NIRB Application for Screening #125431

Carboniferous Basins in Svalbard, Canada and the Barents Sea (CBS2)

Application Type:	New
Project Type:	Scientific Research
Application Date:	1/8/2019 11:28:28 AM
Period of operation:	from 0001-01-01 to 0001-01-01
Proposed Authorization:	from 0001-01-01 to 0001-01-01
Project Proponent:	Jean-Baptiste Koehl
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DETAILS

Non-technical project proposal description

English: Project titleCarboniferous Basins in Svalbard, Canada and the Barents SeaResearchers names and affiliationsLeader: Jean-Baptiste Koehl, University of Calgary, Calgary, Canada; University of Oslo, Oslo, NorwayOne field assistant to be named.Project locationThe study area is located on the Grinnell Peninsula, in Northwest Devon Island, along the Lyall River.TimeframeThree to four weeks between June 15th and August 15th 2019.Project descriptionPurposeThe project aims at studying 360-325 million years old sedimentary rocks in NW Devon Island. The project will investigate the context of deposition of these rocks and compare them to analogous rocks in Svalbard and the Barents Sea (Norway).Goals and objectivesThe project will test three main hypotheses:1.Testing that the studied rocks were deposited within a large depression bounded by large cracks.2.Testing that these rocks deposited while the tectonic plates were diverging.3.Testing the influence of adjacent basement rocks on the deposition and deformation in the studied rocks.Methods of transportationTwin Otter from Resolute Bay to the Grinnell Peninsula or strip designated by the PCSP. If needed, helicopter transportation from Twin Otter landing site to study area. Daily walks from the campsite to the outcrops.Structures to be erectedTwo personal tents will be erected at the campsite.Restoration/abandonment plansThe camp site will be restored to its original conditions and photos will be taken by the field participants prior and after abandonment following the legislation in place. All unburnt waste will be bagged and transported back to Resolute Bay.MethodologyCollection protocol and mechanismAbout 70 small rock samples (less than 0.5 kg each) will be collected for geochemical, structural, microscopic, and geochronological analyses. The samples will be collected using a geological hammer and a chisel and will be catalogued and stored at the University of Calgary. No fossil will be collected.Use of dataThe data will be published in Gold Open Access peer-reviewed scientific journals and be freely accessible to anyone who wishes to use them. The data will also be accessible on repositories at the University of Calgary.ReportingSix to eight peer-reviewed articles and two to three popular science articles will result from this project. The results will be disseminated through international and specialized scientific conferences and popular science events. Report to the communities and the media will be provided upon request.

French: Titre du projetBasins Carbonifères au Svalbard, Canada et en Mer de BarentsNoms des chercheurs et affiliationsLeader : Jean-Baptiste Koehl, Université de Calgary, Calgary, Canada ; Université d'Oslo, Oslo, NorvègeUn assistant de camp de terrain à être nommé.Localisation du projetLa zone d'étude est située sur la Péninsule de Grinnell, au nord-ouest de l'île Devon, proche de la Rivière Lyall.AgendaTrois à quatre semaines entre le 15 juin et 15 août 2019.Description du projetObjet de rechercheLe projet est une étude de roches sédimentaires vieilles de 360-325 million d'années sur l'île Devon, au nord-ouest. Le projet étudiera le contexte de déposition de ces roches et les comparera à des roches similaires au Svalbard et en Mer de Barents (Norvège).Buts et objectifsLe projet testera trois hypothèses principales :1. Tester que les roches étudiées ont été déposées dans une large dépression limitées par de larges fractures.2. Tester que ces roches ont été déposées pendant que les plaques tectoniques étaient en divergence.3. Tester l'influence d'adjacentes roches de socle sur la déposition et déformation des roches étudiées.Méthodes de transportTwin Otter depuis la baie Resolute à la Péninsule de Grinnell ou zone désignée par le PCSP. Si besoin, transport en hélicoptère depuis la zone d'atterrissage du Twin Otter à la zone d'étude. Marches journalières depuis le camp jusqu'aux affleurements.Structures à être érigéesDeux tentes personnelles vont être dressées sur la zone du camp.Plans de restauration et d'abandonnementLe camp sera restauré dans ces conditions originales et des photos seront prises par les participants avant et après abandonnement suivant la législation en place. Tout déchet non-brulé sera placé dans un sac et transporté à la baie Resolute.MéthodeProtocole d'échantillonnagePrès de 70 échantillons de roches (de moins de 0.5 kg chacun) seront prélevés pour analyses géochimiques, structurelles, microscopiques, and géochronologiques. Les échantillons seront prélevés à l'aide d'un marteau géologique et d'un burin et seront catalogués et stockés à l'Université de Calgary. Aucun fossile ne sera prélevé.Utilisation des donnéesLes données seront publiées dans des journaux scientifiques Gold Open Access et seront accessible gratuitement à quiconque souhaitera les utiliser. Les données seront aussi accessibles depuis le dépôt informatique de l'Université de Calgary.Compte renduDe ce projet résulteront entre six et huit articles scientifiques et entre deux et trois articles de vulgarisation. Les résultats seront communiqués à des conférences internationales et spécialisées et à des évènements de vulgarisation scientifique. Un compte rendu sera transmis aux communautés et aux media sur requête.

