



Type de demande :	New
Type de projet:	Mineral Exploration
Date de la demande :	2/26/2021 6:22:33 PM
Period of operation:	from 0001-01-01 to 0001-01-01
Autorisations proposées:	from 0001-01-01 to 0001-01-01
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## DÉTAILS

## Description non technique de la proposition de projet

Anglais: The Meadowbank Precious Metal Project (the "Project") is located in the eastern part of the District of Kivalliq, within 1:50,000 scale National Topographic System ("NTS") map sheets 56D12, 66A09, 10 and 16 and 66H01 and 08. The Project consists of three non-contiguous claim blocks (Black A, B and C) located on Crown Lands, approximately 50 km north of the community of Qamani'tuaq (Baker Lake) and 280 km northwest of the community of Kangiqliniq (Rankin Inlet). The mineral claims are all 100% owned by 5530 Nunavut Inc, a wholly owned subsidiary of Western Atlas Resources Inc. All claim blocks comprising the Project are accessible by helicopter and the Agnico Eagle Mines Limited ("Agnico") All Weather Access Road ("AWAR"), linking Baker Lake to Agnico's Eagle's Meadowbank and Amaruk mines. Permission is required from Agnico to use the AWAR. Exploration activities on the Meadowbank Precious Metal Property to date include: helicopter-borne, versatile time domain electromagnetic ("VTEM") surveys, ground induced polarization ("IP") surveys, geological mapping, prospecting and rock geochemical sampling in 2018; a Property visit in 2019 and diamond drilling of 13 holes from 7 platforms in 2020. During the 2020 drilling program, on the request of Agnico, the AWAR was used by Agnico Eagle's Energy and Infrastructure team to refuel an Orbit Garant fuel storage container located at Kilometer 58 in order to assist in reduction in the amount of helicopter flights required to refuel. Although a 10-person temporary camp with fuel cache is currently permitted at the project, the 2018, 2019 and 2020 programs were based out of Baker Lake. The 2021 will either be based out of Baker Lake once again or supported by a temporary 20 person exploration camp with fuel cache. Structures for the proposed camp will include 10 sleeper tents, 1 medical tent, 1 kitchen, 1 dry (with showers), 1 office tent, core shack, generator shack, incinerator and outhouses/pacto systems. The majority of the structures will be insulated Weatherhaven tents, or similar, with plywood floors. Activities on the Project are currently authorized by Crown-Indigenous Relations and Northern Affairs Canada ("CIRNAC") Land Use Permit ("LUP") N2017C0005 and Nunavut Water Board ("NWB") water licence 2BE-MPM1722. The current approved water usage authorized under water licence 2BE-MPM1722 is 42m3/day (2 m3/day for camp use and 40 m3/day for drilling). 5530 Nunavut Inc. is currently applying to amend water licence 2BE-MPM1722 to increase the water usage to 299 m3/day (10 m3/day for camp and 289 m3/day for drilling) to allow for the increase in the camp size and increase from one to four drills. For the 2021 program, 5530 Nunavut Inc. proposes to drill 15,000 to 20,000 m. If required, the Orbit Garant fuel storage container may be established on the AWAR once again. The program is anticipated to commence May 1, 2021 and run for 8 weeks (56 days).

Français: N/A

[illegible]

### Post-Closure Phase: from to

## 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
AWAR_Km_58_Fuel_Cache_n83z14_20210108	Fuel and chemical storage	Crown	To support the 2020 drilling program an Orbit Garant fuel tank was located at Kilometre 58 on the AEM AWAR (625807.7 Easting, 7182273.3 Northing). The helicopter refueled in Baker Lake and therefore no aviation fuel caches were required. It is anticipated that fuel for drilling will be stored at this location for the 2021 program.	The site is pre-existing staging area operated by AEM.	The proposed fuel cache is located 58 km from Qamani'tuaq (Baker Lake).
WA_Meadowbank_Claims_n83z14_2020031	Mineral Exploration	Crown	Exploration activities completed by 5530 Nunavut Inc. at the Project to date have consisted of geological mapping, geochemical sampling, prospecting, airborne and ground geophysical surveys and diamond drilling. Although a 10-person temporary camp with fuel cache is currently permitted at the Project, the 2018, 2019 and 2020 programs were based out of Baker Lake. The proposed	In June of 2017, 5530 Nunavut Inc. commissioned Golder to complete an Archaeological Overview Assessment (AOA) for the Project. The AOA provided 5530 Nunavut Inc. with information of known sites in the Project area and where there is a high potential for the discovery of undocumented sites. The report was used to assist in the Project planning for the 2018, 2019 and 2020 programs and will be used for	The Project is located in the eastern part of the District of Kivalliq, approximately 50 km north of the community of Qamani'tuaq (Baker Lake) and 280 km northwest of the community of Kangiqliniq (Rankin Inlet). The exact location of the proposed camp is still to be determined, but it will be within the project mineral claims. As soon as it is

