



## **NIRB Uuktuutinga Ihivriughikhamut #125434**

### **North Arrow Minerals - Mel Project**

**Uuktuutinga Qanurittuq:** New

**Havaap Qanurittunia:** Mineral Exploration

**Uuktuutinga Ublua:** 1/11/2019 6:50:34 PM

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

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

**Havauhikhaq Ikayuqtinga:** North Arrow Minerals Inc.  
North Arrow Minerals Inc.  
Suite 960-789 West Pender Street  
Vancouver BC V6C1H2  
Canada  
Hivayautit Nampanga:: 604-563-4808, Kayumiktukkut Nampanga:: 604-336-4813

[illegible]

Personnel on site: 12  
Days on site: 60  
Total Person days: 720  
Operations Phase: from 2019-03-29 to 2024-09-28  
Closure Phase: from 2019-03-29 to 2024-09-28

## Hulilukaarutit

Inigiya	Hulilukaarut Qanurittuq	Nunannga Qanurittaakhaanik	Initurlinga qanuritpa	Initurlinga utuqqarnitat unaluuniit Ingilraaqnitat Uyarannguqtut akhuurninnga	Qanitqiyauyuq qanitqiamut nunallaat kitulluuniit ahiruqtaliyainnit nuna
Mel Project - Mineral Claims Boundary	Mineral Exploration	Inuit Owned Surface Lands	Prior to North Arrow Minerals acquiring mineral claims at Mel, historic heavy mineral sampling was conducted by Apex Geoscience and Stornoway Diamond Corp. in the early 2000's.	N/A - A site visit to the project was organized by North Arrow in September 2017 for a member of the Hall Beach Hunter's and Trapper's Association (Danny Arvalaq) to inspect the area of the camp and future drilling areas for evidence of archaeological sites. Nothing was found.	The project is located on the Melville Peninsula in Nunavut, approximately 200 km northeast of the Hamlet of Naujaat, and 150 km south of the Hamlet of Hall Beach. It is comprised of 46 mineral claims within the Qikiqtani region of Nunavut, and most of the claims are covered by Inuit Owned Land parcel HB-01.
Exploration Camp	Camp	Crown	Prior to North Arrow Minerals acquiring mineral claims at Mel, historic heavy mineral sampling was conducted by Apex Geoscience and Stornoway Diamond Corp. in the early 2000's.	N/A - A site visit to the project was organized by North Arrow in September 2017 for a member of the Hall Beach Hunter's and Trapper's Association (Danny Arvalaq) to inspect the area of the camp and future drilling areas for evidence of archaeological sites. Nothing was found.	The project is located on the Melville Peninsula in Nunavut, approximately 200 km northeast of the Hamlet of Naujaat, and 150 km south of the Hamlet of Hall Beach. It is comprised of 46 mineral claims within the Qikiqtani region of Nunavut, and most of the claims are covered by Inuit Owned Land parcel HB-01.
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**Nunaliin Ilauyun, Aviktuqhimayuniitunullu Ikayuuhiarunguyun**

<b>Nunauyuq</b>	<b>Atia</b>	<b>Timiuyuq</b>	<b>Upluani Uqaqatigiyaungmata</b>
Sanirayaak	George Qulaut	MLA of Amittuq	2016-04-06
Sanirayaak	Peter Siakuluk	Mayor of Hall Beach	2016-04-06
Sanirayaak	P.J. Akeeagok	President of the Qikiqtani Inuit Association	2016-04-06
Sanirayaak	Salamonie Shoo	Qikiqtani Inuit Association	2016-04-06
Sanirayaak	Salamonie Shoo	Qikiqtani Inuit Association	2016-02-25
Sanirayaak	Salamonie Shoo	Qikiqtani Inuit Association	2016-02-22
Sanirayaak	Salamonie Shoo	Qikiqtani Inuit Association (QIA)	2016-01-28
Sanirayaak	Salamonie Shoo	QIA	2016-12-16
Sanirayaak	Salamonie Shoo	QIA	2017-02-08
Sanirayaak	Darryl Dibblee	Hall Beach Senior Administrative Officer	2017-02-08
Sanirayaak	Darryl Dibblee	Hall Beach Senior Administrative Officer	2017-03-13
Sanirayaak	Darryl Dibblee	Hall Beach Senior Administrative Officer	2017-03-15
Sanirayaak	Jayko Simonie (Deputy Mayor), Peter Seakuluk (Mayor), Joeline Kaerner (Councillor - community liaison for Baffinland), Lily Arnaqjaq (Councillor), Philip Arguratsiaq (Councillor), Stacey Kadlutsiak (Councillor), Anne Curley (Councillor), Danny Arvalak (Councillor), Paul Haulli (Councillor), Abe Qammaniq	Hall Beach Mayor and Council	2017-04-06
Sanirayaak	Jopie Kaerner, Chair Lou Nattuk Cain Pikuyak Paypeetee Audluqiaq Abraham Qammaniq (interpreter) Sam Armarjunq Manasee Naulaq (Manager)	Hunters and Trappers Association	2017-04-06
Sanirayaak	33 members of the community	Community Meeting in Hall Beach	2017-04-06
Sanirayaak	George Qulaut	Nunavut MLA	2017-04-14
Sanirayaak	Manasee Naulaq	Hunters and Trappers Association	2017-04-20
Sanirayaak	Manasee Naulaq	Hunters and Trappers Association	2017-05-08
Sanirayaak	Manasee Naulaq	Hunters and Trappers Association	2017-05-31
Sanirayaak	Peter Siakuluk	Mayor of Hall Beach	2017-06-28
Sanirayaak	Manasee Naulaq	Hunters and Trappers Association	2017-07-14
Sanirayaak	Samantha ?	Hunters and Trappers	2017-09-07