Inuktitut: ᐱᓕᓐᓇᐅᖅ ᐊᑎᖏᒐ60 ᒥᓕᐅᖅᑭᓂᑕᓂᓕᓂ ᐊᖅᖃᔪᓕᓂ ᐃᒪᖅᖁᐱᐅᔾᔪᑦ Svalbard–ᒥᑦ, ᑲᓇᑕ ᐊᒻᒪ Barents Seaᖅᑲᐅᔾᔭᖅᑎᑦ ᐊᑎᖏᑦᑐ ᐊᒻᒪ ᐱᓕᓐᓇᖅᑕᐅᔾᔪᑐᑭᑎᔾᔪᖅ: ᔪᓴ–ᔨᑦᑎᑦ ᑯᐃᐅᑦ, ᓂᓕᑦᑐᔾᔭᖁᔾᔪᐊᖅ ᑭᐅᑭᓐᓇ, ᑭᐅᑭᓐᓇ, ᑲᓇᑕ, ᓕᐊᑫᐃᐊᑕᐅᓂᖅ ᖁᑲᐅᔾᔭᖁᐱᐅᔾᔪᑎᑦ ᐃᑲᔾᔭᖅᑎ ᓇᓕᓇᐃᖅᑕᐅᓂᐊᖅᑐᖅ.ᐱᓕᓐᓇᐊᖅ ᓇᒋᓴᓂᖅᑲᐅᔾᔭᖁᔾᔪᐅᐱᐅᔾᔪᖅ Grinnell Peninsula–ᒋᑦᑐᖅ, ᐅᐊᓴᓂᖅᒪᑕ ᐱᖅᒪᓴᓂᖅᓂᒃ ᑕᑦᓕᑭᑎᐅᔨ, ᑭᑦᓕᓂᖅᒪᑦ ᓪᐃᐊᔾ ᑯᖅᒪᔪᑦ.ᖁᖅᑲᖅᑯᒋᓂᖅᑐᓂᖅᐱᖅᒪᓂᓕᑦ ᑎᔨᒪᓓᑦ ᐱᓇᓕᐊᑭᐅᓂᑦ ᐊᑯᓴᓂᖅᑭᓂᖅᑐᓂ ᔪᓐ 15 ᐊᒻᒪ ᐊᓗᑎᓂ 15 2019.ᐱᓕᓐᓇᐊᖅ ᓇᓕᓇᐃᔪᖅᓂᒪᓂᖅᒪᐱᔾᔪᑎᖅᒪᓕᓐᓇᐊᖅ ᖁᐅᐸᔨᔪᓂᖁᕐᓂᐊᖅᑐᖅ 360-325 ᒥᓕᐊᓂ ᐊᖅᖃᔪᓕᓂ ᐃᖅᑲᒥᐅᑕᓂ ᐅᔪᖅᑲᓂ ᐅᐊᓴᖅᑎᓂ ᑕᑦᓕᑭᑎᐅᔨ. ᐱᓕᓐᓇᐊᖅ ᖁᐅᐸᔨᓂᐊᖅᑐᖅ ᓇᓕᓇᐃᔪᖅᓂᒪᓂᖅᑎᓂ ᐃᓕᓴᖅᑎᓂ ᑕᐅᔭᖅᑎᓂᑲᓂᖅᑲᓂ ᐊᒻᒪ ᐊᔪᐸᑦᖅᔪᑦᑎᓐᓕᑦ ᐊᔪᐸᓕᓄᖅᑎᓂ

