



New

Scientific Research

1/20/2025 1:54:04 PM

from 2025-03-25 to 2027-05-30

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ᖃᓕᓗᓴᓂᓗᓐ: We are scientists with the German Alfred Wegener Institute for Polar Research and have carried out airborne sea ice observations in Nunavut for many years. Here we propose to continue our long-term observations and to include Cambridge Bay and Victoria Strait as a new study region. This complements our other study region where we have worked for many years, including Resolute Bay, Pond Inlet, Eureka, and Alert. We use a DC3 airplane for our sea ice observations. It will carry cameras, a radar, and an EM probe for measuring snow and ice properties. The airplane will take off and land at open airports in communities in Nunavut. It will fly along long, straight transects 200 or 300 miles long. It will fly low over the sea ice at 200 ft altitude. On board the aircraft will be three crew and three scientists. They will overnight in the communities. Two or three flights will be carried out from each community. The objective of the surveys is to observe the variability and change of sea ice and snow thickness and deformation in the Canadian Arctic. Results are important for better understanding of climate change. They will also be used to improve satellite observations of ice conditions, for example for better generation of ice travel hazard maps, and to evaluate the feasibility of shipping in the Northwest Passage. In the past we have been granted permission to survey the sea ice in the vicinity of Resolute Bay, Pond Inlet, Eureka, and Alert. Here we ask for permission to survey the sea ice around Cambridge Bay, including in Dease Strait and Victoria Strait. We will avoid surveying in protected areas. Our surveys are planned between March 25 and April 13, 2025. We plan to repeat them every year for the next five years during the March and April time period.

▷ ΔΑΝΩC: n/a

[illegible]

Inuinnaqtun: n/a

Personnel

Personnel on site: 7

Days on site: 6

Total Person days: 42

Operations Phase: from 2025-03-25 to 2025-04-15

Operations Phase: from 2025-03-25 to 2027-05-30

Post-Closure Phase: from to

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Cambridge Bay	Aerial surveys	Marine	n/a	n/a	>35 km
Resolute Bay	Aerial surveys	Marine	n/a	n/a	> 10 km
Pond Inlet	Aerial surveys	Marine	n/a	n/a	5 km
Qikiqtarjuaq	Aerial surveys	Marine	n/a	n/a	5 km
Eureka	Aerial surveys	Marine	n/a	n/a	> 400 km

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የጥናታዊ ምርመራዎች ዓይነት	ስም	የጥናታዊ ምርመራዎች ዓይነት	የጥናታዊ ምርመራዎች ዓይነት
ጥናታዊ ምርመራዎች	Daniel Kramer, U Sherbrooke	HTC	2025-02-13
ጥናታዊ ምርመራዎች	Trevor Bell	SmartIce	2025-02-03
የጥናታዊ ምርመራዎች ዓይነት	Sheldon Oqallak	Bear monitor	2025-02-27
ጥናታዊ ምርመራዎች	Andrew Arreak	SmartIce	2024-12-09
የጥናታዊ ምርመራዎች ዓይነት	David Iqqaqsaq	SmartIce	2024-12-09

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Project transportation types

Project accomodation types

மாண்புமிகு

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A^cd^c A^br^at^s A^cD^sC^aσ^aH^at^s Δ^cb^ap^an^aJ^c ΔjCΔ^c, Γ^c→A^cp^añ^c, ^sb^aL^cC^j^s, m^ep^a→^c A^r^ar^c→

$\Delta^{\alpha}\Gamma^{\beta}\wedge^{\gamma}\delta^{\epsilon}$ $\Delta\zeta\eta\sigma\Delta^{\beta}\zeta^{\epsilon}$ $\epsilon\mu\Delta^{\gamma}\zeta^{\alpha}\sigma^{\beta}\eta$	$\epsilon^{\beta}\gamma^{\alpha}\eta^{\gamma}\epsilon^{\epsilon}$	$\Delta^{\alpha}\Gamma^{\sigma^{\alpha}\Gamma^{\epsilon}} - >^{\beta}\zeta^{\alpha}\sigma^{\beta}\Gamma^{\epsilon}$	$\eta^{\epsilon}\zeta^{\epsilon}\Delta\zeta\eta\sigma\Delta^{\beta}\epsilon^{\epsilon}$
Basler BT-67 (DC3) airplane	1	N/A	Research flights and ferrying equipment & passengers

[illegible]

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Aviation fuel	fuel	1	16000	16000	Liters	For survey flights. Fuelling will take place at local community airports YCB, YRB

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$\triangleleft \nabla \cap \Gamma \triangleright C \dot{\sigma}^C \supset^C \triangleleft^b \supset^{cb} C \triangleright \gamma L \dot{\gamma}^C$

Our surveys take place at 200, 1100, and 1500 ft flying altitude, with a speed of 120 knots. The only impact is short-term noise from the aircraft, particularly during the overflight at 200 ft. However, noise is limited due to the fact that only one overflight takes place at any location as the low altitude surveys take place along extended single lines. For the larger altitudes, aircraft presence is limited to a maximum of several overflights during one hour, and only on one day. The impact of these flights is minimal and we have permission to carry them out even in Antarctica where the strictest environmental requirements worldwide exist. Nothing will be left in the environment, potentially resulting garbage will be returned and disposed in communities (with our accommodations) or taken with us out of Nunavut.

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 I1: Municipal Development

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L^ea AENP^c bMACTC-CLPSL: BLT^bC^bS^s

[illegible]

Miscellaneous Project Information

We continue to intend to carry out surveys in all the following places/communities:- Resolute Bay- Pond Inlet- Cambridge Bay- Qikiqtarjuaq,- Eureka, and- AlertWe plan to carry out such surveys for at least another two years (note that we have been doing this at least since 2017, in continuation of the surveys I started as a Canada Research Chair in 2007), and therefore it would be great to approve the project for five years and to renew it on an annual basis during that time.

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Cumulative Effects

Impacts

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$$(P = \langle b \rangle_{\dot{a} p n^a q^c}, N = \langle b \rangle_{\dot{a} n^a r^c} \langle \dot{c} \rangle_{\dot{d} p n^a q^c} \langle \dot{c} \rangle_{\dot{d} n^a r^c}, M = \langle b \rangle_{\dot{a} n^a r^c} \langle \dot{c} \rangle_{\dot{d} p n^a q^c} \langle \dot{c} \rangle_{\dot{d} n^a r^c}, U = \langle b \rangle_{\dot{a} l^a q^c})$$

1	polygon	Last Ice Area
2	polygon	Victoria Strait
3	polygon	Penny Strait
4	polygon	Pond Inlet
5	polygon	Qikiqtarjuaq
6	point	Eureka
7	point	Resolute Bay
8	point	Cambridge Bay

1	polygon	Last Ice Area
2	polygon	Victoria Strait
3	polygon	Penny Strait
4	polygon	Pond Inlet
5	polygon	Qikiqtarjuaq
6	point	Eureka
7	point	Resolute Bay
8	point	Cambridge Bay