			amendment is to construct a 20-40 person camp and increase the water use from 42m3/day to 299m3/day.	planning all future programs. No new or known sites have been encountered to date.	known, the location will be submitted to all regulatory bodies for approval.
WA_Meadowbank_Claims_n83z14_2020031	Camp	Crown	5530 Nunavut Inc. is applying too increase the permitted camp in order to construct a 20 person seasonal camp with the ability to increase to a 40 person camp for future programs. Structures for the proposed camp will include 10 sleeper tents, 1 medical tent, 1 kitchen, 1 dry (with showers), 1 office tent, core shack, generator shack, incinerator and outhouses/pacto systems. The majority of the structures will be insulated Weatherhaven tents, or similar, with plywood floors.	In June of 2017, 5530 Nunavut Inc. commissioned Golder to complete an Archaeological Overview Assessment (AOA) for the Project. The AOA provided 5530 Nunavut Inc. with information of known sites in the Project area and where there is a high potential for the discovery of undocumented sites. The report was used to assist in the Project planning for the 2018, 2019 and 2020 programs and will be used for planning all future programs. No new or known sites have been encountered to date.	The Project is located in the eastern part of the District of Kivalliq, approximately 50 km north of the community of Qamani'tuaq (Baker Lake) and 280 km northwest of the community of Kangiqliniq (Rankin Inlet). The exact location of the proposed camp is still to be determined, but it will be within the project mineral claims. As soon as it is known, the location will be submitted to all regulatory bodies for approval.

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

Collectivité	Nom	Organisme	Date de la prise de contact
Baker Lake	Phillip Putumiraqtuq	Baker Lake Hunters and Trappers Organization	2020-07-03
Baker Lake	Philip Idviat	Baker Lake Hunters and Trappers Organization	2020-08-11
Baker Lake	Richard Aksawnee	Mayor	2020-08-11
Baker Lake	Paula Kigjugalik Hughson	Municipal Council	2020-08-11
Baker Lake	Sheldon Dorey	Senior Administrative Officer	2020-08-11

## Autorisations

Indiquez les zones dans lesquelles le projet est situé:

Kivalliq

### Autorisations

Organisme de régulation	Description des autorisations	État actuel	Date de l'émission/de la demande	Date d'échéance
Affaires autochtones et Développement du Nord Canada	CIRNAC Class A Land Use Permit N2017C0005	Active	2017-05-20	2022-03-08
Office des eaux du Nunavut	NWB Type B Water Licence 2BE-MPM1722	Active	2017-07-29	2022-07-28
Autre	NPC Conformity Decisions 148482	Active	2016-06-07	
Autre	NPC Conformity Decisions 149465	Active	2021-02-27	
Autre	NIRB Screening Decision 17EN020	Active	2017-05-19	

### Project transportation types

Transportation Type	Utilisation proposée	Length of Use
Air	Helicopter	
Land	Agnico Eagle All Weather Access Road (permission required)	

### 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
Generator	6	5 kW or similar	To supply electricity for camp and drilling.
Water Pump	6	KF40 or similar	To supply water for camp and drilling.
Helicopter	2	A-star or similar	Transport equipment, supplies and personnel.
ATV with trailer	2	350 cc	Transport equipment, supplies and personnel.
Diamond drill	4	Zinex A5 or similar	Core sample collection.
Dual chamber controlled air incinerator	1	Inciner8 I8-20S or similar	Incineration of waste.

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
Gasoline	fuel	25	205	5125	Liters	Fuel for ATVs and generators.
Aviation fuel	fuel	200	205	41000	Liters	Fuel for aircraft.
Propane	fuel	25	100	2500	Lbs	Fuel for stove and hot water heater.
Oil/Hydraulic oil	hazardous	10	4	40	Liters	Oil for ATVs, generators, and drills.
Diesel	fuel	200	205	41000	Liters	Fuel for generators and drills.
CaCl <sub>2</sub>	hazardous	1500	50	75000	Lbs	Drilling.
Waster Oil	hazardous	1	5	5	Liters	Used oil unable to be repurposed.
Bleach	hazardous	2	2	4	Liters	Cleaning.
Various Cleaning Supplies	hazardous	20	1	20	Liters	Cleaning products such as Lysol, Clorox, Windex.
Gun	hazardous	1	1	1	Liters	Lubrication.

