



## **Demande de la CNER faisant l'objet d'un examen préalable #125646 Tree River Geoscience Project 2022**

**Type de demande :** New

**Type de projet:** Scientific Research

**Date de la demande :** 12/20/2021 4:04:36 PM

**Period of operation:** from 0001-01-01 to 0001-01-01

**Autorisations proposées:** from 0001-01-01 to 0001-01-01

**Promoteur du projet:** Jesse Reimink  
503 Deike Building  
University Park Pennsylvania 16802  
USA  
Téléphone :: 18148656666, Télécopieur ::

# DÉTAILS

## Description non technique de la proposition de projet

Anglais: • Who: A scientific collaboration between Professor D. Graham Pearson of the University of Alberta and Dr. Jesse Reimink of Penn State University in the United States. Additional personnel involved include a PhD student from Penn State, and possibly regional geoscience experts from: the University of Alberta, Laurentian University, or the Nunavut Geoscience Office, as well as a float plane pilot. • What: We will conduct field sampling of ancient basement rocks exposed on the surface. We will be residing at the Plummer's Tree River Lodge and Kugluktuk for the duration of our project and will be flying a Bush Hawk float plane up to 80 km from this location during the day. We will land the Bush Hawk on small lakes, and hike to outcrops near the lakes. Once at outcrops of scientific interest, we will use small hand hammers to take geological samples for research (~1 kg samples) of the rocks of scientific interest. We will be sampling for 8-10 days and expect to collect ~100 samples of rocks in this time period. The sampling will be spread out and will largely be focused on going back to sample locations that have been described by previous Geological Survey of Canada bedrock mappers, projects that took place in the 1980's. Our crew will consist of three to five geologists and a float plane pilot. • Why: Sedimentary rocks exposed in this region contain mineral grains that are extremely old. With the advanced scientific laboratories currently in use at the University of Alberta, we are able to learn a lot about how the very ancient Earth operated by analyzing tiny mineral grains that are found in these sediments. We will be collecting rock samples that contain these tiny mineral grains, extracting the grains, and analyzing their chemical signatures. Our results will be published in peer-reviewed scientific journals. Hopefully, we will learn a lot about how the ancient Earth operated by analyzing these ancient mineral grains.

Français: NA

Inuktitut: NA

Inuinnaqtun: • Kina: Naunaiyaut havaqatiriigunmi uumanga D. Graham Pearson-mit Ilihaqvikiyuamit Alberta-mi, Dr. Jesse Reimink-milu Penn State-mi Ilihaqvikiyuamit Amialigat Nunagiyaanit. Ilagiarutit havaktuni ilauyuni ilaqaqtuq PhD-nigiamini ilihaqtuq Penn State-mit, nunamilu nunamiutaliqiyit ayugitut uvanga, Ilihaqvikiyuamit Alberta-mit, Laurentian-mit Ilihaqvikiyuamit, uvaluniit Nunavumi Nunamiutanik Naunaiyainit Titiraqvianik, unalu qayalikmik. • Hunauk: Maniqami naunaiyainiaqtugut igilraat tungaviuyunik uyaqaiq takuukhauliqtunik qaagani nunap. Hiniktaqvikaqniaqtugut Plummer-p Qugluaqtualukmi Aguniaqtitiviani Kugluktumilu atuqhimaqtilugu havaariyaqut tikminiaqtugulu Bush Hawk-mi qayalikmi tikmiaqmi 80-kilaamitanik umanga inigiyauyumit ubluani. Miniaqtugut mikiyuni tahiqli, pihuklutalu uyaraqtuniqnut haniani tattit. Uyaraktuniqmugarupta naunaiyaivikhamut, atuqniaqtugut mikiyunik kautauyanik nunami naunaiyagakhanik ilituqhaqtakhanik (~1-kilogram-guyut naunaiyagakhat) uyaqanik naunaiyagakhanik. Naunaiyainiaqtugut 8-mit qulinut ubluni nahuriyugulu katitiriami ~100-nik naunaiyagakhanik uyaqanik talvuuna. Naunaiyainiq hiamayaktauniaqtugut ihumagiyaauluaqniaqtulu utiriami naunaiyariagani inigiyauyut uqautauyut kiguliqmi Nunaliqijutunik Naunaiyautimi Kanatami qaiqtunik nunauiyutqinit, havaat atuqhimayut 1980 ukiut atuqtilugit. Havaktivut pigahunit talimanut nunamiutaliqiyit ilauniaqtut qayalikmiklu tikmialikmik. • Huuq: Qaliriiktuuyaaqtut uyaqat hatqigtut uvani nunami piquaqtut uyaraktaakhanik utuqaqyuaguyunik. Ihuaqhivaaliqtuni naunaiyautimi ilituqhautit taja atuqtauyuuq Ilihaqvikiyuami Alberta-mi, ilitpaliahimayugut amihunik qanuq igilraat Hilaqyuaq aulaniganik ilituqhaqhugit mikanuit uyaraktaakhani ilagiyait naniyauhmayut ukunai hiuraliani. Katitiriniaqtugut uyaqanik naunaiyagakhanik piquaqtunik mikanuanik uyaraktaakhanik avugiinik, ahivaqtiqlugit avugiiknigit, ilituqhaqlugilu hunavaluqaqniginik nalunairutunik. Naluhuiqtavut takuupkaqtitauniqtut havaqatinik ihivriuniginik naunaiyautinik uqauhiini. Ihumami, iliniaqtugut amihunik qanuq taimaniraaluk Nunaqyuaq aulaniqaqmagaa ilituqhaqniginik ukua igilraat uyaraktaakhani ilaliutihimayut.

