

Type de demande :	New
Type de projet:	Scientific Research
Date de la demande :	3/15/2024 3:20:07 AM
Period of operation:	from 2024-03-27 to 2024-06-01
Promoteur du projet:	Mark Skidmore Montana State University Department of Earth Sciences, 226 Traphagen Hall Bozeman Montana 59717 United States Téléphone :: 406 994 7251, Télécopieur ::

DÉTAILS

Description non technique de la proposition de projet

Anglais: Researchers from Montana State University, including graduate students, are proposing a project that would characterize the geochemical and biological properties of a brine system and a glacial outflow on Axel Heiberg Island, Nunavut. The research on Axel Heiberg Island would involve taking samples of water, ice, snow, brine, salt and sediments from the Stolz Diapir in Whitsunday Bay and from a glacier that feeds into Skaare Fiord. There would be a temporary field camp for approximately ten days at each of the two field sites with up to five people. Transport to the field camp locations would be via Twin Otter aircraft from the Polar Continental Shelf Program facility near Resolute Bay. Transport at the field camp locations would be via snowmobile and on foot. The chemical and biological data would provide information to improve understanding on whether these cold and salty environments are good habitats for microbes. The planned research would take place from late-April to the end of May 2024.

Français: Des chercheurs de la Montana State University, dont des étudiants en fin de cycle universitaire, proposent un projet pour caractériser les propriétés géochimiques et biologiques d'un réseau de saumure et d'un écoulement glaciaire sur l'île Axel Heiberg, au Nunavut. L'étude sur l'île Axel Heiberg impliquerait de prélever des échantillons d'eau, de glace, de neige, de saumure, de sel et de sédiments de l'intrusion diapirique de Stolz dans la baie de Whitsunday et d'un glacier qui alimente le fjord Skaare. Il est envisagé d'installer un camp temporaire sur le terrain pendant environ dix jours sur chacun des deux sites, pouvant accueillir jusqu'à cinq personnes. Le transport vers le camp se ferait via des avions Twin Otter depuis les installations du programme du plateau continental polaire, près de Resolute Bay. Le transport aux emplacements des camps sera assuré par motoneige et à pied. Les données chimiques et biologiques recueillies fourniront des informations permettant de mieux comprendre si ces environnements froids et salés constituent de bons habitats microbiologiques. Le projet se déroulerait de fin avril à fin mai 2024.

[illegible]

Personnel

Personnel on site: 5

Days on site: 20

Total Person days: 100

Operations Phase: from 2024-03-27 to 2024-06-01

Activités

Emplacement	Type d'activité	Statut des terres	Historique du site	Site à valeur archéologique ou paléontologique	Proximité des collectivités les plus proches et de toute zone protégée
Fieldwork location - Whitsunday Bay	Scientific/International Polar Year Research	Crown	Previously visited for research by Wayne Pollard in 2012/2013	N/A	310 km from Grise Fiord and 525 km from Resolute Bay
Fieldwork location - Skaare Fiord	Scientific/International Polar Year Research	Crown	Previously visited for research by Wayne Pollard in 2004	N/A	310 km from Grise Fiord and 500 km from Resolute Bay

Engagement de la collectivité et avantages pour la région

Collectivité	Nom	Organisme	Date de la prise de contact
Resolute Bay	Nancy Amarualik	Resolute Bay HTA	2024-03-15
Resolute Bay	Ian Dudla	Hamlet of Resolute Bay	2024-03-15
Grise Fiord	Marty Kuluguqtuq	Hamlet of Grise Fiord	2024-03-15
Grise Fiord	Jimmie Qaapik	Arctic College	2024-03-15
Grise Fiord	Grise Fiord HTA	Grise Fiord HTA	2024-03-15

Autorisations

Indiquez les zones dans lesquelles le projet est situé:

Autorisations

Organisme de régulation	Description des autorisations	État actuel	Date de l'émission/de la demande	Date d'échéance
Institut de recherche du Nunavut	Will be submitting an application to NRI shortly	Not Yet Applied		
Office des eaux du Nunavut	Will be submitting an application to NWB shortly	Not Yet Applied		

Project transportation types

Transportation Type	Utilisation proposée	Length of Use
Air	Twin Otter from Resolute Bay to each field site, Whitsunday Bay and Skaare Fiord	
Land	By foot or by snowmobile from the field camp to the field sampling site	

Project accomodation types

Temporary Camp

Utilisation de matériel

Équipement à utiliser (y compris les perceuses, les pompes, les aéronefs, les véhicules, etc.)

