



## Meadowbank Precious Metal Project

<b>Application Type:</b>	New
<b>Project Type:</b>	Exploration
<b>Application Date:</b>	3/6/2017 11:19:00 AM
<b>Period of Operation:</b>	From 2017-06-15 to 2022-06-14
<b>Proposed Authorization:</b>	From 2017-06-15 to 2022-06-14
<b>Project proponent:</b>	Fabio Capponi 5530 Nunavut Inc. 2205-1211 Melville St Vancouver Bc V6E0A7 Canada Tel: 17783897274, fax: 17783897274

### Non-technical project proposal description

English: The Meadowbank Precious Metal Property is located in the Kivalliq Region of Nunavut, within the 1:250,000 scale NTS map sheets, 66A and 66H. The Property is approximately 30 to 100 km north of the community of Baker Lake and consists of three project areas: Area A to the north, Area B in the centre and Area C to the south (Figure 1). The 2017 proposed exploration program will be supported by a temporary, 6 to 10 person exploration camp. The program is anticipated to commence June 15th, 2017 and run for 6 weeks (42 days). Personnel and cargo will be transported to the camp along the Agnico-Eagle Meadowbank Road and then flown to site via helicopter. Structures for the proposed camp may include 4 sleeper tents, 1 kitchen, 1 dry, 1 generator shack, and 1 outhouse. The majority of the structures will be insulated Weatherhaven tents, or similar, with tarp floors. A fuel cache of less than 4,000 L (approximately 19 drums) will be established on stable ground near the camp, primarily to store diesel and jet fuel. Small quantities of gasoline and propane will also be stored. Small remote temporary fuel caches (less than 4,000 L), may also be required to supply the exploration program. Within 30 days of the establishment of any temporary fuel cache, the appropriate agencies will be notified of the details of the cache including: GPS location, fuel type, container sizes, method of storage and proposed date of removal. The temporary fuel cache GPS locations will also be included in the annual reports submitted to Indigenous and Northern Affairs Canada (INAC), the Nunavut Water Board (NWB) and the Nunavut Impact Review Board (NIRB). The proposed 2017 exploration activities for the Meadowbank Precious Metal Property include prospecting, till sampling and ground geophysical surveys. The intent of the 2017 exploration program is to delineate targets for diamond drilling. As soon as targets are identified for drilling INAC, NWB and NIRB will be notified and supplied with locations and maps. All exploration work and drilling will be strictly confined to the Areas A, B and C (Figure 1).

French: N/A

[illegible]

Proposed term of operation: from 2017-06-15 to 2022-06-14

## ACTIVITIES

### Project Activities

Location	Activity Type	Land Status	Site History	Site Archaeological or Paleontological Value	Proximity to the nearest communities and any protected areas
Meadowbank Precious Metal Property Outline	Drilling	Crown	Very little exploration has been conducted directly on the Property. AREA A (northern claim block): McChip resources completed till sampling and mapping in 1996-1997. AREA B (Central claim block): Agnico Eagle completed rock sampling and mapping in 2009. AREA C (southern claim block): Tanqueray Resources completed mapping in 2004.	There are no known archaeological or paleontological sites on the Property that the company is aware of. All staff and contractors will be properly trained in identification of potential sites and what to do when a site is located. If an archaeological or paleontological artifact or site is discovered, work in the area will be immediately stopped and INAC and the Department of Culture, Language, Elders and Youth will be notified. Nothing will be removed, disturbed, or displaced.	The Property is ~30 to 100km north of Baker Lake. 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.
Meadowbank Precious Metal Property Outline	Mineral Exploration	Crown	N/A	N/A	N/A

### Community Involvement and Regional Benefits

Community	Name	Organization	Date Contacted
Information is not available			

## AUTHORIZATIONS

### Project Locations

Kivalliq

### Project Authorization

Authorizing Agency	Authorization Description	Current Status	Date Issued / Applied	Expiry Date
Aboriginal Affairs and Northern Development Canada	Applying for Class A Permit	Not Yet Applied		
Nunavut Water Board	Applying for a Class B Water Licence	Not Yet Applied		

Please indicate the mineral of interest that is being extracted. Include a brief description.

