

The 2025 field program focused on the Rankin Inlet and Whale Cove areas, where a lightweight Shock-Auger drilling system was deployed to minimize ground disturbance and improve efficiency in remote terrain. Ten sites were visited, nine of which were successfully drilled, revealing subsurface materials, active-layer thicknesses, ice content, and bedrock depths ranging from surface exposure to 6.3 m. Multiple samples from each site were collected for laboratory analysis, and two additional thermistors were installed near Whale Cove. Data from thermistors installed in 2024 were downloaded, providing a complete year of ground-temperature records for the corridor. A comprehensive analysis and reporting of the data is underway, with results expected in February 2026.

The project also delivered local training and employment opportunities, including thermistor data-collection training and wildlife monitoring roles. The successful approach used to date is recommended for future geotechnical investigations as the program expands to additional areas of the corridor.

Key Message: *Concise, plain language summary of key take away messages of work to date, findings, and conclusions (3-5 points, in bullet form).*

IQ key messages:

1. Kivallirmiut have experienced changes to the weather, climate, community life, and culture.
2. Country food and traditional activities are important.
3. The KHFL is expected to provide jobs and opportunities.
4. Designing and constructing the Project will need to reflect areas and species of importance, like caribou.

Geotechnical key messages:

1. Over two consecutive field seasons (2024 and 2025), significant progress has been made in gathering subsurface data along the KHFL corridor, critical to support engineering planning and design for the project.
2. Both years of fieldwork greatly benefited from local support.
3. A similar approach is recommended for subsequent geotechnical data collection initiatives, including the expansion of the investigative drilling program to other areas along the corridor.

Objectives: *IQ project objectives (bullet form).*

IQ objectives:

- To understand land and resource use patterns relative to the Project area
- To collect IQ to strengthen the dataset already collected, fill remaining knowledge gaps, and ensure IQ is meaningfully integrated into all aspects of KHFL planning and development.
- To support Project proposal to NIRB and future impact assessment.

Geotechnical objectives:

- Collect preliminary geotechnical data from sites representative of the diverse surface conditions along prioritized sections of the proposed KHFL corridor.

- Installation of thermistors (permafrost monitors) for the collection of ground temperatures along the corridor.
- The resulting data and its analysis are intended to inform the siting, design, and costing of tower foundations and help determine ideal data collection protocols for subsequent geotechnical investigations.

Activities: *A description of activities and methods carried out (what, where, when, who, how?). Include dates team members conducted research at remote field sites or collected data (including interviews) in communities.*

IQ activities and methods:

Land and Resource Use Workshops were conducted in Chesterfield Inlet to gather information from community members about IQ and their relationships with the land and natural resources. A total of five workshops were scheduled as summarized in Table 1.

Table 1 – Land and Resource Use Workshops

| Location | Date/Time YYYY-MM-DD/00:00 | Team Members Present | # of Participants |
|------------------------------------|-------------------------------|--|-------------------|
| Chesterfield Inlet, Community Hall | 2025-01-21/09:30 | Kurtis Ulrich - InterGroup Consultants Gerald Beta – InterGroup Consultants | 4 |
| Chesterfield Inlet, Community Hall | 2025-01-21/18:30 | Kurtis Ulrich - InterGroup Consultants Gerald Beta – InterGroup Consultants | 1 |
| Chesterfield Inlet, Community Hall | 2025-01-22/10:00 | Joni Gibbons - Nukik Kurtis Ulrich - InterGroup Consultants Gerald Beta – InterGroup Consultants | 2 |
| Chesterfield Inlet, Community Hall | 2025-01-22/13:30 | Joni Gibbons - Nukik Kurtis Ulrich - InterGroup Consultants Gerald Beta – InterGroup Consultants | 7 |
| Chesterfield Inlet, Community Hall | 2025-01-23/11:00 | Joni Gibbons - Nukik Kurtis Ulrich - InterGroup Consultants Gerald Beta – InterGroup Consultants | 5 |

In May 2025, two Inuit post-secondary students hired to conduct interviews with Elders, Knowledge Keepers, and experienced land-users. Summer students were flown to Winnipeg for onboarding and training at the InterGroup offices in downtown Winnipeg. Students learned about the KHFL and

conducting interviews. The students also learned and practiced interview skills, including scheduling and setting up an interview, conducting the interview, troubleshooting challenges, and typing up interview notes. Between June and August, the students reviewed training materials, conducted a practice interviews, and began scheduling interviews. Scheduling included making phone calls, sending emails, doing a radio ad, and visiting homes or local businesses.