		Association	
Sanirayaak	Peter Siakuluk	Mayor of Hall Beach	2017-09-07
Sanirayaak	Jason Mikki	Hunters and Trappers Association	2017-09-14
Sanirayaak	Peter Siakuluk	Mayor of Hall Beach	2017-09-19
Sanirayaak	Jason Mikki	Hunters and Trappers Association	2017-09-19
Sanirayaak	Salamonie Shoo	QIA	2017-09-25
Sanirayaak	Peter Siakuluk	Mayor of Hall Beach	2017-10-17
Sanirayaak	Salamonie Shoo	QIA	2017-10-17
Sanirayaak	Peter Siakuluk	Mayor of Hall Beach	2018-01-24
Sanirayaak	Joelie Kaernerck	Nunavut MLA	2018-01-26
Sanirayaak	Jim Langille	Senior Administrative Officer	2018-02-20
Sanirayaak	Jim Langille (SAO Hall Beach), Jaypeetee Audlakiak (Mayor of Hall Beach)	Mayor and SAO	2018-09-24
Sanirayaak	Joel Fortier	QIA	2018-09-24
Sanirayaak	Joelie Kaernerck	Nunavut MLA	2018-09-24
Sanirayaak	Jim Langille (SAO Hall Beach), Jaypeetee Audlakiak (Mayor of Hall Beach)	SAO and Mayor of Hall Beach	2018-11-13
Sanirayaak	Joel Fortier and P.J. Akeeagok	QIA	2018-11-13
Sanirayaak	Joelie Kaernaerk	Nunavut MLA	2018-11-13
Sanirayaak	Joyce Arnadjuak	Hunters and Trappers Association	2018-11-13
Sanirayaak	Danny Arvalaq	Hunters and Trappers Association	2017-09-19
Sanirayaak	Manasee Naulaq	Hunters and Trappers Association	2018-09-05
Sanirayaak	Jim Langille	Senior Administrative Officer	2018-09-05

# Angiuttauvaktunik

Naunaiqlugu nunanga talvani havauhikhaq ittuq:

South Baffin

## Angiuttauvaktunik

Munariniqmut Ayuittiaqtuq	Angirutinga Qanurittuq	Tadja Qanurittaakhaanik	Ublua Tuniyauyuq/Uuktuqtuq	Umikvikhaa Ublua
Aboriginal and Northern Affairs Canada	N2017C0006 Crown Land Use Permit	Active		2022-04-30
Nunavut Imaligiyyit Katimayit	2BE-MPP1719 Type B Water Licence	Active		2019-06-02
Qikiqtani Inuit Katimayit	Q17L2003 Level 3 Access to IOLPermit	Active		2019-03-31

## Project transportation types

Transportation Type	Qanuq Atuqtauniarmangaa	Length of Use
Air	Helicopter and Fixed Wing Aircraft (Summer and Winter)	
Land	Snowmobile (Winter)	