Mineral Type	Description
Information is not available	

## MATERIAL USE

### Equipment to be used (including drills, pumps, aircraft, vehicles etc.)

Equipment Type	Quantity	Size - Dimensions	Proposed Use
Helicopter	1	A-Star, Bell 407, or similar	Transport equipment & personnel
Flat Bed Truck	1	Flat Bed Truck	Transport Equipment and Personnel along Meadowbank road
Diesel generator	2	10 - 20 kW	Power for camp and drill
Water pump	2	General purpose 2" water pump	Supply water for camp and drill
Diamond Drill	1	Boyles 17-A or similar	Drilling for core rock samples
Dual-chamber controlled air incinerator	1	Granite Environmental Vulcan 0.3 (or similar)	Incinerate combustible waste

### Detail Fuel and Hazardous Material Use

Fuel / Material	Type	Number of Containers	Container Capacity	Total Amount	Units	Proposed Use
Diesel	fuel	8	205	1640	Liters	Run equipment and heat tents
Aviation fuel	fuel	10	205	2050	Liters	Helicopter
Gasoline	fuel	1	205	205	Liters	run equipment
Propane	fuel	2	100	200	Lbs	Run Kitchen equipment and heat water
Cleaning Chemicals such as Javex	hazardous	1	5	5	Liters	cleaning
Moter oil/ hydrolic oil	hazardous	5	20	100	Liters	Generators and drill

### Project Water Consumption

Daily Amount (m3)	Proposed Water Retrieval Methods	Proposed Water Retrieval Location
42	The water intakes for the camp will use an electrically powered submersible pump with a fine screen (<1/4" openings) on the intake. The drill pumps use a 1" inside diameter suction	Adjacent to camp and drillhole locations, which are yet to be determined

## WASTE

### Waste Management

Project Activity	Type of Waste	Projected Amount Generated	Method of Disposal	Additional Treatment Procedures
Drilling	Combustible wastes	6 people	Backhauled or incinerated	recycled
Drilling	Greywater	42m3/day	sump	Disposed of in natural depressions or excavated pits located adjacent to camp and/or drill holes; allowed to percolate into overburden; minimum distance of 31 m from nearby water sources
Drilling	Hazardous waste	0.005m3/day	Stored in sealed containers	Removed and taken to approved disposal site
Drilling	Non-Combustible wastes	unknown	backhauled	Removed and taken to approved recycling or disposal site
Drilling	Sewage (human waste)	0.05m3/day	Outhouse	Lime

### Environmental Impacts

All potential environmental effects associated with the proposed Meadowbank Precious Metal Project are considered minor, 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. Please see attached Management Plans for mitigation measures.

## DETAILS PART 2

### Project General Information

1. The objective of the current project is to explore for economic gold deposits in the Kivalliq Region. 2. Previous exploration surrounding the area has defined the area to be prospective for gold occurrences. More detailed exploration work, including diamond drilling, is justified. Small temporary camps are required in order to carry out exploration activities in the area. 3. June 15, to July 26, 2017. Similar programs anticipated for the next few years. 4. - Article 13 – Nunavut Land Claims Agreement - NWB – Water Licensing in Nunavut - DFO – Freshwater Intake End of Pipe Fish Screen Guidelines - DFO – Fisheries Act – s.35 - RWED – Environment Protection – Spill Contingency Regulations - Public Health Act Camp Sanitation Regulations - Public Health Act Water Supply Regulations 5. AANDC LUP – Under Application NWB Water Licence – Under Application NIRB Screening Decision – Under Review (File No. 17EN020) NPC Non-Conformity Decision – Approved (File No. 148482)

### DFO Operational Statement of Conformity

N/A

### Transportation

1. Access to the Property will be along the Agnico-Eagle Meadowbank Road and then helicopter to site (see attached map) 2. N/A 3. N/A 4. There will be no aircraft other than helicopter, which will be used to mobilize camp gear, personnel and equipment to site from the Agnico-Eagle Road and then daily drop off and pick-ups to field locations from the temporary camp. The exact location of the camp is unknown at this time and therefore flights paths cannot be finalized. NIRB will be notified when a suitable camp location is identified and flight paths are determined.