ᐅᔭᖅᑲᖕᒋᓐᓄᑦ Svalbard−ᒥ ᐊᒻᒪ Barents Sea (ᓄᐊᕙᐃ).ᑐᕌᒐᖕᒋᑦ ᐊᒻᒪ ᐱᓕᕆᐊᖕᒍᒋᐊᓖᑦᐱᓕᕆᐊᖅ ᖃᐅᔨᓴᓂᐊᖅᑐᑦ ᐱᖕᒐᓱᓪᓗᐊᑕᓂᑦ ᐃᓱᒪᒋᔭᐅᔪᓂᑦ ᖃᐅᔨᒪᔭᐅᔪᓂᑦ:1. ᖃᐅᔨᓴᕐᓗᓂ ᖃᐅᔨᓴᖅᑕᐅᓯᒪᔪᑦ ᐅᔭᖅᑲᐃᑦ ᐊᖕᒋᔪᒧᑦ ᓇᖅᓴᐅᓂᖕᒐᓅᖅᑲᕐᓗᑎ ᐊᖕᒋᔪᓂᑦ ᓄᑎᓐᓂᖃᑐᓂᑦ.2. ᖃᐅᔨᓴᕐᓗᓂ ᑖᒃᑯᐊ ᐅᔭᖅᑲᐃᑦ ᓄᓇᐅᑉ ᑲᑎᓐᓂᖕᒋᑦ ᓅᑉᐸᓪᓕᐊᑎᓪᓗᒋᑦ.3. ᖃᐅᔨᓴᕐᓗᓂ ᖃᓄᐃᓕᒍᑎᓪᓗᐊᑕᐅᔪᑦ ᐊᑦᑐᐊᓂᓕᓪᓗᑦ ᐊᑖᓂ ᐅᔭᖅᑲᓂᑦ ᐊᒻᒪ ᖃᓄᐃᓕᖕᒐᓂᖕᒋᑦᖃᐅᔨᓴᖅᒻᑕᐅᓯᒪᔪᓂᑦ ᐅᔭᖅᑲᓂᑦ.ᐊᑐᖅᑕᐅᓂᐊᖅᑐᑦ ᐃᖕᒋᕋᔾᔪᑎᓄᑦᖃᖕᒐᑕᓲᕋᓛᖅ ᒪᕐᕈᓕᒃ ᖃᐅᓱᐃᑦᑐᒥᑦ Grinnell Peninsula−ᒧᑦᐅᕝᕙᓘᓐᓃᑦᒥᕝᕕᐅᔪᖅ ᓇᓗᓇᐃᖅᑕᐅᓯᒪᔪᖅ PCSP−ᑯᓐᓄᑦ. ᐱᑕᖃᕆᐊᖃᕈᓂ, ᖁᓛᒍᓕᒃᑯᑦ ᐃᖕᒋᕋᓂᖅᖃᖕᒐᑕᓲᒧᑦᒥᕝᕕᐅᔪᒥᑦ ᖃᐅᔨᓴᕐᕕᒻᒧᑦ. ᖃᐅᑕᒫᑦ ᐱᓱᖃᑦᑕᖅᑐᑦ ᓇᔪᖅᑕᐅᔪᒧᑦ ᓄᓇᒥᑦ.