



NIRB Uuktuutinga Ihivriughikhamut #125646

Tree River Geoscience Project 2022

Uuktuutinga Qanurittuq: New

Havaap Qanurittunia: Scientific Research

Uuktuutinga Ublua: 12/20/2021 4:04:36 PM

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

Piumayaat Angirutinga: from 0001-01-01 to 0001-01-01

Havauhikhaq Ikayuqtinga: Jesse Reimink
503 Deike Building
University Park Pennsylvania 16802
USA
Hivayautit Nampanga:: 18148656666, Kayumiktukkut Nampanga::

QANURITTUT

Tukihiannaqtunik havaariyaayumayumik uqauhiyuyun

Qablunaatitut: • 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.

Uiviititut: 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 ilauiyuni ilaqaqtuq PhD-nigiamini iliaqtuq 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 uyaqaik takuukhauilqutunik qaagani nunap. Hiniktaqvikaqniaqtugut Plummer-p Qugluaqtualukmi Aguniaqtitiviani Kugluktumilu atuqhimaqtulugu havaariyaqt tikminiaqtugulu Bush Hawk-mi qayalikmi tikmiaqmi 80-kilaamitanik umanga inigiyaayumit ubluani. Miniaqtugut mikiyuni tahiqni, pihuklutalu uyaraqtuniqnut haniani tattit. Uyaraktunimugarupta naunaiyaivikhamut, atuqniaqtugut mikiyunik kautauyanik nunami naunaiyagakkanik ilituqhaqtakkanik (~1-kilogram-guyut naunaiyagakhat) uyaqanik naunaiyagakkanik. Naunaiyainiaqtugut 8-mit qulinut ubluni nahuriyugulu katitiriami ~100-nik naunaiyagakkanik uyaqanik talvuuna. Naunaiyainiq hiamayaktauniaqtuq ihumagiyaaulaqaqniaqtulu utiriami naunaiyariagani inigiyaayut uqautayut kiguliqmi Nunaliqijutininik Naunaiyautimi Kanatami qaiqtunik nunauiyuqtinit, havaat atuqhimayut 1980 ukiut atuqtilugit. Havaktivut pigahunit talimanut nunamiutaliqiyit ilauniaqtut qayalikmiklu tikmialikmik. • Huuq: Qaliriiktuuyaaqtut uyaqat hatqigtut uvani nunami pigaqtut uyaraktaakkanik utuqaqyuaguyunik. Ihuaghivaaliqtuni naunaiyautimi ilituqhautit taja atuqtauyut Ilihaqvikiyuami Alberta-mi, ilitpaliahimayugut amihunik qanuq igilraat Hilaqyuaq aulaniganik ilituqhaqhugit mikanuit uyaraktaakhani ilagiyait naniyauhimayut ukunai hiuraliani. Katitiriniaqtugut uyaqanik naunaiyagakkanik pigaqtunik mikanuanik uyaraktaakkanik avugiinik, ahivaqtiqlugit avugiiknigut, ilituqhaqlugilu hunavaluqaqniginik nalunairutininik. Naluhuiqtavut takuupkaqtitauniqtut havaqatinit ihivriunqiginik naunaiyautininik uqauhiini. Ihumami, iliniaqtugut amihunik qanuq taimaniraaluk Nunaqyuaq aulaniqaqmaga 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

Hulilukaarutit

Inigiya	Hulilukaarut Qanurittuq	Nunannga Qanurittaakhaanik	Initurlinga qanuritpa	Initurlinga utuqqarnitat unaluuniit Ingilraaqnitat Uyarannguqtut akhuurninnga	Qanitqiyauyuq qanitqiamut nunallaat kitulluuniit ahiruqtaliyainnit nuna
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

Nunaliin Ilauyun, Aviktuqhimayuniitunullu Ikayuuhiarunguyun

Nunauyuq	Atia	Timiuyuq	Upluani Uqaqatigiyaungmata
Information is not available			

Angiuttauvaktunik

Naunaiqlugu nunanga talvani havauhikhaq ittuq:

Kitikmeot

Angiuttauvaktunik

Munariniqmut Ayuittiaqtuq	Angirutinga Qanurittuq	Tadja Qanurittaakhaanik	Ublua Tuniyauyuq/Uuktuqtuq	Umikvikhaa Ublua
Kitikmeot Inuit Katimayiingit	Have applied - awaiting decision	Applied, Decision Pending		
Nunavut Kavamanga, Nunavunmi Ihivriuqniqmut Timiqutigiyanga	Have applied - awaiting decision	Active		

Project transportation types

Transportation Type	Qanuq Atuqtauniarmangaa	Length of Use
Air	Float Plane	

Project accomodation types

Permanent Camp

Nunauyuq

Alaanut,

Ihuaqutivaluin Atuqtauyukhan

Hanalrutit atuqtaunahuat (ukuallu ikuutat, pampiutainnik, tingmitinik, akhaluutinik, hunaluuniit)

Hanalrutit Qanurittuq	Qaffiuyut	Aktikkulaanga – Qanurittullu	Qanuq Atuqtauniarmangaa
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.