Type d'équipement	Quantité	Taille – Dimensions	Utilisation proposée
Snowmobile	2	300 cc	Transport at the field research site from the field camp to sampling sites
Twin Otter	1	Aircraft	Transfer from Polar Continental Shelf Program facility in Resolute Bay to fieldwork locations and return to Resolute Bay
Generator	2	2kW	To provide electrical power for the field camp

Décrivez l'utilisation du carburant et des marchandises dangereuses

Décrivez l'utilisation de carburant :	Type de carburant	Nombre de conteneurs	Capacité du conteneur	Quantité totale	Unités	Utilisation proposée
Propane	fuel	6	20	120	Lbs	Cooking and heating in the field camp
Gasoline	fuel	5	20	100	Liters	Fuel for the snowmobiles and generators

Consommation d'eau

Quantité quotidienne (m3)	Méthodes de récupération de l'eau proposées	Emplacement de récupération de l'eau proposé
0	Snowpack or glacier ice melt	Adjacent to the field camp locations in Whitsunday Bay and Skaare Fiord

Déchets

Gestion des déchets

Activités du projet	Type des déchets	Quantité prévue	Méthode d'élimination	Procédures de traitement supplémentaires
Scientific/International Polar Year Research	Eaux grises	20 liters per day, 400 liters total	Greywater would be strained into a sump/pit and solids added to the non-combustible waste.	N/A
Scientific/International Polar Year Research	Déchets non combustibles	2kg per day, 40 kg total	Non-combustible waste will be stored in (sealed) buckets and returned to PCSP in Resolute Bay for disposal.	N/A
Scientific/International Polar Year Research	Eaux usées (matières de vidange)	3kg per day, 60kg total	Sewage will be stored in (sealed) buckets and returned to PCSP in Resolute Bay for disposal.	N/A

Répercussions environnementales :

The temporary field camps are small but may result in some localized minor compaction of the soil and possibly vegetation beneath tent sites. This impact would be limited due to the relatively short duration of the camps. We will have a fuel spill kit on site in case of any minor fuel spills from refueling snowmobiles or generators. All food will be stored in sealed containers to prevent access by wildlife. We will generate sewage, waste water from cooking, and a small amount of non-combustible waste. Sewage will be stored in (sealed) buckets and returned to PCSP in Resolute Bay for disposal. Cooking water will be strained, solids added to the non-combustible waste and strained water put into a sump. The non-combustible waste will be stored in sealed buckets and returned to PCSP in Resolute Bay for disposal.

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 de l'environnement existant : Environnement physique

Both field locations are in terrain that has been glaciated. However, there is currently no glacier at the Whitsunday Bay location.

Description de l'environnement existant : Environnement biologique

There is minimal vegetation at the two field locations, and any vegetation will be under snow cover/not growing given the timeframe of the fieldwork.

Description de l'environnement existant : Environnement socio-économique

The field locations are more than 300 km from Grise Fiord and 500 km from Resolute Bay.

Miscellaneous Project Information

Not applicable

Identification des répercussions et mesures d'atténuation proposées

The temporary field camps are small but may result in some localized minor compaction of the soil and possibly vegetation beneath tent sites. This impact would be limited due to the relatively short duration of the camps.

Répercussions cumulatives

No cumulative effects are anticipated.