ᓴᓇᓯᒪᔪᑦ ᓇᑉᐸᖅᑕᐅᓂᐊᖅᑐᑦᒪᕐᕉᒃ ᑐᐲᒃ ᑐᐱᖅᑕᐅᓂᐊᖅᑐᑦ ᓇᔪᖅᑕᐅᔪᒥᑦ.ᐅᑎᖅᑎᑦᑎᓂᖅ/ᕿᒪᐃᓂᕐᒧᑦ ᐸᕐᓇᐅᑏᑦᓇᔪᖅᑕᐅᔪᖅ ᐊᑎᖅᑎᑕᐅᓂᐊᖅᑐᖅ ᖃᓄᐃᓕᖕᒐᓂᕆᓚᐅᖅᑕᖕᒐᓄᑦ ᐊᒻᒪ ᐊᔾᔨᓕᐅᕆᖃᑦᑕᓂᐊᖅᑐᖅ ᐃᑲᔪᖅᑎᖃᐅᔨᓴᕐᕕᐅᔪᒥᑦᓯᕗᓂᐊᒍᑦ ᐊᒻᒪ ᑭᖕᒍᓂᐊᒍᑦ ᕿᒪᑦᑕᐅᓚᐅᖅᑎᓪᓗᒍ ᒪᓕᒐᖅ ᐃᓂᖕᒐᓃᓕᖅᑎᓪᓗᒍ.ᐃᑭᑕᐅᓯᒪᖕᒋᑦᑐᓕᒫᑦ ᐊᑦᑕᑯᐃᑦ ᐴᖅᑕᐅᓂᐊᖅᑐᑦ ᐊᒻᒪ ᐅᑎᐅᔾᔭᐅᓗᑎ ᖃᐅᓱᐃᑦᑐᒧᑦ.ᐊᑐᖅᑕᐅᓂᐊᖅᑐᑦᓄᐊᑦᑎᓂᕐᒧᑦ ᐊᑐᖅᑕᐅᓂᐊᖅᑐᑦ ᐊᒻᒪ ᐊᐅᓚᓂᖕᒋᑦᖃᓂᒋᔭᐸᓗᖕᒋᓐᓃᑦᑐᑦ 70 ᒥᑭᔪᑦ ᖃᐅᔨᓴᕋᔅᓴᐃᑦ (ᑑᖕᒑᓃᑦᑐᑦ 0.5 kg ᐊᑐᓂ) ᓄᐊᑕᐅᓂᐊᖅᑐᑦ ᐃᓗᓕᖕᒋᓐᓂᑦᖃᐅᔨᓴᕐᓗᑎ, ᓴᓇᓯᒪᓂᖕᒐ, ᒥᑭᔫᑎᓂᑦ, ᓄᓇᖕᒐᓄ ᐋᖅᑭᓱᖅᓯᒪᓂᖕᒐ ᖃᐅᔨᓴᐃᓂᕐᒥᑦ. ᖃᐅᔨᓴᕋᔅᓴᐃᑦ ᐱᔭᐅᓂᐊᖅᑐᑦᐊᑐᕐᓗᑎ ᐅᔭᕋᑦᑎᐊᒥᑦ ᐊᒻᒪ chisel ᐊᒻᒪ ᑎᑎᕋᖅᑕᐅᓂᐊᖅᑐᑦ ᐊᒻᒪ ᑐᖅᑯᖅᑕᐅᓯᒪᓗᑎ ᓯᓚᑦᑐᓴᕐᕕᒃᔪᐊᒥᑦ ᑭᐅᕈᕆ.ᐆᒪᔪᑐᖃᒥᓂᕐᓂᑦ ᓄᐊᑦᑎᔪᖃᔾᔮᖕᒋᑦᑐᖅ.