### Camp Site

1. There are no existing camp structures but a 6-10 person camp will be required to support the 2017 exploration program. Structures for the proposed camp may include 4 sleeper tents, 1 kitchen, 1 dry, 1 generator shack, and 1 outhouse. The majority of the structures will be insulated Weatherhaven tents, or similar, with tarp floors. 2. It will be a temporary camp 3. 6-10 people for 42 days from June 15 to July 26, 2017.

### Equipment

1. Helicopter (1): A-Star, Bell 407, or similar, to Transport equipment & personnel 2. Flat Bed Truck (1): to Transport equipment, supplies & personnel up Agnico-Eagle Meadowbank Road 3. Diesel generator (1): 10 - 20 kW for Power for camp 4. Camp Water pump (1): General purpose 2" water pump, for Water for camp 5. Drill Water pump (1): Standard for Zinex A-5 or similar for Water for drill 6. Diamond Drill with generator (1): Boyles 17-A or similar for Drilling core rock samples 7. Dual-chamber controlled air incinerator (1): Granite Environmental Vulcan 0.3 (or similar), to Incinerate combustible waste

### Water

1. All camp and exploration activities, including drilling will be within the claims owned by 5530 Nunavut Inc. (see figure 1 attached) The exact location of water sources is unknown at this point. As soon as a suitable camp location and drill targets are identified INAC, NWB and NIRB will be supplied with the coordinates and maps. The water intakes for the camp will use an electrically powered submersible pump with a fine screen (<1/4" openings) on the intake. The drill pumps 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. 2. 2 m<sup>3</sup>/day for camp use, 40 m<sup>3</sup>/day for drilling 3. Camp greywater will be stored and treated in an excavated sump, which will allow for slow infiltration into the soil and will be located at least 31 m away from a water body. 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. Filters will be installed on kitchen drains to ensure solid food wastes do not enter the sumps and have the potential to attract wildlife. The sumps will maintain a minimum 1 metre freeboard at all times. Sumps and pipes will be inspected at regular intervals for leaks or overflow. When full, greywater sumps will be covered with enough material to allow for future ground settlement. Drilling will utilize recirculation and filtration systems to minimize loss of water and drill additives. Bio-degradable drilling fluids will be used at all times where ever possible. Drilling fluids will be directed of in a properly constructed sump or an appropriate natural depression, 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 and no additional impacts are created 4. N/A

### Waste Water (Grey water, Sewage, Other)

1. Sewage To control sewage pathogens, privy pits (outhouses) will be periodically treated with lime. When full, the pits will be covered with at least 30 cm of compacted soil. Camp grey water Camp greywater will be stored and treated in an excavated sump, which will allow for slow infiltration into the soil and will be located at least 31 m away from a water body. 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. Filters will be installed on kitchen drains to ensure solid food wastes do not enter the sumps and have the potential to attract wildlife. The sumps will maintain a minimum 1 metre freeboard at all times. Sumps and pipes will be inspected at regular intervals for leaks or overflow. When full, greywater sumps will be covered with enough material to allow for future ground settlement. Combustible solid waste The 2017 exploration program will back haul all waste to Baker Lake and if required Yellowknife. When the program and therefore camp expands an Environment Canada approved batch waste, controlled air, dual chamber incinerator will be selected to burn combustible waste, therefore reducing harmful emissions. Non-combustible solid waste, including bulky items/scrap metal Effort will be taken to reuse or repurpose any materials before disposal is considered. Materials that cannot be reused, repurposed or incinerated such as: scrap metal, glass, electronics, tires, hoses and other rubber materials will be stored in appropriate containers until they can be removed from site for recycling, treatment and/or disposal at an accredited facility. Hazardous waste or oil All opportunities will be taken to reuse or recycle hazardous waste materials. All hazardous wastes such as: lubricating oils, hydraulic fluids, petroleum based solvents, batteries, aerosol cans and fluorescent light bulbs will be placed in sealed containers and stored within "Arctic Insta-Berms", or similar, for secondary containment until they can be reused or backhauled for recycling or disposal. A hazardous waste storage area will be established adjacent to the camp fuel cache. Contaminated soils/snow Any contaminated soil, snow, or ice will be cleaned up immediately in accordance with the "Spill Prevention and Response Plan." All contaminated soil, snow, and ice will be sealed in 205 L steel drums and stored in the hazardous waste storage area to await backhaul to a registered hazardous waste receiver. Empty barrels/ fuel drums Empty containers will be stored in a designated area and returned to the supplier. Drums may alternatively be drained, air dried, backhauled to a recycling facility. Any other waste produced Waste management operations at the Property comprise a number of activities with the common goal of reducing the amount of waste generated on site and to ensure that any wastes created are reused, recycled, or disposed of in a responsible manner. Wastes will be separated at the source into a number of categories including: organics (food wastes), materials for incineration, inert recyclables, inert non-combustible materials, and various hazardous materials. Materials that cannot be incinerated or burned will be stored in appropriate containers until they can be removed from site for treatment and/or disposal at an accredited facility. 2. N/A