The students conducted twelve interviews throughout the summer, including four interviews in Rankin Inlet (one via teams). After completing each interview, the students were responsible for updating the interview tracker, typing up notes, scanning consent forms, and other administrative duties. Dates and location of interviews can be found in Table 2. The students finalized their interview notes and other relevant reporting, including drafting short summaries reflecting on the work they did over the summer. In addition, the summer students had the opportunity to conduct fieldwork with one of the project partners AAE Tech. They got to assist with the collection of biological samples and documenting characteristics of different waterbodies near the McConnell River, Maguse River, Wallace River, and Tha-Anne River.

Table 2 – Summer Student IQ Interviews

| Community | Date of interview |
|------------------|--------------------------|
| Arviat | 2025-06-20 |
| Arviat | 2025-06-23 |
| Arviat | 2025-06-23 |
| Arviat | 2025-06-24 |
| Arviat | 2025-06-25 |
| Arviat | 2025-07-07 |
| Arviat | 2025-07-08 |
| Arviat | 2025-08-28 |
| Rankin Inlet | 2025-08-06 |
| Rankin Inlet | 2025-08-07 |
| Rankin Inlet | 2025-08-06 |
| Rankin Inlet | 2025-08-15 |

Geotechnical activities and methods:

Fieldwork in 2025 continued south along the corridor, focusing on investigative drilling in the greater Rankin Inlet and Whale Cove areas. The drilling involved the use of a lightweight Shock-Auger drilling system, building off the investigations and techniques improved upon from 2024, to standardize drilling practices and minimize ground disturbance. The Project area is quite remote, making it logistically challenging, costly, and commonly results in significant ground disturbance when using larger, standard geotechnical drilling equipment.

The Shock-Auger drill enabled observations of subsurface material compositions, depth to bedrock, active layer thickness, and permafrost ice content within minimal disturbance. In addition, ground temperature sensors (thermistors) were installed at select locations to monitor seasonal and year-over-year changes in ground (permafrost) temperature. Recordings from the

previous year of installations were visited and downloaded for the first year of complete ground temperature data for analysis. The results of both the 2024 and 2025 drilling investigations will allow for broad interpretation and grouping of the corridor into landform complexes that will frame the various scenarios needed to inform siting, design, and costing of foundation concepts.

Work was performed with support from local community members from Rankin Inlet, from July 14th to July 31st, 2025. The field work was limited to the main line of the corridor between Rankin Inlet and the greater Whale Cove area.

Results and achievements: *Findings and results to date of the above activities, highlight key research achievements.*

IQ results and achievements:

- Hired, trained, and employed two Inuit-post secondary students as summer students.
- Successfully completed twelve key-person interviews with Elders and land users in Arviat and Rankin Inlet and five land and resource use workshops in Chesterfield Inlet.
- Documented findings related to the location, type, and importance of land and resource use.
- Documented findings related to changes to culture, communities, and traditional activities

Geotechnical results:

A total of 10 sites were visited in 2025 as part of the drilling study, with nine sites drilled using the lightweight Shock-Auger drilling system. Bedrock at surface restricted drilling at one site visited, indicating a range of bedrock to be from near/at surface to 6.3 m depth (maximum depth achieved) for the 10 sites visited in 2025. Subsurface conditions, depth to bedrock, active layer thickness, and permafrost ice content was recorded. Multiple samples were retrieved from each site and sent for laboratory analysis, and two new thermistors recording ground temperatures were installed at locations near Whale Cove.

Preliminary findings from the geotechnical drilling study suggest stable subsurface conditions suitable for infrastructure development in the Rankin Inlet and Whale Cove areas, with near-surface bedrock commonly observed. Initial findings based on subsurface drilling completed so far in 2024 and 2025 identify suitable soil layers for foundation support and manageable ground water depths. The data collected are currently being analyzed and a report is expected in February 2026.