## Project accomodation types

Temporary Camp

# Ihuaqutivaluin Atuqtauyukhan

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

Hanalrutit Qanurittuq	Qaffiuyut	Aktikkulaanga – Qanurittullu	Qanuq Atuqtauniarmangaa
Diamond Drill	1	6m x 6m x 6m, 3000 kg	Diamond Drilling
Reverse Circulation Drill	1	6m x 6m x 6m, 3000kg	RC Drilling
Helicopter (Bell 206 Long Ranger)	1	12m x 10.m(rotor diameter) x 2.8m, 1000kg	Daily transport of personnel between sites and camp. Moving drilling-related equipment and fuel. Moving drill core samples between sites and camp.
Snowmobile	1-2	2m x 1m x 1m, 200kg	Transporting crews to/from the drill, and general working purposes in camp during winter months.
Water Pumps	2	1m x 1m x 1m, 100-200lbs	Water for camp and the drill.
Ice Auger	2	1m x 0.5m x 0.5m, 30lbs	Water for camp and the drill.
Incinerator	1	1m x 1m x 2m	Disposal of Combustible Waste

## Qanurittuq Urhuqyuaq unalu Qayangnaqtut Hunavaluit Aturninnga

Qanurittuq urhuqyuaq hunavaluit aturninnga:	Urhuqyuaq Qanurittuq	Qaffiuyut qattaryut	Qattaryuk Aktikkulaanga	Atauttimut Qaffiuyut	Ilanga	Qanuq Atuqtauniarmangaa
Aviation fuel	fuel	50	205	10250	Liters	Helicopter and Fixed Wing Aircraft
Diesel	fuel	50	205	10250	Liters	Camp Generator, Tent Stoves, Drilling
Gasoline	fuel	3	20	60	Liters	Water Pumps, Snowmobiles
Propane	fuel	10	100	1000	Lbs	Camp (Cooking, Laundry Facilities), Drilling (Heating)
Engine Oil	hazardous	12	1	12	Liters	Drill engine, Snowmobiles, Camp Generator
Antifreeze	hazardous	5	5	25	Liters	Drill Engine, Camp Generator
Drilling Muds/Greases	hazardous	20	20	400	Liters	Drilling
Salt	hazardous	50	20	1000	Kg	Drilling
Lead Battery	hazardous	2	10	20	Lbs	Camp Generator, Drill Engine

## Imaqmik Aturninnga

Ubluq qanuraaluk (m3)	Aturumayain imavaluin utiqittagaani qanuq	Atulirumayain imavaluin utiqittagani humi
50	Hose with screen and water pump at the Camp and all drilling sites	Waterbodies with suitable capacity located within the proposed land use area



# Iqqakuq

## Ikkakunik Munakgiyauyunik

Havauhikhaq Hulilukaarut	Qanurittuq Iqqakut	Ihumagiyauyuq Qanuraaluktut Atuqtait	Qanuq Iqqakuurniarmangaa	Halummaqtirarnirutikhan piyutin
Camp	Ikulalaaqtun iqqakuuvaluin	Small amount	Incineration	n/a
Camp	Qirnarivyaktuq imaq	12 people for up to 8 weeks at a time	Sump	Sumps will be back-filled upon completion of the program
Drilling	Qirnarivyaktuq imaq	Approx. 15 m <sup>3</sup> of drill water per 200 m drill hole	Along with drill cuttings, a small amount of recirculated water used for drilling will be deposited in a natural depression or hand-dug sump	Sumps will be back-filled upon completion of the program
Mineral Exploration	Hivuuranaqtun iqakuuvaluin	50 empty fuel drums (the rest will be reused)	Transport to town (Hall Beach or Naujaat) on backhaul flights for approved and proper disposal	n/a
Mineral Exploration	Hivuuranaqtun iqakuuvaluin	Used engine oil and antifreeze	Collected and sealed in clearly marked containers and transported to town (Hall Beach or Naujaat) and beyond for approved and proper disposal	n/a
Mineral Exploration	Ikulalimanngittun iqqakuuvaluin	Small amount	Transport to town (Hall Beach or Naujaat) on backhaul flights for approved and proper disposal	n/a
Drilling	Atakuin (halumaiqtun nunan, iqqakuuvaluillu uyaqqiqivingmin)	Approx. 2 m <sup>3</sup> per 200 m drill hole	Drill cuttings will be pumped out of the drill hole and into an appropriate natural depression or hand- dug sump >31 m above the normal high water mark of nearby waterbodies to allow the settlements of fine material. If drilling on ice, cuttings will be pumped into a natural depression or hand- dug sump on land, or a cuttings-capture system such as a “Polydrill Filter” will be employed at the drill to contain all of the cuttings so as to avoid releasing material into lakes.	Hand-dug sumps will be back-filled upon completion of drilling activities to match, as close as possible, the surrounding topography

			Cuttings will then be transported to a location >31 m above the normal high water mark of nearby waterbodies and deposited into a natural depression or hand-dug sump.	
Camp	Anaagun (inuin anaaguin)	12 people for up to 8 weeks at a time	Outhouse, hand-dug pits	Application of lime upon completion of program

