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PRELIMINARY SCREENING REPORT FORM

PRELIMINARY SCREENER: WLWB REFERENCE / FILE NUMBER: W2017C0005 TITLE: Mineral Exploration, Hardy Lake, NT ORGANIZATION: Margaret Lake Diamonds Inc. MEETING DATE: December 13, 2017	EIRB REFERENCE NUMBER: _
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Type of Development: (CHECK ALL THAT APPLY)

<input checked="" type="checkbox"/>	New
<input type="checkbox"/>	Amend, EIRB Ref. # _____
<input checked="" type="checkbox"/>	Requires permit, license or authorization
<input type="checkbox"/>	Does not require permit, license or authorization

Project Summary

Margaret Lake Diamonds Inc. submitted an application for a Type A Land Use Permit to the Wek'èezhìi Land and Water Board (WLWB) on October 23, 2017. The purpose of this land use application is to conduct mineral exploration including prospecting, mapping, till sampling, ground and airborne geophysics, diamond core drilling, and reverse circulation drilling, as well as for the operation and maintenance of a temporary camp (proposed camp site location is N64° 44' 03", W109° 45' 13"). The area of interest is located on and to the south of Hardy Lake, approximately 35 kilometers northeast of the Diavik Diamond Mine and 35 kilometers east of the Ekati Diamond Mine. The project is a joint venture between Margaret Lake Diamonds Inc. and Arctic Star Exploration Corp.

Scope

This Permit entitles Margaret Lake Diamonds Inc. to conduct the following land-use operation:

- a) Operation and maintenance of a camp;
- b) Activities include, prospecting, mapping, till sampling, ground and airborne geophysics, diamond core and reverse circulation drilling;
- c) Establishment of a petroleum fuel storage facilities; and
- d) Use of vehicles and equipment.

Principal Activities (related to scoping)

(CHECK ALL THAT APPLY)

<input type="checkbox"/> Construction	<input checked="" type="checkbox"/> Exploration	<input type="checkbox"/> Decommissioning
<input type="checkbox"/> Installation	<input checked="" type="checkbox"/> Industrial	<input type="checkbox"/> Abandonment
<input checked="" type="checkbox"/> Maintenance	<input type="checkbox"/> Recreation	<input checked="" type="checkbox"/> Aerial
<input type="checkbox"/> Expansion	<input type="checkbox"/> Municipal	<input type="checkbox"/> Harvesting
<input checked="" type="checkbox"/> Operation	<input type="checkbox"/> Quarry	<input checked="" type="checkbox"/> Camp
<input type="checkbox"/> Repair	<input type="checkbox"/> Linear / Corridor	<input type="checkbox"/> Scientific/
<input type="checkbox"/> Research	<input type="checkbox"/> Sewage	<input type="checkbox"/> Solid Waste
<input checked="" type="checkbox"/> Water Intake		
<input type="checkbox"/> Other:		

Principal Development Components (related to scoping)

<input type="checkbox"/> Access Road	<input checked="" type="checkbox"/> Waste Management
<input type="checkbox"/> construction	<input type="checkbox"/> disposal of hazardous waste
<input type="checkbox"/> abandonment/removal	<input checked="" type="checkbox"/> waste generation
<input type="checkbox"/> modification e.g., widening, straightening	<input checked="" type="checkbox"/> Sewage
<input checked="" type="checkbox"/> Automobile, Aircraft or Vessel Movement	<input checked="" type="checkbox"/> disposal of sewage
<input type="checkbox"/> Blasting	<input type="checkbox"/> Geoscientific Sampling

- Building
- Burning
- Burying
- Channeling
- Cut and Fill
- Cutting of Trees or Removal of Vegetation
- Dams and Impoundments
 - construction
 - abandonment/removal
 - modification
- Ditch Construction
- Drainage Alteration
- Drilling other than Geoscientific
- Ecological Surveys
- Excavation
- Explosive Storage
- Fuel Storage
- Topsoil, Overburden or Soil
 - fill
 - disposal
 - removal
 - storage

- trenching
- diamond drill
- borehole core sampling
- bulk soil sampling
 - Gravel
 - Hydrological Testing
- Site Restoration
 - fertilization
 - grubbing
 - planting/seeding
 - reforestation
 - scarify
 - spraying
 - recontouring
- Slashing and removal of vegetation
- Soil Testing
- Stream Crossing/Bridging
- Tunneling/Underground
- Other (describe):

NTS Topographic Map Sheet Numbers

(LIST ALL THAT APPLY)

NAD83, 076 C/12, 13 & 076 D/09, 16

Latitude / Longitude and UTM System:

Minimum Latitude, 64° 41' 00"

Maximum Latitude, 64° 52' 11"

Minimum Longitude, 109° 39' 35"