Qanurittuq Urhuqyuaq unalu Qayangnaqtut Hunavaluit Aturninnga

Qanurittuq urhuqyuaq hunavaluit aturninnga:	Urhuqyuaq Qanurittuq	Qaffiuyut qattaryut	Qattaryuk Aktikkulaanga	Atauttimut Qaffiuyut	Ilanga	Qanuq Atuqtauniarmangaa
Aviation fuel	fuel	2	55	110	Gallons	Aviation fuel is required for flying to remote locations

Imaqmik Aturninnga

Ubluq qanuraaluk (m3)	Aturumayain imavaluin utiqittagaani qanuq	Atulirumayain imavaluin utiqittagani humi
1	Drinking water will be gathered from streams and lakes in the region	

Iqqakuq

Ikkakunik Munakgiyauyunik

Havauhikhaq Hulilukaarut	Qanurittuq Iqqakut	Ihumagiyauyuq Qanuraaluktut Atuqtait	Qanuq Iqqakuurniarmangaa	Halummaqtirarnirutikhan piyutin
Information is not available				

Avatiliriniqmut Ayurhautingit:

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

Qanurittuq Ittunik Avatinga: Avatingalluanga

Qanurittuq Ittunik Avatinga: Inuuhimayunut Avatinga

Qanurittuq Ittunik Avatinga: Inungit-maniliurutingit Avatinga

Miscellaneous Project Information

Naunaiyainiq ukuninnga Ayurhautingit unalu Piumayaat Ikikliyuumiutinahuarutit

Tamatkiumayunik Ihuikgutivaktunik

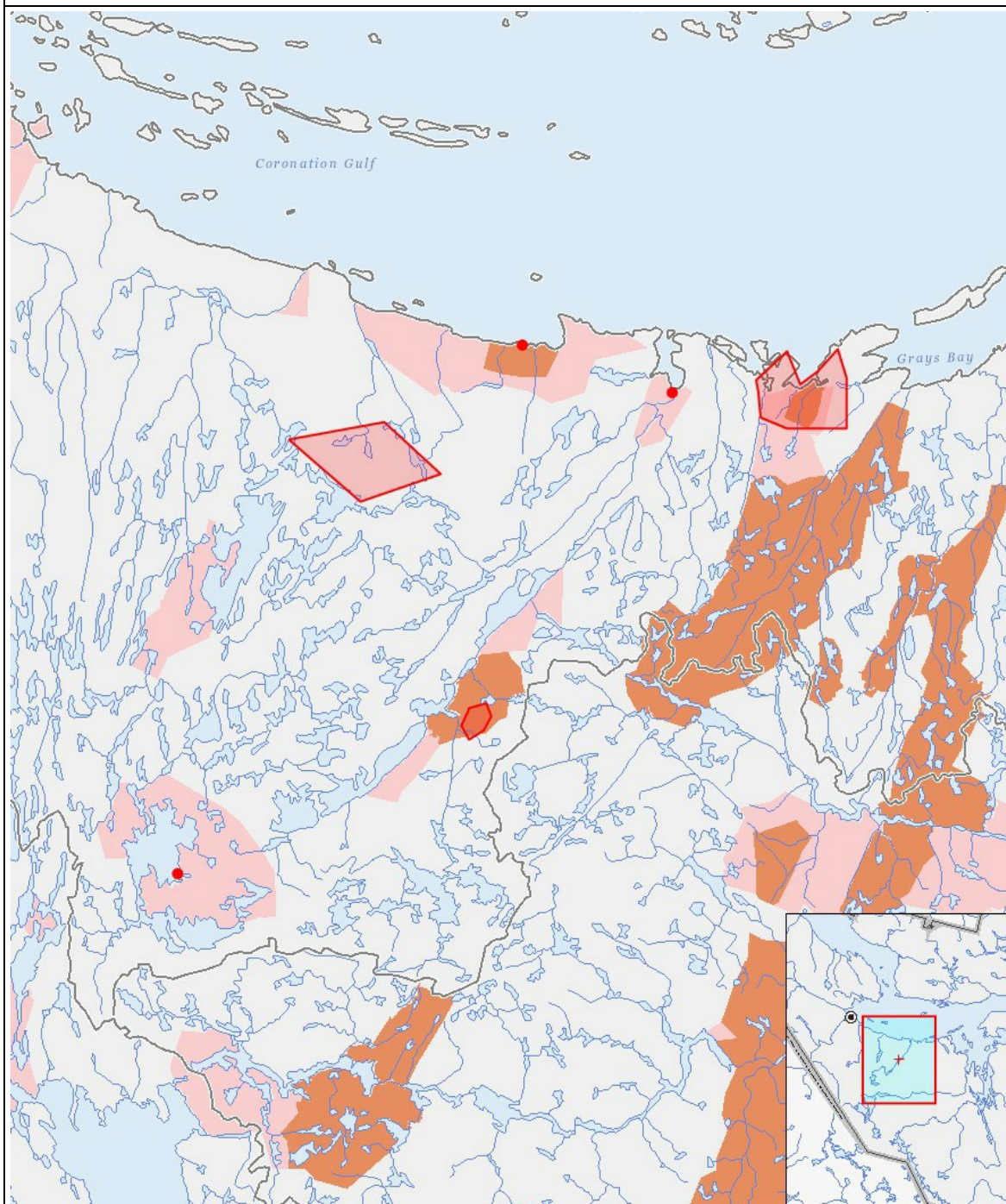
Impacts

Ilitariyauniq Avatiliriniqmut Ayurhautingit

		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	
Havakvinga																											
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Aulapkaininnga																											
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Piiqtauniq																											
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(P = Nakuuyuq, N = Nakuungittut unalu mikhilimaittuq, M = Nakuungittut unalu mikhittaaqtuq, U = Naluyauyuq)

Havaariyauyukhamut Nayugaa



List of Project Geometries

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