

Detailed Technical Project Description

Community Mapping Points of Interest, Kimmirut Region

Mary Sanborn-Barrie (Geological Survey of Canada) with Kimmirut Hamlet Council & residents

Summary: Community bedrock mapping within the municipality of Kimmirut and along the Itijjagial Trail (Kimmirut to Frobisher Bay) will form the foundation of a pilot study to develop a new “Points of Interest” feature on the mobile app SIKU, intended to increase access to geoscience by Northerners and visitors to the region. Community involvement (hiring/training) in acquisition of digital geoscience content, accessible on mobile devices, is being co-developed by Kimmirut Hamlet council, Territorial Parks and GEM GeoNorth, to update and replace the out-dated, out-of-print paper ‘Geology Walking Tour of the Kimmirut Area’.

Short term objectives:

- to provide a meaningful way to engage Northerners, especially youth, to experience and participate in science;
- to offer short-term, outdoor employment opportunities to interested residents;
- to replace the outdated, out-of-print ‘Geology Walking Tour of the Kimmirut Region’ with a digital alternative that is accessible by mobile phone, as a way to increase access, interest and uptake of knowledge and data related to geoscience in the North;
- to enable knowledge co-production and knowledge sharing via the free, user-friendly, Indigenous knowledge network SIKU;

Long term objectives:

- to make geoscience data available and accessible to Northerners;
- to build interest and increase uptake of knowledge and data related to geoscience in the North;
- to strengthen the capacity of Northern communities to address geoscience opportunities and challenges;

Background & Rationale: Accessibility and uptake of geoscience knowledge by First Nations and Inuit communities have traditionally been limited. This is, at least in part, due to the technical nature of geological maps and the expensive licensing requirements of the geographic information system software used to view and analyse geoscience data. SIKU is an existing web platform and mobile app, developed by the Arctic Eider Society, that supports knowledge-gathering primarily related to the land. Its >45,000 users post and share observations related to mammals, birds, and fish (harvesting; food security) and sea-ice conditions (travel; safety). Previously as part of NRCan’s GEM GeoNorth program, SIKU was expanded to allow users in the Kivalliq region to post and share observations of geology (**NRI research license 03 010 23N-A; 03 010 24R-M**) and the changing climate (permafrost features, glacial landforms (**NRI research license#**). To further expand the role SIKU can have in increased access to geoscience, a new “Points of Interest” feature will allow representation of important geological landmarks on mobile devices to allow easy access to the story of the evolving landscape that rocks record.

Progress To Date: The concepts of community mapping and a “Points of Interest” pilot study were enthusiastically embraced by local Inuit organizations during a September 17-22, 2025 visit to the

community. A report highlighting a recent Engagement visit to Kimmirut (September 17-22, 2025) is attached.

Recruitment: A process of recruitment that has been highly successful in many past bedrock mapping projects (Southampton Island 2007; Pangnirtung 2009; Qikiqtarjuaq 2010; Taloyoak 2016, 2017; Resolute Bay 2018; Whale Cove & Arviat 2023, 2024) will be used. This involves:

- engagement visit to present ideas & gauge interest and support (September 17-22, 2025);
- post a one-pager (what, why, who, when, how) in the community (Northern, Co-Op, Hamlet & Housing offices - Spring 2026);
- provide Hamlet with application forms specific to community bedrock mapping (Spring 2026);
- consult with the Hamlet SAO and EDO on an appropriate daily rate for the activity (Spring 2026);
- arrange through the NRCan Business Office an Agreement for Services Procurement between NRCan and the municipality (Hamlet) whereby hires are paid by the Hamlet weekly and, upon completion of the project, the Hamlet is reimbursed by NRCan for all costs related to the community mapping activity plus an administrative fee. Under this type of agreement, many residents can be hired and those hired are covered by the insurance of the Hamlet;
- assess applications & contact applicants; try to hire as many as possible (late June 2026);
- hold an in-person information meeting (June 29 2026) to arrange best scheduling for those interested and explain process of pay thru the Hamlet and the pay verification form (below);
- mentor hires in geological mapping
- complete and sign 'Pay Verification' form (*see uploaded attachment*) with resident (in duplicate) as proof of employment. This form, signed by both the resident and NRCan project lead, in duplicate is then submitted to the Hamlet financial officer so that each resident is paid, with a copy retained by NRCan for records and to ensure full reimbursement of all costs relating to the project (Fall-Winter 2026)

