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$\epsilon_b \Delta^c \dot{\bar{N}}_0 \sigma^b \wedge c_n d\epsilon^f b^g d n d^a l^a \sigma^b$

ᑭᓪᓂᓄᓐ ᑭᓪᓂᓄᓐ: Title: Periglacial Geomorphology investigation study in permafrost at the Houghton impact structure and surrounding terrains, Devon Island, Nunavut Our objective this year is to investigate the underground in relation to the periglacial landforms and ground ice using a geophysical approach such as field sampling, ground surveying and mapping with a focus on in-crater and out of crater differentiation.

DΔΛΠD: Titre: Periglacial Geomorphology investigation study in permafrost at the Houghton impact structure and surrounding terrains, Devon Island, Nunavut
Cette année notre objectif est d'étudier la proche surface du sol et la dynamique périglaciaire et des coins de glace en utilisant une approche géophysique, comme l'échantillonnage de terrain, l'utilisation de géoradar et la cartographie en utilisant une approche de différenciation du terrain intra-cratère versus extra-cratère.

$\Delta_{\mathcal{M}^b} \cap \mathcal{C}$: I included an Inuktitut non-technical summary with the application

Personnel

Personnel on site: 4

Days on site: 19

Total Person days: 76

Operations Phase: from 2019-07-17 to 2019-08-04

$\Lambda \subset \mathbb{N} \triangleleft \mathbb{N} \hookrightarrow \Sigma \triangleleft^{\text{qb}} \mathcal{C}$

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Haughton River Valley Camp	Camp	Inuit Owned Surface Lands	This site is used for research since the late 1990's	None	Grise Fjord and Resolute are several hunder km from the location
Haughton Crater Area (big polygon); Orbiter Lake and Lake Comet (small circles)	Researching	Inuit Owned Surface Lands	Orbiter and Comet lake are desert. Haughton River Valley was studied since the late 1990's and the Haughton Formation since the 1980's	No know archeological sites. There is fossil rich layers in the Haughton Formation in the SW of the crater: we will not go there.	Grise Fjord and Resolute are several hunder km from the location

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Information is not available			

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North Baffin

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ᓂᓐᓂᓐ ᓂᓐᓂᓐ ᓂᓐᓂᓐ ᓂᓐᓂᓐ ᓂᓐᓂᓐ ᓂᓐᓂᓐ	Investigate the periglacial landscapes in and near the Houghton Impact Structure #02 021 19R-M	Active	2019-02-25	2019-12-31
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Project transportation types

Transportation Type	ᓂᓐᓂᓐ ᓂᓐᓂᓐ ᓂᓐᓂᓐ	Length of Use
Air	Twin Otter to open and then close the camp	
Land	ATV's and walking on the site depending on distance to point of interest	

Project accomodation types

Temporary Camp

◀▷↳◀⁹⁶▷⁹⁶

Λ⁹δ^c Δ⁹β^cΓ⁹Δ⁹σ^cΔ⁹γ^c Δ^cε^cΓ^cΔ^cΠ^cΔ^cΔ^c, Γ^cΔ^cΠ^cΔ^c, β^cε^cΔ^cΔ^c, Δ^cε^cΔ^cΔ^c

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Kawasaki Bayou	2	1.75x1.0x1.0 m, 185 kg	Travelling to sites too far to be accessed by walking
Honda Generator	1	0.5x0.3x0.4 m, 22 kg	Powering and charging electronic equipment
Coleman Stoves	2	0.6x0.1x0.3 m, 6 kg	Cooking food and boiling water
Badger Auger	1	0.5x0.4x0.4	For accessing deeper (~1 m) soil horizons
Portable Drill	1	1 m 30 kg	Small man portable CRREL drill for shallow soil drilling. (max depth is 2.5 m)
Ground Penetrating Radar	1	40 kg	This is a passive instrument to look at underground ice with antennas.