ᐊᑐᖅᑕᐅᓂᖕᒋᑦ ᑎᑎᕋᖅᓯᒪᔪᑦ ᖃᐅᔨᓴᐅᑎᒥᓃᑦᑎᑎᕋᖅᓯᒪᔪᑦ ᖃᐅᔨᓴᐅᑎᒥᓃᑦ ᓴᖅᑭᖅᑎᑕᐅᓂᐊᖅᑐᑦ ᐅᕙᓂ Gold Open Access ᖃᐅᔨᓴᖅᑎᐅᖃᑕᐅᔪᓄᑦᕿᒥᕐᕈᔭᐅᓯᒪᔪᑦ ᖃᐅᔨᓴᓂᕐᒧᑦ ᐅᖃᓕᒫᒐᐃᑦ ᐊᒻᒪ ᐊᑭᖃᖕᒋᑦᑐᒥᑦ ᐱᔭᔅᓴᐅᓪᓗᑎ ᑭᓇᑐᐃᓐᓇᕐᒧᑦ ᐊᑐᕈᒪᔭᖕᒋᓐᓂᑦ.ᑎᑎᕋᖅᓯᒪᔪᑦ ᖃᐅᔨᓴᐅᑎᒥᓃᑦ ᐱᔭᔅᓴᐅᓂᐊᕐᒥᔪᑦ ᑐᖅᑯᐃᕕᓐᓂᑦ ᓯᓚᑦᑐᓴᕐᕕᒃᔪᐊᒥᑦ ᑭᐅᕈᕆ.ᑐᓴᖅᑎᑦᑎᓂᖅᐊᕐᕕᓂᓕᓐᓂᑦ ᑎᓴᒪᐅᔪᖅᑐᓄᑦ ᖃᐅᔨᓴᖅᑎᐅᖃᑕᐅᔪᓄᑦ ᕿᒥᕐᕈᔭᐅᓯᒪᔪᑦ ᐅᖃᓕᒫᒐᐃᑦ ᐊᒻᒪ ᒪᕐᕉᓐᓂᒃ ᐱᖕᒐᓱᓄᑦᐱᐅᒋᔭᐅᓛᖕᒍᔪᑦ ᖃᐅᔨᓴᓂᕐᒧᑦ ᐅᖃᓕᒫᒐᐃᑦ ᓴᖅᑭᓂᐊᖅᑐᑦ ᑕᕝᕙᓐᖕᒐᑦ ᐱᓕᕆᐊᒥᑦ. ᖃᐅᔨᓴᐅᑎᒥᓃᑦᑐᓂᐅᖅᑲᖅᑕᐅᓂᐊᖅᑐᑦ ᓯᓚᕐᔪᐊᒃᑯᑦ ᐊᒻᒪ ᖃᐅᔨᓴᓂᕐᒧᑦ ᑲᑎᒪᓂᐅᔪᓄᑦ ᐊᒻᒪ ᐱᐅᒋᔭᐅᓛᖕᒍᔪᓂᑦ ᖃᐅᔨᓴᓂᕐᒧᑦᖃᓄᐃᓘᖅᑕᐅᔪᓂᑦ. ᐅᓂᒃᑳᑦ ᓄᓇᓕᓐᓄᑦ ᐊᒻᒪ ᐱᕙᓪᓕᔨᐊᔪᓕᕆᔨᓄᑦ ᐱᑕᖃᖅᑎᑕᐅᓂᐊᖅᑐᑦ ᑐᔅᓯᕌᖕᒍᒍᑎ.