Consommation d'eau

Quantité quotidienne (m3)	Méthodes de récupération de l'eau proposées	Emplacement de récupération de l'eau proposé
299	Electrically powered submersible pump with fine mesh screen on the intake to prevent fish entrapment.	Drilling: numerous unnamed sources proximal to drilling locations. Camp: unnamed lake proximal to camp.

# Déchets

## Gestion des déchets

Activités du projet	Type des déchets	Quantité prévue	Méthode d'élimination	Procédures de traitement supplémentaires
Camp	Déchets combustibles	Camp capacity of 20 - 40 people	The camp will use a batch fed, dual-chamber controlled air incinerator to dispose of combustible solid wastes. All combustible wastes will be incinerated in accordance with applicable federal and territorial regulations and the Nunavut Department of Environment Guideline for the Burning and Incineration of Solid Waste. Incinerator ash will be properly stored in sealed containers, removed and taken to approved disposal site.	See Meadowbank Waste Management Plan for additional details on individual waste types.
Drilling	Eaux grises	289 m3/day	Recirculation and filtration systems will be used to minimize the amount of water used and additives released into the environment. Non-toxic and bio-degradable drilling additives will be used at all times where ever possible. Drilling fluids will be will be directed of in a properly constructed sump or an appropriate natural depression, downslope from the drill and at least 31 m from the ordinary high water mark of any adjacent water body, where direct flow into a water body is not possible.	See Meadowbank Waste Management Plan for additional details on individual waste types.
Camp	Eaux grises	10 m3/day	Camp greywater (kitchens, showers, etc) will be directed in a properly constructed sump adjacent to the source, at least 31 m from the ordinary high water mark of any adjacent water body, where direct flow into a water body is not	See Meadowbank Waste Management Plan for additional details on individual waste types.



			possible. Filters and grease traps will be installed on the kitchen drains to ensure solid food wastes do not enter the sump. The sump and pipes will be inspected and the filters cleaned on a regular basis to ensure there are no leaks or overflows.	
Drilling	Dangereux	Minimal	Any hazardous waste produced will be placed in sealed containers and stored within “Arctic Insta-Berms”, or similar, for secondary containment until they can be backhauled for proper disposal. A hazardous waste storage area will be established adjacent to the main camp fuel cache.	See Meadowbank Waste Management Plan for additional details on individual waste types.
Camp	Déchets non combustibles	Camp capacity of 20 - 40 people	Labeled bins will be provided at various locations around camp and at drill sites for non-combustible solid waste. Effort will be taken to reuse or repurpose any materials before disposal is considered. Non-combustible wastes will be backhauled on an ongoing basis throughout and at the termination of the program.	See Meadowbank Waste Management Plan for additional details on individual waste types.
Camp	Eaux usées (matières de vidange)	Camp capacity of 20 - 40 people	The camp will utilize Pacto systems and the sewage will be incinerated with incinerator specifically designed for that waste type. Ashes from incineration will be removed and taken to approved disposal site.	See Meadowbank Waste Management Plan for additional details on individual waste types.

#### Répercussions environnementales :

5530 Nunavut Inc. is applying for an amendment to their Nunavut Water Board Water (“NWB”) Licence, 2BE-MPM1722, and Crown-Indigenous Relations and Northern Affairs Canada (“CIRNAC”) Land Use Permit, N2017C0005, to establish a 20 to 40-person camp on the Property. The water licence amendment will also include an increase in the water allowance from 42 m3/day (2 m3/day for a 10 person camp and 40 m3/day for drilling) to 299 m3/day (10 m3/day for the larger camp and 289 m3/day for drilling). The predicted environmental impacts of the increase in size of the camp and increase in water use are anticipated to be negligible and mitigatable.

# **Additional Information**

## **SECTION A1: Project Info**

## **SECTION A2: Allweather Road**

## **SECTION A3: Winter Road**

## **SECTION B1: Project Info**

Gold

## **SECTION B2: Exploration Activity**

Indicate the type of exploration activity: Exploration drilling Geophysical work (ground and/or air) Other – prospecting, mapping Soil/till sampling On land drilling (indicate drill type) – Diamond Drilling On ice drilling (indicate drill type) – Diamond Drilling

## **SECTION B3: Geosciences**

Indicate the geophysical operation type of geophysical operation: Magnetic Electromagnetic geophysical operation Geological Mapping All exploration and drilling will be strictly confined to the Meadowbank Property Boundary. Aircraft will only fly lower than 610 m when dropping off and picking up field crews or moving the drill. When low altitude flights are necessary, such as deploying field personnel, all efforts will be taken to avoid wildlife, dwellings, and nests. Pilots will be instructed not to land where wildlife is present unless it is an emergency situation. If a landing occurs for any reason in the presence of wildlife, it will be documented and submitted to NIRB, CIRNAC and the NWB as part of the of the Meadowbank Property Annual Report.