### Fuel

1. Diesel (8): 205 L Drums Jet Fuel (10): 205 L Drum s Gasoline (1): 205 L Drum Propane (2): 100 lb Cylinder Fuel will be stored near the camp, a minimum 31 m from the high water mark of any waterbody. As soon as the camp and therefore fuel location is identified NIRB, INAC and NWB will be supplied with the location. 2. Arctic Insta-Berms (or similar) will provide secondary containment. All fuel caches will be stored 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 fuel is stored or transferred. 3. Fuel will be transferred by hand held pump or grounded electric pump directly from fuel drums to helicopter, drill, etc. Spill kits and fire-fighting equipment will be available at each storage/refueling site. Smoking will be prohibited during fuel transfer and within the vicinity of any stored fuel. 4.No drilling will be performed, sump created or fuel and/or hazardous chemical stored within thirty one (31) metres of the normal high water mark of any water body. All hazardous materials will be placed in secondary containment. Appropriate spill kits and emergency equipment will be located proximal to any hazardous materials. Inspections of the hazardous materials storage area will be conducted daily. All employees and contractors will receive training in emergency response and spill response, as outlined in the Meadowbank Precious Metal Property Emergency Response and Spill Prevention and Responses. For additional spill control measures, see Meadowbank Precious Metal Spill Prevention and Response Plan.