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[illegible]

$\Delta L^{\epsilon_b} \quad \triangleleft \triangleright^{\epsilon_b} \subset \triangleright \triangleleft^{\epsilon_b} \triangleright^{\epsilon_b}$

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0	We go toward the stream with clean water bottles and we refill	The Haughton River is a pretty large river about 1 km from the base camp location

$\triangleleft^b C d^c$
$$\Delta^b C d_C \sim \sigma \Delta^q \sigma^q$$
[illegible]

4907D C⁺ C⁺ 4^b C^{6b} C D L L^c

While in Resolute we will go to the Tudjaat COOP to buy supplies (food) and some camp equipment. In the field the camp is on an old river bed (present river at 1 km from the site). This site has been in use for more than a decade for camp during summer and we reuse the same area to prevent local disturbance spreading. The place will be clean-up (pits refilled, garbage out) before we leave. During research we use ATV in trails or over hard rock to prevent tracks. We are careful/proactive to not disturb wildlife.

Additional Information

SECTION A1: Project Info

SECTION A2: Allweather Road

SECTION A3: Winter Road

SECTION B1: Project Info

SECTION B2: Exploration Activity

SECTION B3: Geosciences

SECTION B4: Drilling

SECTION B5: Stripping

SECTION B6: Underground Activity

SECTION B7: Waste Rock

SECTION B8: Stockpiles

SECTION B9: Mine Development

SECTION B10: Geology

SECTION B11: Mine

SECTION B12: Mill

SECTION C1: Pits

SECTION D1: Facility

SECTION D2: Facility Construction

SECTION D3: Facility Operation

SECTION D4: Vessel Use

SECTION E1: Offshore Survey

SECTION E2: Nearshore Survey

SECTION E3: Vessel Use

SECTION F1: Site Cleanup

SECTION G1: Well Authorization

SECTION G2: Onland Exploration

SECTION G3: Offshore Exploration

SECTION G4: Rig

SECTION H1: Vessel Use

SECTION H2: Disposal At Sea

SECTION 11: Municipal Development

[illegible][illegible][illegible]

Miscellaneous Project Information

$\alpha \rightarrow \Delta^{\text{fb}} \text{CD} \sigma^{\text{fb}} \Gamma^{\text{C}} \quad \Delta^{\text{b}} \text{CD} \Gamma^{\text{L}} \Gamma^{\text{C}} \quad \text{fb} \Delta^{\text{C}} \sigma^{\text{fb}} \Gamma^{\text{C}} \quad \text{C} \Delta \Gamma^{\text{L}} \Gamma^{\text{fb}} \text{CD} \sigma^{\text{fb}} \Gamma^{\text{C}} \rightarrow$

Cumulative Effects

Impacts

[illegible][illegible]
$$(P = \langle b \rangle \Delta \langle p \rangle \cap \langle q \rangle \langle a \rangle \langle b \rangle)^C, N = \langle b \rangle \langle p \rangle \langle q \rangle \langle \langle \langle p \rangle \langle a \rangle \langle b \rangle \rangle^C \langle \langle \langle p \rangle \langle q \rangle \langle a \rangle \rangle \langle b \rangle \rangle^C \langle \langle \langle p \rangle \langle a \rangle \rangle \langle b \rangle \rangle^C \rangle, M = \langle b \rangle \langle p \rangle \langle q \rangle \langle \langle \langle p \rangle \langle a \rangle \langle b \rangle \rangle^C \langle \langle \langle p \rangle \langle q \rangle \langle a \rangle \rangle \langle b \rangle \rangle^C \rangle, U = \langle b \rangle \langle p \rangle \langle \langle \langle p \rangle \langle a \rangle \rangle \langle b \rangle \rangle^C \rangle$$

List of Project Geometries

- | | |
|-----------|---|
| 1 polygon | Haughton Crater Area (big polygon); Orbiter Lake and Lake Comet (small circles) |
| 2 point | Haughton River Valley Camp |