## **SECTION B4: Drilling**

Western Atlas proposes annual exploration programs which will include rock, soil, and till geochemical sampling, geological mapping, ground and/or airborne geophysical surveys and diamond drilling up to 20,000 m. The programs may commence as early as April, beginning with mobilization of equipment and supplies. Drilling could commence mid-April to mid-May to test targets below lakes with drilling of land targets commencing mid-June through September.

## **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**

### **Description de l'environnement existant : Environnement physique**

Proximity to protected areas, including: i. designated environmental areas, including parks; The Property is not located within any federal or territorial Protected Areas. The nearest National Park to the Property is the Ukkusiksalik National Park of Canada, located 200 km northwest of the Property. The Thelon Game Sanctuary is located 175 km to the west of the Property and the Queen Maud Gulf Migratory Bird Sanctuary located 150 km northwest of the Property. ii. heritage sites; There are no known heritage sites on the Property, although the Thelon Heritage River runs through the southwest corner of Area C. iii. sensitive areas, including all sensitive marine habitat areas; There are no known sensitive areas on the Property. iv. recreational areas; There are no known recreational areas on the Property. v. sport and commercial fishing areas; There are no known sport and commercial fishing areas on the Property. vi. breeding, spawning and nursery areas; There are no known breeding, spawning and nursery areas on the Property. vii. known migration routes of terrestrial and marine species; The Property is completely within the Caribou Fall Migration corridor and is partially overlapped by the spring migration corridor. viii. marine resources; Marine resources should not be affected by this project. ix. areas of natural beauty, cultural or historical history; All efforts will be made to respect and preserve all natural, cultural or historical resources. x. protected wildlife areas There are no protected wildlife areas within the project boundary of which the company is aware. xi. other protected areas. There are no other protected areas within the project boundary of which the company is aware. Eskers and other unique landscapes (e.g. sand hills, marshes, wetlands, floodplains) There are a number of eskers located on the northern Area A Evidence of ground, slope or rock instability, seismicity. There is no evidence of ground, slope, rock instability or seismicity within the boundary of the Property of which the company is aware. Evidence of

thermokarsts. There is no evidence of the presence of thermokarsts within the boundary of the Property of which the company is aware. Evidence of ice lenses. There is no evidence of the presence of ice lenses within the boundary of the Property of which the company is aware. Surface and bedrock geology. The Meadowbank Property occurs north (Block A) and south (Blocks B and C) of AEM's Meadowbank deposit which is hosted in the Pipedream-Third Portage sequence of the Woodburn Lake group (WLg) within the Rae domain. The WLg constitutes part of a greenstone belt that extends for over 2,000 km and includes ultramafic to mafic volcanic rocks, intermediate volcanic rocks, banded iron formation, quartzite, and oligomictic conglomerate, metamorphosed to greenschist to amphibolitic facies. This succession of rocks is generally considered to have been deposited during the intracratonic rifting of the Mesoarchean basement. Topography. The Project area is on historically glaciated Canadian Shield. Topography is relatively flat lying with elevations between 60 and 220 metres above sea level. There are numerous glacially sculpted hills, which rise above boulder fields, till moraines, and sand plains. Outcrop in the Project area is between 10% to 20% on average and often presents as felsenmeer. There are elevated regions with up to 70% outcrop exposure as well as extensive areas where exposure is minimal or non-existent. Felsenmeer consisting mainly of in-situ frost-heaved blocks and boulder fields is developed in many areas of rock exposure. Outcrop is typically covered by variable thickness till and alluvial deposits. Permafrost is continuous with low ice content. Permafrost (e.g. stability, depth, thickness, continuity, taliks). The entire region is subject to continuous permafrost, extending to depths of 400 to 500 metres. Sediment and soil quality. Flat areas are dominated by felsenmeer and cryoturbated soils. Cryoturbation produces features such as frost boils, ice-wedge polygons, stone nets and stone stripes. Hydrology/ limnology (e.g. watershed boundaries, lakes, streams, sediment geochemistry, surface water flow, groundwater flow, flood zones). The Property is located within the Baker Lake watershed and the Thelon Heritage River runs through the southwest corner of Area C. Tidal processes and bathymetry in the project area (if applicable). N/A Water quality and quantity. Water quality on the Property appears to be abundant and pristine. All efforts will be made to keep water quality as close to pristine as possible. Air quality. All pollutants will be kept to an absolute minimum. Climate conditions and predicted future climate trends. January and February are the coldest months, with average temperatures below -30°C. Summers are typically brief, cool, and damp with a mean temperature through July and August of under 3°C. Snow cover during winter months may be as little as 30 cm, however due to constant northwest winds, drift accumulations can be significant. Noise levels. Will be kept to an absolute minimum. Other physical Valued Ecosystem Components (VEC) as determined through community consultation and/or literature review. None known at this time