## Personnel

Personnel on site: 4

Days on site: 12

Total Person days: 48

Operations Phase: from 2022-07-15 to 2022-07-25

## 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
Sampling Region of Interest #1	Researching	Crown	NA	NA	NA
Sampling Region of Interest #2	Researching	Crown	NA	NA	NA
Tree River Lodge Base Camp #4	Camp	Crown	NA	NA	NA
Sampling Region of Interest #3	Researching	Inuit Owned Surface Lands	NA	NA	NA
Sampling Region of Interest #5	Researching	Inuit Owned Surface Lands	NA	NA	NA
Sampling Region of Interest #6	Researching	Inuit Owned Sub-Surface Lands	NA	NA	NA

### Engagement de la collectivité et avantages pour la région

Collectivité	Nom	Organisme	Date de la prise de contact
Information is not available			

# Autorisations

Indiquez les zones dans lesquelles le projet est situé:

Kitikmeot

## Autorisations

Organisme de régulation	Description des autorisations	État actuel	Date de l'émission/de la demande	Date d'échéance
Kitikmeot Inuit Association	Have applied - awaiting decision	Applied, Decision Pending		
Gouvernement du Nunavut, Institut de recherche du Nunavut	Have applied - awaiting decision	Active		

## Project transportation types

Transportation Type	Utilisation proposée	Length of Use
Air	Float Plane	

## Project accomodation types

Permanent Camp

Collectivité

Autre,

## 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
Hand hammers	3	1x10x3	We will use handheld rock hammers to sample basement rocks
Bush Hawk on floats	1	1	We will utilize a BushHawk on floats for transport to and from field areas.

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
Aviation fuel	fuel	2	55	110	Gallons	Aviation fuel is required for flying to remote locations

Consommation d'eau

Quantité quotidienne (m3)	Méthodes de récupération de l'eau proposées	Emplacement de récupération de l'eau proposé
1	Drinking water will be gathered from streams and lakes in the region	

# Déchets

## Gestion des déchets

Activités du projet	Type des déchets	Quantité prévue	Méthode d'élimination	Procédures de traitement supplémentaires
Information is not available				

## Répercussions environnementales :

No environmental impacts will be produced. We will remove all garbage and will take only small research rock samples.

