔪᑦ. ᑐᑭᓯᐅᒪᓂᖅ ᑕᐃᒪᐃᑦᑐᓂᒃ ᐊᐅᓚᓂᕐᓂᒃ ᐃᑲᔪᕈᓇᖅᑐᖅ ᐅᔭᕋᖅᓯᐅᕐᓂᕐᒧᑦ ᕿᒥᕐᕈᐊᕐᓂᕐᒧᑦ ᐸᕐᓇᐅᑎᑦ ᐊᒻᒪ ᐃᑲᔪᕐᓗᒋᑦ ᓇᓗᓇᐃᔭᐃᓗᑎᒃ ᓇᔪᕕᒋᔭᐅᔪᑦ ᓴᓇᙳᐊᒐᒃᓴᓄᑦ ᐅᔭᖅᑲᐃᑦ ᐊᒻᒪ ᐊᓯᖏᓪᓗ ᐃᒡᓗᒃᓴᐃᑦ.