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

Description of Existing Environment: Biological Environment Vegetation (terrestrial as well as freshwater and marine where applicable). Vegetation within the Southern Arctic Ecozone is adapted to short, cold growing seasons; high persistent winds and acidic soils over permafrost. The Ecozone is bounded to the south by the tree line, a broad ecological division between the taiga forest and the treeless arctic tundra. Low precipitation and extremely low winter temperatures are among the factors that discourage tree growth. The near continuous blowing of cold, dry winds and the presence of permafrost also restricts plant growth. Low shrubs such as the Shrub Birch, Willow and Labrador Tea are well adapted to these conditions. On the most exposed sites, low shrubs give way to mats of lichens, mosses, and ground-hugging shrubs such as Mountain Cranberry and Least Willow. Wildlife, including habitat and migration patterns. Low biological productivity, a short growing season, and extremely cold long winters are demanding on wildlife so those found in the area are well adapted to arctic living. Wildlife includes Muskox, Caribou, Wolf, Barren Land Grizzly Bear, Polar Bear (Coastal Regions), Arctic Fox, Wolverine, Arctic Ground Squirrel and Brown Lemming. Birds, including habitat and migration patterns. According to Key Migratory Bird Terrestrial Habitat Sites in the Northwest Territories and Nunavut (2008), published by the Canadian Wildlife Service, there are no critical migratory paths or nesting areas within the project area. Species of concern as identified by federal or territorial agencies, including any wildlife species listed under the Species at Risk Act (SARA), its critical habitat or the residences of individuals of the species. Peregrine Falcon, anatum/tundrus complex, Red-necked Phalarope and Short-eared owl, other Raptors— Special Concern as per the Species at Risk Act ("SARA"). Grizzly Bear, Polar Bear, Wolverine – Special concern as per the Committee on the Status of Endangered Wildlife in Canada ("COSEWIC"). Aquatic (freshwater and marine) species, including habitat and migration/spawning patterns. Freshwater aquatic species common to the Kivalliq Region of Nunavut include Arctic Char, Lake Trout and Arctic Grayling. The network of lakes and rivers provide abundant habitat for fish. Other biological Valued Ecosystem Components (VEC) as determined through community consultation and/or literature review. None known at this time.

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

Proximity to communities. The Property is approximately 50 km north of the community of Qamani'tuaq (Baker Lake) and 280 km northwest of the community of Kangiqliq (Rankin Inlet). Archaeological and culturally significant sites (e.g. pingos, soap stone quarries) in the project (Local Study Area) and adjacent area (Regional Study Area). In June of 2017, 5530 Nunavut Inc. commissioned Golder to complete an Archaeological Overview Assessment (AOA) for the Project. The AOA provided 5530 Nunavut Inc. with information of known sites in the Project area and where there is a high potential for the discovery of undocumented sites. The report was used to assist in the Project planning for the 2018, 2019 and 2020 programs and will be used for planning all future programs. No new or known sites have been encountered to date. Palaeontological component of surface and bedrock geology. The company is currently not aware of any palaeontological sites on the Property. Land and resource use in the area, including subsistence harvesting, tourism, trapping and guiding operations. The Property is in an area of traditional land use as identified by the DNLUP shapefiles, therefore all exploration activity planning will take into account any possible impacts to the cultural value, including subsistence

harvesting, of the area and quality of water. Local and regional traffic patterns. This Project is not anticipated to have any affect on local or regional traffic patterns. Human Health, broadly defined as a complete state of wellbeing (including physical, social, psychological, and spiritual aspects). This project is not anticipated to have any affect on human health. Other Valued Socioeconomic Components (VSEC) as determined through community consultation and/or literature review. No other Valued Socioeconomic Components (VSEC) have been identified.