Personnel

Personnel on site: 2
Days on site: 21
Total Person days: 42
Operations Phase: from 2019-07-01 to 2019-07-26

Activities

Location	Activity Type	Land Status	Site history	Site archaeological or paleontological value	Proximity to the nearest communities and any protected areas
Grinnell Peninsula, study of rock outcrops of the Emma Fiord Formation.	Camp	Crown	None.	None.	250 km from Resolute Bay.
Grinnell Peninsula, study of rock outcrops of the Emma Fiord Formation.	Researching	Crown	None.	None.	250 km from Resolute Bay.
Grinnell Peninsula, study of rock outcrops of the Emma Fiord Formation.	Sampling sites	Crown	None.	None.	250 km from Resolute Bay.

Community Involvement & Regional Benefits

Community	Name	Organization	Date Contacted
Resolute Bay	Jodi MacGregor	Polar Continental Shelf Program	2018-10-24

Authorizations

Indicate the areas in which the project is located:

North Baffin

Authorizations

Regulatory Authority	Authorization Description	Current Status	Date Issued / Applied	Expiry Date
Nunavut Research Institute	Scientific Research License	Applied, Decision Pending		
Nunavut Water Board	Application for use without a Water License	Applied, Decision Pending		
Other	Nunavut Planning Commission Conformity	Active	2018-12-07	
Other	Nunavut Impact Review Board Screening	Applied, Decision Pending		

Project transportation types

Transportation Type	Proposed Use	Length of Use
Air	Twin Otter and/or Helicopter	

Project accomodation types

Temporary Camp

Material Use

Equipment to be used (including drills, pumps, aircraft, vehicles, etc)

Equipment Type	Quantity	Size - Dimensions	Proposed Use
Aircraft	1	20*16*6	Transportation of two field participants between Resolute Bay and the study area in Devon Island in Twin Otter.
Aircraft	1	11*11*4	If needed, transportation of he two participants by helicopter (Astar) from the Twin Otter landing site to the camp site.

Detail Fuel and Hazardous Material Use

Detail fuel material use:	Fuel Type	Number of containers	Container Capacity	Total Amount	Units	Proposed Use
Propane	fuel	1	15	15	Liters	Cooking
iosol	fuel	1	4	4	Liters	Cooking
Gasoline	fuel	1	15	15	Liters	Burn waste

Water Consumption

Daily amount (m3)	Proposed water retrieval methods	Proposed water retrieval location
0	Plastic containers.	Nearby snow patches and Lyall River.

Waste

Waste Management

Project Activity	Type of Waste	Projected Amount Generated	Method of Disposal	Additional treatment procedures
Berm	Combustible wastes	8 kg	Burn as much as possible.	Unburned waste will be bagged in waterprrof bags and container, and will be brought back to Resolute Bay.
Berm	Greywater	13 liters	In dugged out pits.	Pits to be backfilled.
Berm	Non-Combustible wastes	8 kg	Crushed, bagged, and stored in a waterproof container.	To be brought back to Resolute Bay upon completion of fieldwork.
Berm	Sewage (human waste)	8 kg	Burned on site as much as possible.	Unburned waste will be Sealed in waterproof bags and container, and will be brought back to Resolute Bay.

Environmental Impacts:

The project participants will establish a temporary camp of three tents if possible away from any fauna and flora. The site will be restored to its original condition prior to departure. Small rock samples will be taken in the field. To mitigate the negative impact on surface and bedrock geology, only small (hand-sized) specimen and loose blocks will be taken.

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

Description of Existing Environment: Physical Environment

Description of Existing Environment: Biological Environment

Description of Existing Environment: Socio-economic Environment

Miscellaneous Project Information

The camp will be set in areas without vegetation and the camp site will be restored to its original condition. The field participants will carry at all time HF transceivers and a satellite phone and communicate their plans to basecamp in Resolute Bay twice a day. Waste will be burned, bagged, sealed, and brought back to Resolute Bay.

Identification of Impacts and Proposed Mitigation Measures

Rock samples will be taken from outcrop of the Emma Fiord Formation. To mitigate the impact on the bedrock only small (hand-sized) samples will be taken and, if possible, as loose blocks.