Maximum Longitude, 110° 01' 20"

Nearest Community and Water Body:

Land Status (*consultation information*)

- Free Hold / Private
- Commissioners/Territorial Land
- Federal Crown Land
- Municipal Land
- Tâichô Lands

Transboundary Implications

- British Columbia
- Alberta
- Saskatchewan
- Yukon
- Nunavut
- Wood Buffalo National Park
- Inuvialuit Settlement Region

Type of Transboundary Implication:

- Impact / Effect
- Development

Public Concern _____
(DESCRIBE)

PHYSICAL - CHEMICAL EFFECTS

IMPACT**1. Ground Water** water table alteration water quality changes infiltration changes other N/A**MITIGATION**

Artesian flow may be encountered when drilling. Drill holes where flowing water is encountered must be permanently plugged to prevent further outflow. See Flowing Artesian Wells, Condition #14.

There is the potential for drilling waste, drilling additives, fuel and sewage that is stored or disposed of onsite to contaminate groundwater. The risk of spills is reduced by using proper handling, storage and disposal techniques. The impact of spills can be reduced by having an appropriate Spill Contingency Plan and spill kits in place and by training personnel in spill responses. See Spill Contingency Plan, Condition #46.

IMPACT**2. Surface Water** flow or level changes water quality changes water quantity changes Drainage pattern changes temperature wetland changes / loss other: N/A**MITIGATION**

There is the potential for drilling waste, drilling additives, fuel and sewage that is stored or disposed of onsite to contaminate groundwater. The risk of spills is reduced by using proper handling, storage and disposal techniques. The impact of spills can be reduced by having an appropriate Spill Contingency Plan and spill kits in place and by training personnel in spill responses. See Spill Contingency Plan, Condition #46.

The withdrawal of water for drilling and camp use may impact local surface water quantity. Estimated water use will be less than 100 m3/day for both the camp and drilling operations.

IMPACT**3. Noise** noise in/near water other: noise increase N/A**MITIGATION**

See mitigations for impacts to wildlife and fish.

IMPACT**4. Land** geologic structure changes soil contamination buffer zone loss soil compaction & settling Destabilization / erosion permafrost regime alteration other: explosives/scarring N/A**MITIGATION**

Drilling waste, fuel and sewage spills may contaminate soils. The risk of spills is reduced by using proper handling, storage and disposal techniques. The impact of spills can be reduced by having an appropriate Spill Contingency Plan, spill response kits in place and by training personnel in spill responses. See Spill Contingency Plan, Condition #46.

Foot traffic, drilling rigs and the establishment of a camp will disturb soils as this is a spring through to fall operation (March to October). See Off-Road Vehicle Travel Condition #15, Prevention of Rutting Condition #16, Suspend Overland Travel Condition #17, and Vehicle Movement Freeze-Up Condition #18.

IMPACT**5. Non Renewable Natural Resources** resource depletion other: N/A**MITIGATION****IMPACT****6. Air/Climate/ Atmosphere** Other N/A**MITIGATION**

Exhaust from equipment and by-products of incinerating garbage will add to atmospheric loadings of pollutants. No mitigation; however, the use of efficient incinerators and prohibiting the incineration of plastics will reduce this impact. See Waste Management Condition #28.

BIOLOGICAL ENVIRONMENT**IMPACT****1. Vegetation** species composition species introduction toxin / heavy accumulation other: N/A**MITIGATION**

As this is an operation spanning from March to October, the vegetation at the drill sites and camp may be disturbed. A condition has been included for the Permittee to prevent rutting. See Prevention of Rutting Condition #16.

IMPACT**2. Wildlife & Fish** effects on rare, threatened or**MITIGATION**

Species at Risk may be encountered during the duration of this operation, proper garbage

endangered species

storage and disposal techniques (burning of approved combustibles as described in the Waste Management Plan) will prevent the attraction of wildlife to the camp. The proponent has committed (in response to ECCC comment 2) to ensuring that the terrestrial Species at Risk table (provided by ECCC in their review comments) will be posted conspicuously in camp and field crew will be informed as such. See Waste Management Condition #28.

fish population changes

Fish may be entrained in the water intakes. The proponent will work with DFO to ensure best operating guidance regarding water intakes.

waterfowl population changes

breeding disturbance

population reduction

species diversity change

health changes
(Identify)

behavioural changes

Animals may avoid the camp and drill sites due to the noise. The proponent (in response to GNWT-ENR) committed to avoiding harassment to wildlife.

Animals may be attracted to the food, garbage and other materials at the camp but proper garbage and food handling techniques (burning garbage, keeping food and non-combustible garbage in wildlife proof containers, etc.) will prevent this from occurring.