### **Miscellaneous Project Information**

For additional information see: Meadowbank Property Non-Technical Summary - English Meadowbank Property Non-Technical Summary - Inuktitut Meadowbank Property Abandonment and Restoration Plan Meadowbank Property Environmental and Wildlife Management Plan Meadowbank Property Emergency Response Plan Meadowbank Property Spill Contingency and Fuel Management Plan Meadowbank Property Waste Management Plan

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

**PHYSICAL AND BIOLOGICAL Designated Environmental Areas:** There are no known protected areas in the vicinity of the Property. **Ground Stability:** The proposed drilling program and low impact regional exploration activities are not likely to cause any impact on the permafrost or stability of the ground. **Permafrost:** Permafrost has the potential to be impacted by camp activities. Mitigation measures to reduce the impact include limiting the amount of vegetation disruption to ensure proper shade coverage and reduction in the potential for ground thaw and subsidence. Areas that have patterned ground, clay-rich soil and or wetlands will be avoided. **Surface Water Hydrology:** Surface water hydrology can be disrupted from removal of water. Water will be drawn for drilling from numerous waterbodies within the Property Boundary and water for camp will be from an waterbody adjacent to the camp. Care will be taken to ensure that water is drawn from bodies with sufficient capacity in order to avoid impact on waterbody level or watercourse flow. Water use will not exceed 299 m<sup>3</sup> per day (289 m<sup>3</sup>/day for drilling and 10 m<sup>3</sup>/day for camp use), which is not anticipated to impact hydrology or aquatic habitat. Drilling water pumps typically use a 1" inside diameter suction hose on the diesel pump with a fine screen on the foot valve. For drilling, a fiberglass window screen with a nominal opening size of less than 1/16" is also generally wrapped around the foot valve to prevent the intake of silt and sand into the pump, which can cause considerable damage to the pump chambers. In addition, it is common practice for the drilling contractor to place the foot valve of the intake hose in a perforated 20 L pail, which further protects against harmful materials and fish being entrained into water intake hoses. **Water Quality:** Surface water quality may be affected by fuel and toxic material spills and improper greywater disposal. Drilling will utilize recirculation and filtration systems to minimize loss of water and drill additives. Non-toxic and bio-degradable drilling fluids will be used at all times where ever possible. Drilling fluids will be directed to a properly constructed sump or an appropriate natural depression, at least 31 m from the ordinary high-water mark of any waterbody so direct flow into a waterbody is not possible. If available, coarse gravel will be placed in the bottom of the sump to provide filtration, and supports will be built on the sides to prevent slumping. When full, sumps will be covered with enough material to allow for future ground settlement. See the Meadowbank Property Waste Management Plan for additional information. All fuel and other hazardous materials located at the camp or drill sites will be stored within "Arctic Insta-Berms", or similar products, for secondary containment. These types of berms utilize chemical and fire resistant fabric (generally polyurethane coated nylon or vinyl coated polyester material) designed for extreme arctic temperatures and puncture resistance. "RainDrain" or similar hydrocarbon filtration systems will be used to safely remove any water collected inside secondary containment berms, and as a safeguard against any potential overflows of contaminated water. All hazardous materials will be used, stored or transferred a minimum distance of 31 m from the normal high water mark of any water body. Spill kits and firefighting equipment will be strategically located near where any hazardous materials are stored, used or transferred, including the camp, drill sites, remote fuel caches and in the helicopter. **Climate Conditions:** The size and duration of the proposed drilling and exploration programs is not likely to cause any impact on climate conditions. **Eschers and Other Unique or Fragile Landscapes:** Western Atlas considers all landscapes to be critical to the natural environment of the area and will treat with care and respect. Any seemingly unique and fragile landscapes will be avoided. **Surface and Bedrock Geology:** The size and duration of the proposed drilling and exploration programs will not cause any impact on surface or bedrock geology. The regional exploration and Diamond drilling programs will help to add new information about the geology of the area. **Sediment and Soil Quality:** Soil quality can be impacted from spills of fuel and other materials, waste discharge and drilling. Preventative measures include appropriate and approved storage locations and containers with secondary containment. All fuel and other hazardous materials will be at least 31 m from the ordinary high-water mark of any waterbody. Refueling will be done with precision and appropriate due-diligence will be taken. Drums and hoses will be inspected regularly for leaks and pans or absorbent pads will be placed below fuel transfer areas and stationary machinery. **Tidal Processes and Bathymetry:** N/A **Air Quality:** Impacts on air quality can result from discharge of exhaust from helicopters, drilling operations and diesel generators. Given the remote location with lack of air quality issues which currently exists within the project location, the short duration and small scope of activities are not expected to result in any measurable air quality impacts. **Noise Levels:** Noise can result from the use of drills, generators, helicopters and other vehicles, which can disturb wildlife. Mitigation measure include, but not be limited to: helicopter avoidance of any birds nests, bear and wolf dens, waterfowl and shorebird staging areas during critical seasons and near large mammals. In addition drill activities and associated work will cease if caribou cows and/or calves appear nearby. **Vegetation and Wildlife Habitat:** Vegetation can be potentially be disturbed by drilling activities. During drilling, If possible, any topsoil required to be removed for sumps will be kept separate from the sub-surface materials excavated. During drill site reclamation the subsurface material stockpiles will be pushed back into the excavated sites as close to the natural contouring as possible