Cumulative Effects

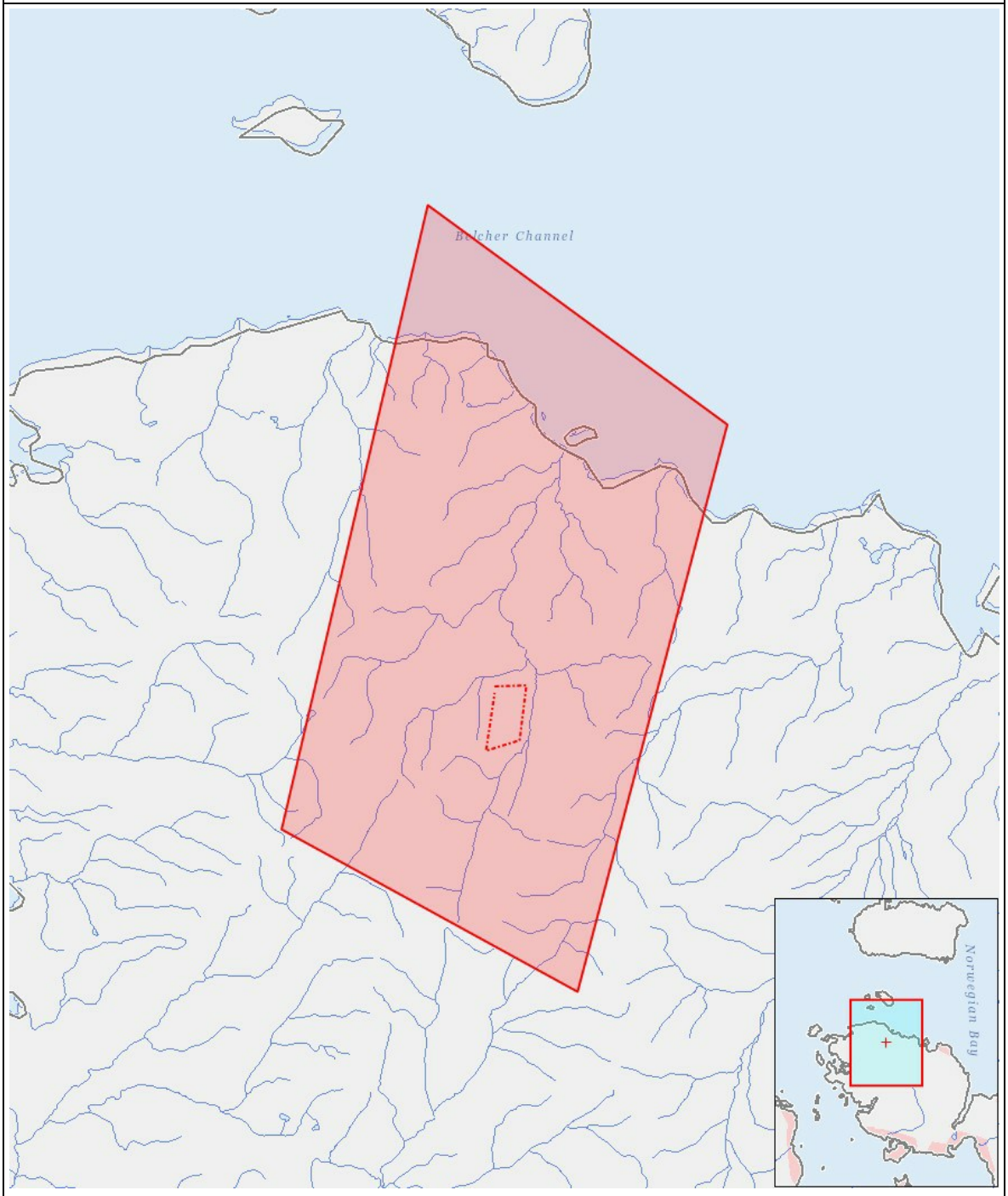
Impacts

Identification of Environmental Impacts

	PHYSICAL	Designated environmental areas	Ground stability	Permafrost	Hydrology / Limnology	Water quality	Climate conditions	Eskers and other unique or fragile landscapes	Surface and bedrock geology	Sediment and soil quality	Tidal processes and bathymetry	Air quality	Noise levels	BIOLOGICAL	Vegetation	Wildlife, including habitat and migration patterns	Birds, including habitat and migration patterns	Aquatic species, incl. habitat and migration/spawning	Wildlife protected areas	SOCIO-ECONOMIC	Archaeological and cultural historic sites	Employment	Community wellness	Community infrastructure	Human health
Construction																									
-		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-
Operation																									
Sampling sites		-	-	-	-	-	-	-	N	-	-	-	-		-	-	-	-	-		-	-	-	-	-
Decommissioning																									
-		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-

(P = Positive, N = Negative and non-mitigatable, M = Negative and mitigatable, U = Unknown)

Project Location



List of Project Geometries

1	polygon	Grinnell Peninsula, study of rock outcrops of the Emma Fiord Formation.
2	polygon	Temporary camp location