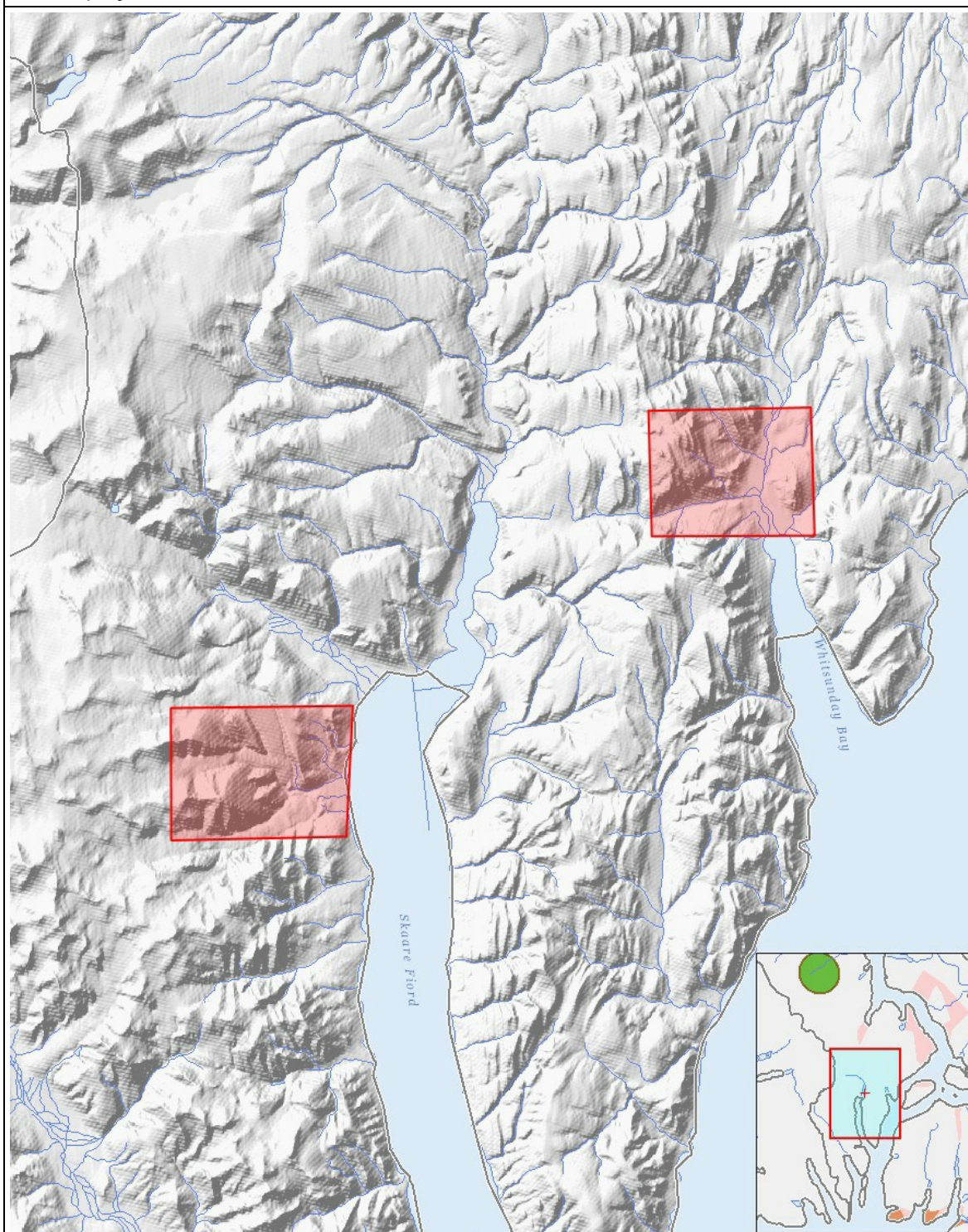
Impacts

Identification des répercussions environnementales

	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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Exploitation																									
Scientific/International Polar Year Research		-	-	-	-	-	-	-	-	-	M	-	-	-	M	-	-	-	-	-	-	-	-	-	-
Désaffectation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

(P = Positive, N = Négative et non gérable, M = Négative et gérable, U = Inconnue)

Site du projet



Liste des géométries de projet

- | | | |
|---|---------|-------------------------------------|
| 1 | polygon | Fieldwork location - Whitsunday Bay |
| 2 | polygon | Fieldwork location - Skaare Fiord |