## Chemical and Hazardous Material

1. Chemicals Chemicals to be used on site may include household-strength cleaning supplies such as Javex, ammonia-based window/countertop sprays, wash soaps, degreasers, etc. In addition, limited miscellaneous items such as insect repellent and aerosols will be available. All items will be stored in their original containers in their respective storage/use areas, and removed off-site with routine garbage backhauls. All Hazardous materials will be transported to and from camp via helicopter to the Agnico-Eagle Meadowbank Road and then hauled to Baker Lake and if Required shipped to Yellowknife. All containers storing hazardous materials will be inspected for dents, punctures, etc prior to being slung. Extreme care will be taken in the process of transferring all chemicals/chemical solutions/fuels/etc. Funnels will be utilized to direct small amounts of liquid to reduce the potential of spillage. Spill mats will be in place when transferring/refuelling. Motor Oil When drilling commences, a maximum of approximately 100 L of motor oils and hydraulic oils will be maintained at the camp for the drill rig and generator at the camps. The products will be supplied in 1L or 20 L plastic containers stored in the generator enclosure. For the purpose of this project description submission, the inventory of lubricating oils will be approximately 1 case of twelve 1 L containers, and 4 pails of 20 L capacity. This inventory will be maintained during operations and resupplied as. These products will be used as crankcase oils in the diesel engines that power the electrical generator, diesel engines on the drill rigs, gasoline engines in small equipment such as portable electrical generators, outboard boat motors and turbine lubricants in helicopters and fixed wing aircraft. The containers will be stored on spill containment pallets. Drill Mud/Additives All drill additives will be non-toxic and biodegradable. The diamond drilling may use modest amounts of additives depending on rock conditions. When drilling is under way, the contractor responsible will store the required drilling muds, additives, oils and lubricants in a temporary shed at drill site or camp; upon annual termination of the project, these materials will be removed via back haul to Baker Lake, or if required Yellowknife, to be properly disposed of. The drill additives will be transferred according to the manufacturer's guidelines and the operating procedures of the drill contractor. Antifreeze Winter drilling programs will utilize non-toxic Beet Juice Antifreeze. Lead Acid Batteries Lead acid batteries will be present on the drill rigs and on the diesel engines for the electrical generators. In addition a small number of batteries may be needed for other portable items. Spares will be maintained on site. For the purpose of this project description, we have assumed that two spare lead acid batteries will be kept in the generator enclosure. Secondary containment measures are not contemplated given the small number of batteries in storage. At no time will any batteries be put in the garbage; nor will they be incinerated. For additional information, see Meadowbank Precious Metal Property Spill Prevention and Response Plan. 2. Secondary containment measures for chemical products will be provided according to the nature of the chemical (liquid vs. solid), the quantity stored and the manner of use. For liquid products such as lubricating oils, spill containment pallets will be provided underneath the product containers. For solids, tarps and/or polyethylene sheets will be placed under the pallets or the bags/pails of product where significant quantities are stored. The generator will be inside a wooden generator shack. Fueling and oil changes of the generator will be undertaken inside this structure. As at all re-fuelling stations, appropriate Spill Kits will be located at the generator shack. Other Hazardous materials in camp will be also be stored in wooden floored structures such as the shop, core shack and kitchen. All other material (soaps, cleansers, degreasers, javex, etc. will be securely stored in the storage area/tent until required. 3. Chemicals will generally be transferred directly to the end use machinery from the containers that the products were provided in. Considering the nature of the operations, generally less than 20 L of product will be transferred at a time. Spill kits will be kept on hand to clean up any product spilled in the transfer process. For any solid products, the bags will be opened directly over the intended use tanks into which the product will be placed. Used chemical products will be returned to empty containers and stored for shipment off-site. Used motor oil will be accumulated in sealed, labeled 20 L pails for shipment off-site. 4. Small packages of chemicals will be placed in the storage sheds at the camp. Larger packages will either be stored in the camp's buildings or placed outdoors on pallets, wrapped in polyethylene sheeting and tarped over. Immediately prior to use, bags or containers of chemicals will be transported to their place of use by carrying by hand for movement to the camp site. For the drilling materials, the containers will be slung with a helicopter and deployed at the drill site. Appropriate spill kits, including empty containers for contaminated soil, will be kept on hand to clean up any product spilled. For additional information, see the Meadowbank Precious Metal Property Spill Prevention and Response Plan.

## Workforce and Human Resources / Socio-Economic Impacts

1. 5530 Nunavut Inc. will hire local Inuit wherever possible. The company will attempt to hire local Inuit from Baker Lake for seasonal camp duties, core processing technicians and/or wildlife specialists. All persons will be fully trained onsite and be provided with appropriate personal protective equipment (PPE). 2. The project is FIFO. Local hires will generally work a rotation of at least 2 weeks in camp with the next 2 weeks off. Other personnel may work up to six weeks at a time, depending upon the job and the time of year. 3. 5530 Nunavut Inc. will hire local Inuit beneficiaries and purchase locally wherever possible.

## Public Involvement / Traditional Knowledge

1. - Agnico Eagle Mines Limited - Nunavut Planning Commission - Nunavut Impact Review Board - Nunavut Water Board - Kivalliq Inuit Association - INAC - Government of Nunavut – Culture Language Elders and Youth (GN-CLEY) - Government of Nunavut – Department of Environment (GN-DoE) - Environment Canada (EC) - Transport Canada (TC) 2. This program is still in the planning stages and to this point no consultations have been conducted. As the program progresses forward, 5530 Nunavut Inc. would anticipate meeting with community representatives from Baker Lake and any other interested parties to inform them of current plans/progress. 3. N/A 4. Traditional knowledge will be obtained through consultations with community representatives from Baker Lake and any other interested parties when the project moves past the planning stage. 5. As the program progresses, preliminary meetings are planned for Baker Lake to determine interests and concerns of people with respect to this project.