with the topsoil placed on top. Wildlife, Birds and Aquatic Species (including habitat and migration patterns): Wildlife can be displaced through loss of habitat, disturbed by noise (helicopter, generators, drilling) or human interaction. Habitat loss can result in displacement of animals. Disturbance can cause stress-induced health problems and mortality. Physical fish habitat (stream beds) could be impacted from drill activity. Water extraction at the camp and drill site, as well as water quality impacts (resulting from fuel or other toxic materials) can ultimately affect fish populations. Mitigation procedures for reducing the impact of activities on wildlife will include, but not be limited to the following: - All personnel will be trained on wildlife-human interaction/encounters procedures. - Pre-drilling reconnaissance site visits prior to drilling activities will assist in identifying sensitive wildlife habitat. - Wildlife sightings will be recorded and this information will be passed on to other members of the crew; - Proper storage of hazardous materials, garbage, food and any other potential attractants will be ensured to avoid exposure to wildlife; - All personnel will be aware of, and will follow, wildlife deterrence techniques (including proper storage and disposal of food) to reduce the possibility of attracting wildlife to the drill areas; - All personnel will have bear safety training and will be aware of the penalties for shooting polar bears, even in self defense. - Operations will be modified or suspended if there is a potential to affect seasonal migration or nesting activities. - Appropriate screens will be placed over all water intakes in order to reduce the potential for fish entrapment. - The amount of water used for the drill from any source body of water will never cause a drawn down. See above comments in Noise Levels and Vegetation and Wildlife Habitat for additional information about wildlife disturbance mitigation measures.

**SOCIO-ECONOMIC** Archaeological and cultural historic sites: Work in remote areas may help identify new archaeological and/or palaeontological sites, but these important sites/artifacts can be disturbed or destroyed if proper precautions are not taken. All staff and contractors will be properly trained in identification of potential sites and what to do when a site is located. All sites identified from archaeological reconnaissance and inventory programs will be used for program planning to be avoided. If an archaeological or palaeontological artifact or site is discovered, work in the area will be immediately stopped and the Department of Culture, Language, Elders and Youth and CIRNAC will be notified. Nothing will be removed, disturbed, or displaced at any archaeological or palaeontological site.

**Employment:** Western Atlas believes that it is essential to develop the project in cooperation with local communities. The proposed exploration program will provide seasonal employment and training opportunities for local Inuit in camp and as guides in the field whenever possible.

**Community wellness:** Whenever possible, goods and services will be sourced from local businesses. Western Atlas is committed to engaging communities in an open and honest manner and would appreciate and consider any and all knowledge, advice and input received. With proper mitigation, the project should not affect land and water use, traditional use or cultural resources.

**Human Health:** As the project is located at a remote site removed from immediate interaction with local communities, no impact to local human health is expected.

## **Répercussions cumulatives**

All potential environmental effects associated with the proposed Meadowbank Property exploration activities are considered negligible, localized effects that can be mitigated. No significant residual impacts to the environment are expected to occur as a result of the implementation of this program. While individually no significant effects are anticipated, consideration should be made to the combination of all existing or known planned activities within the vicinity of the project area. Some cumulative effects can be positive, such as more residents finishing high school and earning higher salaries. Other positive cumulative effects can be increased employment rate, infrastructure and potential for investment in communities by government. Cumulative effects may also be negative and therefore attention should be given to the potential for these to occur in advance of project growth. Cumulative effects on the land might include changes to the number of wildlife, increases in non-native plants, or the melting of permafrost.