Challenges/Obstacles: *Comment on any challenges/obstacles (if any) experienced during the project. List actions to mitigate or resolve these challenges.*

IQ challenges/obstacles:

- Challenge: One issue encountered early in the interview process was that some individuals contacted the summer students expressing interest in participating but did not have sufficient experience or knowledge to meet the participation criteria.

- Resolution: A series of screening questions were drafted to allow the students to vet interview candidates. Additionally, the students were provided with a list of responses for them to politely turn people down who did not fit the criteria.

Geotechnical:

- Challenge: Unseasonable weather conditions during September 2024 limited drilling.
- Mitigation: The 2025 fieldwork occurred earlier in the season (July) allowing for more flexibility of work. The shift in field program timing allowed for weather to only cause minor delays, greatly improved sample collection, and significant challenges did not occur.
- Concerns: No significant concerns were raised regarding the conduct of the team.

RESEARCH OUTCOMES: BENEFITS

Community engagement: *Briefly list and describe any community consultation, engagement, collaboration and outreach activities that you have undertaken for the project; describe the role(s) that community members and/or specific organizations have played in research co-design and activities.*

IQ:

- Five land and resource use community workshops were held in Chesterfield Inlet.
 - InterGroup Consultants planned and facilitated these workshops and conducted interviews and participatory mapping.
 - One Inuktitut interpreter was hired from Chesterfield Inlet for the workshops.
 - Community members participated in interviews and mapping workshops, sharing knowledge on IQ and land and resource use.
- Twelve IQ interviews were conducted by community-based summer students in Arviat and Rankin Inlet.
 - InterGroup consultants hired and trained two Inuit post-secondary students from Arviat.
 - In collaboration with InterGroup, the two summer students developed interview questions and guides and planned, scheduled, and conducted IQ interviews in Arviat and in Rankin Inlet.
 - The summer students recorded and drafted notes from the IQ interviews and submitted them to InterGroup.

Geotechnical:

- A geoscientist from SLR participated in multiple community workshops held in Chesterfield Inlet, Rankin Inlet, and Whale Cove.
 - Activities included responding to community questions and delivering presentations on project progress and planned work.
- SLR geoscientists collaborated with community-based summer students in Arviat and Rankin Inlet by developing surficial-geology and permafrost-focused interview questions.

- Students used these questions to engage local residents about environmental conditions and observed changes within the project area.
- Feedback gathered through workshops and student-led interviews was incorporated into project planning.

Training and employment:

How many Nunavummiut received training from team members? Describe training and/or compensation provided.

IQ:

- Two Nunavut Beneficiary summer students received training on how to conduct interviews, scheduling, and note taking methods as well as aquatic field sampling techniques.
- The summer students filled out a weekly timesheet and were paid at a rate of \$40/hour for time spent training, participating in fieldwork, doing admin work, and conducting interviews.

Geotechnical:

- A training program was completed in February 2025 for thermistor data collection for one local community member, which enabled data collection to be completed for two thermistors in the weeks following the training. At the time of writing, additional training related to thermistor data collection and repairs over the 2026 winter months is anticipated but the exact number of Kivallirmiut receiving training and/or compensations has not been finalized at this time.

How many team members received training from Nunavummiut? Describe training received and/or what knowledge sharing and/or skills exchange took place.

IQ:

- While no formal training from Nunavummiut occurred, there were multiple occurrences of knowledge sharing from the summer students to the rest of the team. The most significant example of this was during training when the summer students assisted with developing questions for the interview guide that were grounded in their own experiences and perspectives, clearly showing their deep local knowledge and familiarity with their communities.

How many Nunavummiut received employment? Describe employment type and length, role(s) and responsibilities, and compensation provided.

IQ:

- Two Inuit post-secondary students received full-time employment between May 26 and August 31, 2025.