## SECTION B: Mineral Exploration: Project Information

Gold

## SECTION B: Mineral Exploration: Exploration Activity

1. Exploration drilling Geophysical work (ground) Other (Till Sampling and prospecting) 2. Soil/till sampling On land drilling (diamond drilling) Other (prospecting)

## SECTION B: Mineral Exploration: Geosciences

1.b. Magnetic d. Electromagnetic 2. a. Geological Mapping 3. All exploration will be restricted to the claims held by 5530 Nunavut Inc. See Figure 1 4. The helicopter will only fly lower than 610 m when dropping off and picking up field crews or moving the drill.

## SECTION B: Mineral Exploration: Drilling

1. There is no anticipated drilling for the 2017 exploration season. When drill targets are identified INAC, NWB and NIRB will be provided coordinates, depths and maps. 2. The exact drill additives are not known at this time, but 5530 Nunavut Inc. will ensure that the drilling contractor maximizes the use of non-toxic and biodegradable additives. The Meadowbank Precious Metal Property Spill Prevention and Response Plan will be updated with appropriate MSDS sheets once any additional additives are been determined. However, until confirmed, it is assumed that the following materials may potentially be present at the drill site: • drill fluid additive “550X polymer” (consists of copolyacrylamide / sodium acrylate; Non Toxic) • tube grease - Beacon 2, Z-50 pipe dope (Non Toxic) • circulation polymer – G-stop (Non Toxic) • antifreeze – Beet juice antifreeze (Non Toxic) • rod grease – Big Bear diamond drill rod grease (Non Toxic) • motor oil – super plus SAE 10W30 and 15W-40 (Non Toxic) • hydraulic oil – Harmony AW 22, 32, 46, 68 (Non Toxic) • Linseed Soap – (Non Toxic) 3. The drill waste, including water, cuttings and muds will be disposed of in a properly constructed sump or an appropriate natural depression; 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 and no additional impacts are created. 4. Drilling will utilize recirculation and filtration systems to minimize loss of water and drill additives. Bio-degradable drilling fluids will be used at all times where ever possible. Drilling fluids will be directed into a properly constructed sump or an appropriate natural depression, 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 and no additional impacts are created. If any artesian water flow is detected, the hole will be plugged immediately and cemented in bedrock to prevent continued flow. 5. The drill, drilling equipment and accessories (pumps, hose, tanks, etc.) will be mobilized to the Property along the Agnico Eagle Meadowbank Road and then slung by Helicopter to site. 6. If later relocation of the hole is not required, casing will be removed whenever possible. Any remaining/fused casing will be cut off to ground level or below and capped. Any holes with flowing water will be permanently sealed unless written instruction from the relevant authority is received to indicate otherwise. 7. N/A

## SECTION B: Mineral Exploration: Stripping / Trenching / Pit Excavation

## SECTION B: Mineral Exploration: Underground Activities

## **SECTION B: Mineral Exploration: Waste Rock Storage and Tailings Disposal**

## **SECTION B: Mineral Exploration: Stockpiles**

## **SECTION B: Mineral Exploration: Mine Development Activities**

## **SECTION B: Mineral Exploration: Geology and Mineralogy**

## **SECTION B: Mineral Exploration: Mine**

## **SECTION B: Mineral Exploration: Mill**

### **Description of Existing Environment: Physical Environment**

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; and 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. Topography. 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). 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 of Existing Environment: Biological Environment**

Vegetation (terrestrial as well as freshwater and marine where applicable). Vegetation at the Property consists mainly of moss, lichens, stunted plants and Arctic grasses. The grasses are typically observed growing at lower elevations in areas associated with river drainage basins. Wildlife, including habitat and migration patterns. Typical wildlife expected to be near the Property include caribou, muskox, arctic fox, hare and lemmings. Birds, including habitat and migration patterns. The proposed activities should not interfere with bird habitat and migration patterns. 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. Aquatic (freshwater and marine) species, including habitat and migration/spawning patterns. The proposed activities should not interfere with marine species. Screens will be placed over water intakes for the camp and drills to ensure no entrapment of freshwater species. Other biological Valued Ecosystem Components. None known at this time