## Impacts

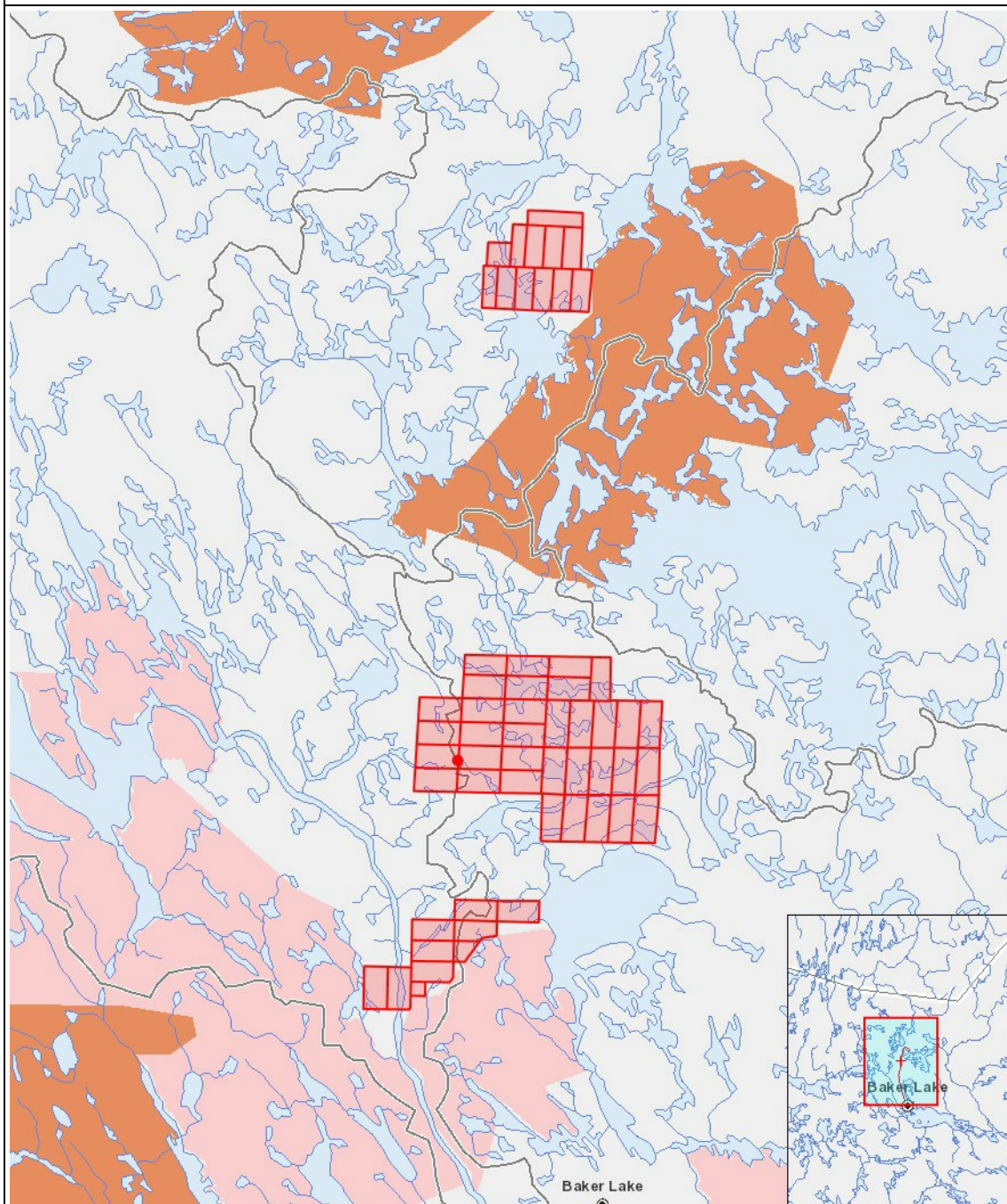
## Identification des répercussions environnementales

		PHYSICAL																		BIOLOGICAL																																												
		Designated environmental areas									Wildlife protected areas									SOCIO-ECONOMIC																																												
		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			Vegetation			Wildlife, including habitat and migration patterns			Birds, including habitat and migration patterns			Aquatic species, incl. habitat and migration/spawning			Wildlife protected areas			Archaeological and cultural historic sites			Employment			Community wellness			Community infrastructure			Human health		
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Fuel and chemical storage		-	-	-	-	M	-	M	-	M	-	M	M		-	-	-	-	-		-	-	-	-	-																																							
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(P = Positive, N = Négative et non gérable, M = Négative et gérable, U = Inconnue)



## Site du projet



## Liste des géométries de projet

- |   |         |                                       |
|---|---------|---------------------------------------|
| 1 | polygon | WA_Meadowbank_Claims_n83z14_2020031   |
| 2 | point   | AWAR_Km_58_Fuel_Cache_n83z14_20210108 |