- The summer students filled out a weekly timesheet and were paid at a rate of \$40/hour for time spent training, participating in fieldwork, doing admin work, and conducting interviews.
- The summer student's role including scheduling and conducting interviews with Elders and land users to document IQ to support the development of the KHFL.
- An interpreter was hired to support the Chesterfield workshop implementation; they received \$2,000 in compensation.

Geotechnical:

During the two phases of field work, employment opportunities were as follows:

- A wildlife monitor from Rankin Inlet was employed during the length of the field program in July 2025. Compensation was \$400/days for every day in the field.
- Logistics support
 - Individuals from Sarliaq Holdings Ltd. were compensated at \$215 an hour on an as needed basis in July 2025. Support included shipping and receiving of equipment within Rankin Inlet while the crew was conducting field work.

How many Nunavummiut received honoraria as research participants? Describe method of participation (interview, observation, sample, survey, etc.), including compensation provided.

Interviews:

- Twelve Nunavummiut received honoraria for participating in interviews led by the summer students. The honoraria provided to each participant was a \$150 gift card to either the Northern or an Arctic Co-op.

Workshops:

- The Chesterfield Inlet Workshops were advertised on local radio, Facebook, and posters throughout the community.
- Participants were invited to ask questions about the project and share information about the areas important for land and resource use, cultural reasons, or other purposes in areas proximal to their home communities. Large maps were available, and team members documented the information shared in the discussion.
- Workshops were on a come-and-go basis, and people could stay as long as they chose. An informed consent process was followed with everyone in attendance to ensure that they knew how their information was being used. Project representatives were available to answer questions, and Project brochures were available.
- Honoraria were offered at each workshop, with the approach to distribution reflective of each community's preference, number of participants, and meaningful participation. \$50 honoraria were offered for Arctic Co-op.

Explain how the project directly benefited Nunavut organizations and/or businesses (e.g., through contract services, local purchases, equipment donations, etc.)

IQ:

- Gift cards given as honoraria to interview participants were purchased locally.
- Travel within the Kivalliq region supported local hotels, restaurants, and a car rental business.
- For the Chesterfield Inlet workshops, rental fees and catering were all sourced locally.

Geotechnical:

- Local businesses provided support services, which included, but was not limited to, logistics support, mechanical services and equipment, and storage. Compensation varied and was based on the services provided. These businesses were:
 - Sarliaq Holdings Ltd., Rankin Inlet
 - EPLS Group, Rankin Inlet
 - Nanuq Lodge & Executive Suites, Rankin Inlet

DATA AND INTELLECTUAL PROPERTY

Did you enter into a research agreement, data-sharing agreement and/or intellectual property rights agreement with a community and/or designated Inuit organization (DIO)? If yes, please explain.

Do intellectual property rights apply to your research? If yes, please explain.

Yes

Who owns the data? Has the raw data been shared with the appropriate community and/or DIO? If yes, how? How is data security and storage handled by community-based co-owners?

Nukik Corporation owns all data collected and produced as part of the KHFL baseline investigations. Nukik has data sharing agreements with all hamlets and Hunter and Trapper Organizations. We have not had a request for data from any of our Nunavut based data sharing partners in 2025.

Where is the data stored and will the data be destroyed within a set timeframe?

IQ Data:

Data is being managed consistent with the informed consent form provided to all participants. The consent form states the following with regards to confidentiality and storage of the data:

- Confidentiality: The answers you provide will be kept confidential to InterGroup and will only be shared publicly in summary form. A list of people who participated in the studies may be included in public reports.
- Data management: Interview notes, geospatial data, and digital recordings (if applicable) of the interviews will be kept on an encrypted server in the InterGroup offices and transferred to the KIA when the project is done. Information will be shared only among team members.

Data sharing agreements have been signed with communities and HTOs in Arviat, Whale Cove, Rankin Inlet, Baker Lake, and Chesterfield Inlet, along with several First Nations in northern Manitoba to support ongoing information sharing related to the Project. Only data that meets the confidentiality requirements of this consent process will be shared through those agreements.

Geotechnical data:

The collected data is stored in a secure, cloud-based database while being analyzed. The data will be retained for ten years and then securely destroyed to ensure privacy and compliance with Engineers and Geoscientists of BC (EGBC) requirements.