### **Description of Existing Environment: Socioeconomic Environment**

Proximity to communities. Baker Lake is approximately 30 to 100 km south of the Property. Archaeological and culturally significant sites (e.g. pingos, soap stone quarries) in the project (Local Study Area) and adjacent area (Regional Study Area). The company is not aware of any archaeological and/or culturally significant sites on the Property. Palaeontological component of surface and bedrock geology. The company is 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 within an area of Traditional Land Use.

### **Identification of Impacts and Proposed Mitigation Measures**

1. See Impacts Tab 2. Potential Impacts and Mitigation: The attached Identification of Environmental Impacts (Table 1) outlines activities associated with the Meadowbank Precious Metal Property, including work related to the camp, exploratory drilling and general regional exploration, which may impact environmental, social, economic and health components. It is noted where the potential for interaction exists, which subsequently, can be used to determine potential impacts. PHYSICAL AND BIOLOGICAL Designated Environmental Areas: There are no known protected areas in the vicinity of the Property (see point i. the Physical Environment portion of Section 4, "Description of the Existing Environment" for more information. Ground Stability: The proposed drilling program and the size and duration of use for the proposed camp, is not likely to cause any impact on the permafrost or stability of the ground. Permafrost: Permafrost can 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. Footpaths can be marked using stakes and flagging tape to ensure that impacts to vegetation are confined to a small area or boardwalks can be built between camp buildings to reduce damage to vegetation on high-traffic footpaths. Areas that have patterned ground, clay-rich soil and or wetlands will be avoided. Heat radiating from camp buildings may thaw permafrost, so all heated camp structures will be slightly elevated above the ground to allow air circulation. Surface Water Hydrology: Surface water hydrology can be disrupted from removal of water for camp use and drilling. Water use at the camp will be drawn from an applicable water source near camp. Extraction volumes to sustain 6 to 10 people will be approximately 1 to 2 m<sup>3</sup> per day, which will not impact hydrology or aquatic habitat. Drilling could use up to 40 m<sup>3</sup> per day and will be drawn from adjacent creeks/ponds/lakes/rivers. The water intakes for camp and drilling will be screened as per DFO requirements to prevent fish entrapment at the pumps. Disturbance to the waterbodies, beds or banks will be minimized by placing temporary pump placement platforms. The water level of any source body of water will never be drawn down. Water Quality: Surface water quality may be affected by fuel and toxic material spills (including drill slurry) and grey water disposal. The measures noted in the Spill Prevention and Response Plan will mitigate for surface water quality impacts from spills. Sediment and drill fluids are also issues for surface water. Biodegradable drill additives will be used whenever possible. Any residual drill water, including cuttings and additives, will be contained in sumps. Sumps will be positioned down slope from the drill collar in such a manner that runoff flows into the sump. Sumps will be positioned a minimum of 31 metres from the normal high water mark of any water body. Activities that may result in sedimentation will be avoided. Climate Conditions: The proposed drilling program and the size and duration of use for the proposed camp, is not likely to cause any impact on climate conditions. Eskers and Other Unique or Fragile Landscapes: 5530 Nunavut Inc. 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 proposed drilling program and the size and duration of use for the proposed camp, will not cause any impact on surface or bedrock geology. The regional exploration and Diamond drilling programs will 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 camp, fuel, hazardous materials and drilling will be a minimum 31 metres away from any watercourses. 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. See the Spill and Response Plan attached for more information. 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, as well as emissions from incineration. 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. An Environment Canada approved batch waste, controlled air, dual chamber incinerator will be selected to burn combustible waste, therefore reducing harmful emissions. Noise Levels: Noise can result from the use of helicopters and drills and to a lesser degree from activities within the camp, which can disturb wildlife. Mitigation measure include, but not be limited to: helicopter avoidance of any raptor nests, bear dens 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 disturbed by clearing/grading at camp, high traffic footpaths and drilling activities. During drilling, if any soil is required to be removed, it will be set aside and replaced at the completion of the drill hole. Any topsoil (if present) will also be stored and covered at the camp site for reuse later during reclamation at abandonment. See the permafrost section above for more vegetation disturbance mitigation measures. 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 camp and 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 at camp and at the drill in order to reduce the potential for fish entrapment. - The amount of water used for the camp or 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 archeological and/or paleontological sites. These important historic sites 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. If an archaeological or paleontological artifact or site is discovered at any stage of the program, work in the area will be immediately stopped and the INAC resource management officer, territorial government and Department of Culture, Language, Elders and Youth will be notified. Nothing will be removed, disturbed, or displaced at any archaeological or paleontological site. Employment: 5530 Nunavut Inc. 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. Local employment benefits individuals and families in isolated communities which may have few opportunities. This in turn boosts the local economy. Community wellness: Whenever possible, goods and services will be sourced from local businesses. 5530 Nunavut Inc. 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. 3. See “Socio-Economic” portion above 4. The Project is not likely to cause any transboundary effects 5. All interaction with wildlife is discouraged; however, employees and contractors will be trained in the appropriate actions to take when encountering wildlife in the field. Intentionally approaching, disturbing, or feeding wildlife is strictly prohibited. Any incidents will be thoroughly investigated and disciplined. All wildlife, and their dwelling sites, will be respected and efforts will be made to avoid them. All personnel will be required to record any wildlife sightings and will be instructed on the appropriate action to take when encountering wildlife in the field. Animal sightings will be recorded in the “Wildlife Record Log” and reported to INAC and the Nunavut Department of Environment as part of the “Wildlife and Environment” section of the Meadowbank Precious Metal Property Annual Report. If any wildlife enters any of the area of operations at the Meadowbank Precious Metal Property, protection measures will be followed and operations will be halted until the animal has moved out of the vicinity. Any bears or nuisance wildlife will be immediately reported to the project supervisor, INAC and the Nunavut Department of Environment. 6. See comments in section above