Methodology: 3-weeks of bedrock mapping will be carried out in the Kimmirut region, a geologically spectacular region of southern Baffin Island which is the source of pride for its residents and a marvel for its many visitors who arrive annually on cruise ships, or via hiking and canoe along the Itijjagialq (Overland) Trail through Katannilik Territorial Park.

The foundation of the "Points of Interest" feature will be geoscience content collected by interested community members (**June 29-July 12**) hired and mentored in Kimmirut by GSC scientists (Sanborn-Barrie, Rayner & Ford) to collection of geoscience information (mapping) of Kimmirut's landmark rock exposures. Within and near Kimmirut, bedrock mapping will be conducted by foot, truck and ATV (as circumstances allow) with a rotating roster of residents hired through an Agreement between NRCan & the Hamlet (*see above*). Community mappers will be equipped with digital cameras, hand lenses, magnets, UV lights, geological hammers and chisels, a drone, etc. to aid in the collection of data. This activity is being co-developed with the community. Direct daily involvement of local indigenous residents will transfer traditional knowledge and best practices with respect to local wildlife and the natural environment. Community members will decide which

local features (landmarks) should become “Points of Interest” in SIKU for access by eco-tourists to the region.

Consent: A release / privacy form (see *uploaded attachment*) will be made available to all participants so that they can indicate whether or not their name and photo can be shared and/or reproduced in a variety of settings:

- Presentations or posters for community use
- Presentations at conferences
- Publications, presentations, or posters posted online
- On the NRCan website, social media or YouTube channel
- In NRCan publicity or promotional materials.

At the request of Territorial Parks staff, Kimmirut-based geoscience content will be supplemented by content collected by NRCan personnel (Sanborn-Barrie, Rayner, Ford) during a 5-day traverse (**July 13-18**) along the Itijjagiq Trail towards Frobisher Bay. Bedrock mapping and content collection through Katannilik Territorial Park will allow future visitors to the park the opportunity to appreciate the setting and the timescale within which its spectacular rocks evolved. Bedrock mapping along the Itijjagiq trail, planned with Territorial Park staff, will be undertaken by foot and supported by well-marked and maintained shelter cabins spaced at 8 to 23 km intervals along the route. We are applying for one day of rotary support (helicopter) originating from and returning to Iqaluit on July 18, 2026. This single day of use will support bedrock mapping at 3 locations (~1 hour shutdown) within Katannilik Territorial Park and demobilization from the park to Iqaluit.

Data Management: Community-acquired digital data and photos collected in July 2026 will be presented and assessed in a public meeting (July 12), so that residents of Kimmirut have their say in deciding which landmarks will appear as "Points of Interest" in the Indigenous Knowledge App – SIKU. Agreed-upon data and photos will be uploaded into SIKU so that they can be accessed by both residents and visitors to the region

Research Outputs: Agreed-upon data and photos will be uploaded into SIKU so that they can be accessed by residents and visitors to the region. In addition to content being accessible electronically as “Points of Interest” on SIKU, illustrated plain-language laminated cards will be created and supplied to residents interested in offering short duration ATV geo-tours to day-trippers from cruise ships that visit Kimmirut each summer.

Throughout this activity, community input on traditional place names in the Kimmirut area will be recorded, discussed, and forwarded to Inuit Heritage Trust so that names appearing on the available place names map (a map layer available on the SIKU app) can be verified and/or corrected.