# **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**

**Description de l'environnement existant : Environnement biologique**

**Description de l'environnement existant : Environnement socio-économique**

**Miscellaneous Project Information**

**Identification des répercussions et mesures d'atténuation proposées**

**Répercussions cumulatives**



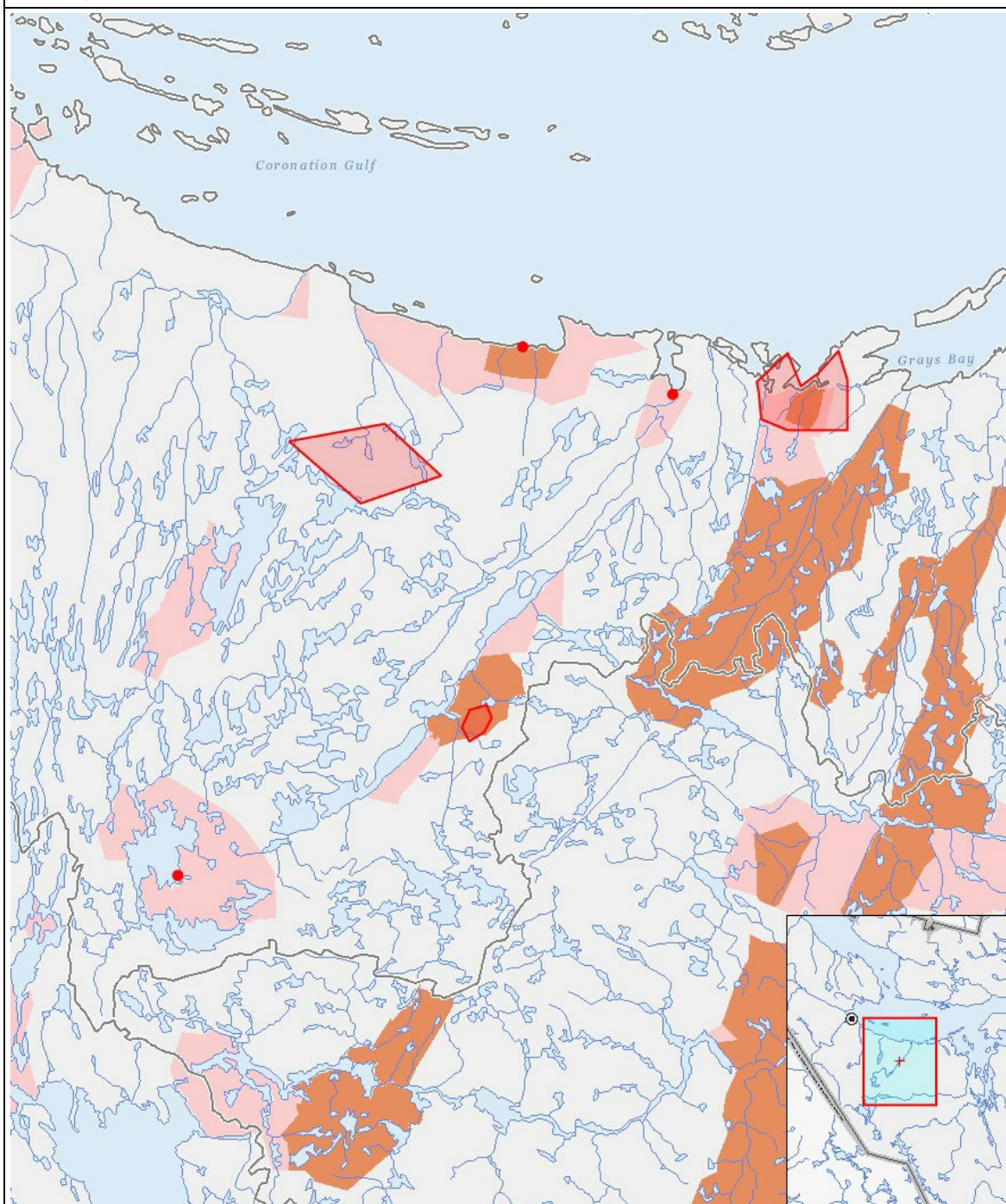
Impacts

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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Désaffectation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

# Site du projet



## Liste des géométries de projet

1	polygon	Sampling Region of Interest #1
2	polygon	Sampling Region of Interest #2
3	polygon	Sampling Region of Interest #3
4	point	Tree River Lodge Base Camp #4
5	point	Sampling Region of Interest #5
6	point	Sampling Region of Interest #6