## Cumulative Effects

All potential environmental effects associated with the proposed Meadowbank Precious Metal Project are considered minor, 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 the case with the establishment of the diamond mines in the NWT, more residents are 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. Other potential exploration projects or sites in the area include the Agnico Eagle Meadowbank Mine and Amaruq deposit.



## IMPACTS

### TABLE 1 - IDENTIFICATION OF ENVIRONMENTAL IMPACTS

		P H Y S I C A L																S O C I O - E C O N O M I C									
		Designated environmental areas																Archaeological and cultural historic sites									
		Ground stability																Employment									
		Permafrost																Community wellness									
		Hydrology / Limnology																Community infrastructure									
		Water quality																Human health									
		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																									
		B I O L O G I C A L																									
		Vegetation																									
		Wildlife, including habitat and migration patterns																									
		Brds, including habitat and migration patterns																									
		Aquatic species, incl. habitat and migration/spawning																									
		Wildlife protected areas																									
		S O C I O - E C O N O M I C																									
		Archaeological and cultural historic sites																									
		Employment																									
		Community wellness																									
		Community infrastructure																									
		Human health																									
CONSTRUCTION																											
Drilling		-	-	M	-	-	-	-	-	M	-	M	M		M	M	M	-	-		P	-	-	-	-		
Mineral Exploration		-	-	-	-	-	-	-	-	-	-	-	M		-	-	-	-	-		P	-	-	-	-		
OPERATION																											
Drilling		-	-	M	-	-	-	-	P	M	-	M	M		M	M	M	-	-		P	-	-	-	-		
Mineral Exploration		-	-	-	-	-	-	-	-	-	-	-	M		-	M	M	-	-		P	-	-	-	-		
DECOMMISSIONING																											
Drilling		-	-	M	-	-	-	-	-	M	-	M	M		M	M	M	-	-		P	-	-	-	-		
Mineral Exploration		-	-	-	-	-	-	-	-	-	-	-	M		-	M	M	-	-		P	-	-	-	-		

(P = Positive, N = Negative and non-mitigatable, M = Negative and mitigatable, U = Unknown)

Project Map