**Avatiliriniqmut Ayurhautingit:**

Camp, Drilling, Helicopter and Fixed Wing Aircraft, Snowmobile

# **Additional Information**

## **SECTION A1: Project Info**

## **SECTION A2: Allweather Road**

## **SECTION A3: Winter Road**

## **SECTION B1: Project Info**

Diamonds

## **SECTION B2: Exploration Activity**

Exploration Drilling (on land and/or ice using a diamond or reverse circulation drill), Delineation Drilling, Preliminary Delineation Drilling, Soil Sampling, Geophysical Surveying (Air and Ground),

## **SECTION B3: Geosciences**

Geophysical Surveys (Magnetic, Electromagnetic, Gravimetric; surveys will be flown below 610m, and could be as low as 10m from the ground; surveys will only be conducted within the property), Geological Mapping, Prospecting

## **SECTION B4: Drilling**

At this point in time, it is unknown how many drill holes will be proposed. The proponent estimates that the next round of drilling will range from 4-8 targets tested by 8-12 drill holes with an average depth of between 50-150 metres. The purpose of the drilling will be to follow-up drilling conducted in 2018, as well as test a number of new targets.

## **SECTION B5: Stripping**

n/a

## **SECTION B6: Underground Activity**

n/a

## **SECTION B7: Waste Rock**

n/a

## **SECTION B8: Stockpiles**

n/a

## **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**

There are no known protected environmental areas or parks in the vicinity of the proposed land use activity. During previous exploration programs conducted by the proponent, no potential archaeological sites have been encountered. The Melville Peninsula is divided into physiographic regions on the basis of topography and surface materials. Topography in the Project area consists of low to moderate relief, with common bedrock exposures consisting of mostly granites and gneisses. Sediments consist primarily of unconsolidated glacial deposits.

### **Qanurittuq Ittunik Avatinga: Inuuhimayunut Avatinga**

Vegetation at the project site is scarce and is comprised of a mix of small shrubs, sedges and grasses, mosses, and lichens. Wildlife is also rare in and around the project area. During previous exploration programs carried out in the summer months, field crews have encountered sik-siks, small birds, wolves and caribou. The Government of Canada and COSEWIC websites list wildlife that may inhabit areas within the proposed work area, they include: Peary caribou (Schedule 2 designation), muskox, arctic hare, arctic fox, polar bear (Schedule 1 designation), snowy owl (Not at Risk) and other seabirds. Field crews and wildlife monitors will make every effort to record instances of all large wildlife sighted while completing exploration activities in conjunction with the Project.

### **Qanurittuq Ittunik Avatinga: Inungit-maniliurutingit Avatinga**

The Mel Property is located approximately 200 km northeast of the Hamlet of Naujaat, and approximately 150 km south

of the Hamlet of Hall Beach. The Project takes about 100-120 minutes to reach via helicopter from either community. The Department of Heritage (Inuit Heritage Trust) recommends that if archaeological sites or features are encountered during the exploration program, activities should immediately be interrupted and moved away from this location. Each site encountered needs to be recorded and reported to their office using a Site Reporting Form (obtained from the GN website). Photographs and a map indicating location of site(s) should be provided as well. The proponent will follow these guidelines should suspected archaeological sites be found during the work program. Due to the fact that the Mel Project is in an early, low impact stage, there have been no studies conducted regarding the socioeconomic environment of the Hamlets of Nauyasat and Hall Beach, which are the closest communities to the land use area.

### **Miscellaneous Project Information**

n/a

### **Naunaiyainiq ukuninnga Ayurhauingit unalu Piumayaat Ikikliyuumiutinahuarutit**

See Impacts section

### **Tamatkiumayunik Ihuikgutivaktunik**

The effects from the land use activities described herein are expected to be minimal due to the relatively short time frame within which it will be conducted. The identified land use area is relatively small and there are presently no competitor interests adjacent to or within the immediate vicinity of the project area. As addressed throughout this application, the proponent recognizes that there are concerns across the North regarding low level helicopter flights and their potential to disturb wildlife, migratory birds, and individuals engaging in traditional land use activities. The proponent has addressed the mitigation measures that will be implemented regarding any foreseeable concerns, notably, the potential for disturbance of wildlife and traditional land use. The proponent believes that the mitigation measures described are sufficient to address any potential concerns and welcomes further recommendations from the NIRB and other government organizations.

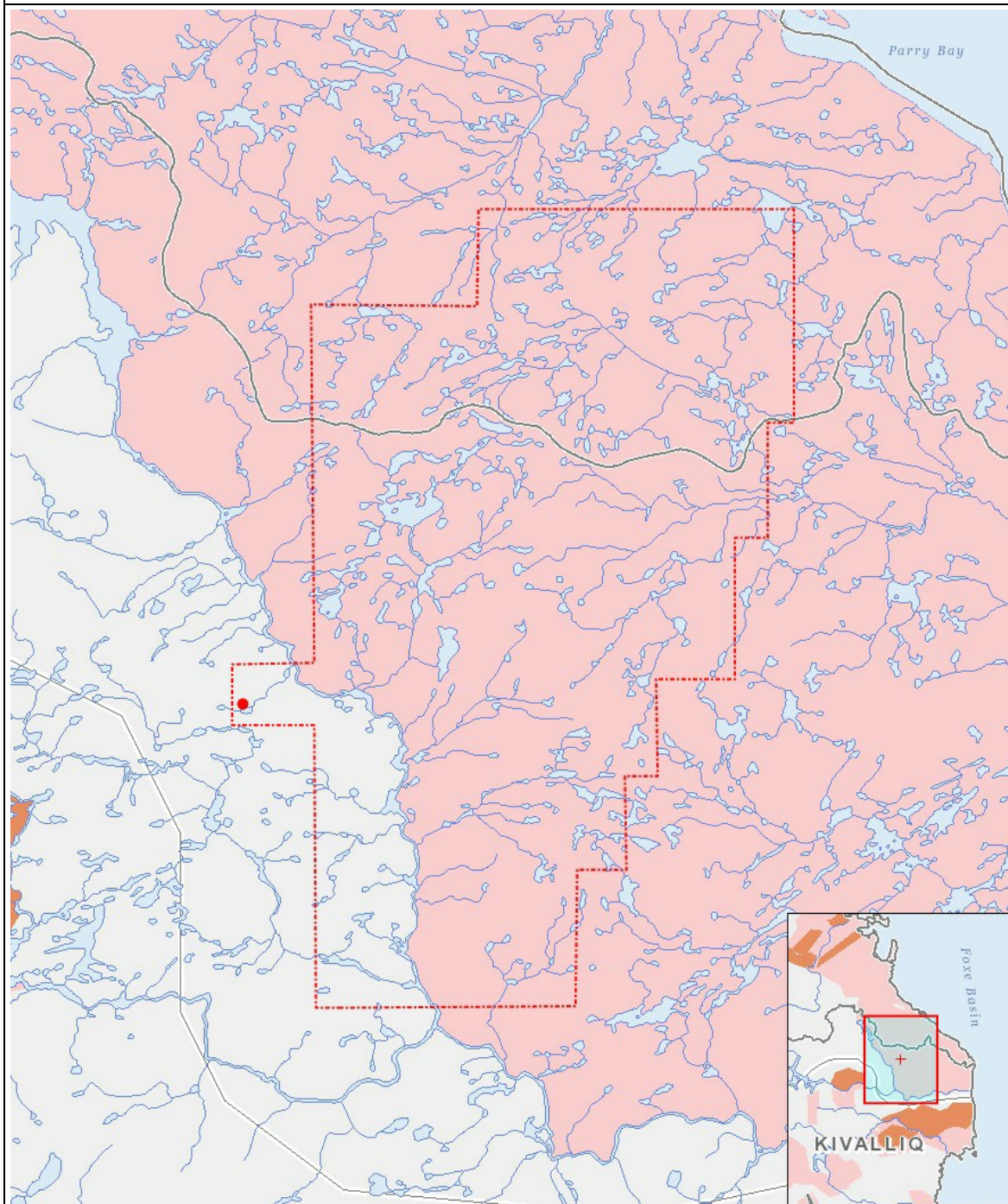
Impacts

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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aulapkaininnga																									
Camp	-	-	-	-	-	-	-	-	-	-	-	-	U	-	U	U	U	-		P	-	-	-	-	-
Mineral Exploration	-	-	-	-	-	-	-	-	-	-	-	-	U	N	U	U	U	-		P	-	-	-	-	-
Piiqtauniq																									
Camp	-	-	-	-	-	-	-	-	-	-	-	-	U	-	U	U	U	-		P	-	-	-	-	-

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

## Havaariyauyukhamut Nayugaa



### List of Project Geometries

- |   |          |                                       |
|---|----------|---------------------------------------|
| 1 | polyline | Mel Project - Mineral Claims Boundary |
| 2 | point    | Exploration Camp                      |