Migration corridors are important for maintaining connectivity among key parts of caribou ranges and allowing caribou to maximize forage availability. Disturbance and obstructions along critical migration routes can displace caribou from preferred habitats, limit access to key ranges (i.e. calving, post-calving, rutting), and may over time alter migratory behavior. This can negatively impact herd productivity and distribution on the landscape, thereby affecting subsistence harvesters. The proponent (in response to GNWT-ENR comment 15) committed to being in regular contact with ENR to determine when migrating caribou may be passing through the project area. In response to NSMA and DKFN, the proponent committed to further discussions to address potential wildlife management concerns.

(Identify)

habitat changes / effects

If any land clearing activities or land occupancy activities such as drill placement are to occur the Proponent has committed (in response to ECCC comment 1) to first having field crews investigate the location for migratory bird nests and eggs. If encountered avoidance will minimize/mitigate impact. Field crews will be informed of their responsibilities.

game species effects

toxins / heavy metals

forestry changes

agricultural changes

other:

N/A

INTERACTING ENVIRONMENT

IMPACT

1. **Habitat and Communities**

MITIGATION

predator-prey

Predators may be attracted to the garbage and food at the camp, which can increase pressure on prey species. This effect should be reduced by burning garbage frequently and storing food and garbage in appropriate containers. See Waste Management Condition #28, Garbage Container Condition #29, and Remove Garbage Condition #30.

wildlife habitat / ecosystem
Composition changes

reduction / removal of keystone
or endangered
species

removal of wildlife corridor or
buffer zone

other:

N/A

IMPACT

MITIGATION

2. Social and Economic

planning / zoning changes or
conflicts

increase in urban facilities or
services use

rental house

airport operations / capacity
changes

human health hazard

impair the recreational use of
water or aesthetic quality

affect water use for other
purposes

affect other land use operations

quality of life changes

public concern

other:

N/A

IMPACT

MITIGATION

3. Cultural and Heritage

effects to historic property

increased economic pressure on
historic properties

change to or loss of historic
resources

change to or loss of
archaeological resources

For the protection of historical, archaeological, and burial sites, conditions #35 and #36 for an Archaeological Overview and AIA – High Potential have been included in Land Use Permit W2017C0005.

increased pressure on archaeological sites

change to or loss of aesthetically important site

effects to aboriginal lifestyle

other:

N/A

NOTES:

PRELIMINARY SCREENER / REFERRING BODY INFORMATION
(CHECK ALL THAT APPLY)

	RA or DRA	ADVICE	PERMIT REQUIRED
Environment Canada	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Fisheries and Oceans	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Indian and Northern Affairs Canada	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Canadian Heritage (Parks Canada)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Natural Resources Canada	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Public Works and Government Services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Transport Canada	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Northern Oil and Gas Directorate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Canadian Nuclear Safety	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Industry Canada	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Canadian Transportation Agency	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
National Defense	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
GNWT – ENR	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
GNWT - MACA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
GNWT - Transportation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Prince of Wales Heritage Center	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
MVEIRB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MVLWB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Deh Cho First Nations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tlicho Government	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Behchoko Community Government	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gameti Community Government	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wekweètì Community Government	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Whati Community Government	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lutsel K'e Dene First Nation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Akaiicho Prescreening Board	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rae-Edzo Metis Local #64	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
North Slave Metis Alliance	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Northwest Territory Metis Nation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

REASONS FOR DECISION
(LIST ALL REASONS AND SUPPORTING RATIONALES FOR PRELIMINARY SCREENING DECISION)

DECISION:

The Wek'èezhii Land and Water Board (The Board) is satisfied that the preliminary screening of application W2017C0005, by Margaret Lake Diamonds Inc., for Mineral Exploration has been completed in accordance with Section 125 of the *Mackenzie Valley Resource Management Act*.

The Board is satisfied that a reasonable period of notice was given to Communities and First Nations affected by the application as required by Subsection 63(2) of the MVRMA so that they could provide comments to the Board.

The Board is also satisfied that the Tlicho Government has also been consulted in accordance with Section 63 of the MVRMA.

Having reviewed all relevant evidence on the Public Registry, including the submissions of the Applicant, the written comments received by the Board and any staff reports prepared for the Board, the Board has decided that in its opinion that:

- there is no reasonable likelihood that the proposed development might have a significant adverse impact on the environment; and
- there is no reasonable likelihood that the proposed development might be a cause of public concern.

The Board is also of the opinion that the application can proceed through the regulatory process and that any impacts of the development on the environment can be mitigated through the imposition of the terms and conditions in the attached Land Use Permit.

As a result, the Board, having due regard to the facts and circumstances, the merits of the submissions made to it, and to the purpose, scope and intent of the *Mackenzie Valley Resource Management Act* and the Mackenzie Valley Land Use Regulations has decided that this Land Use Permit be issued subject to the terms and conditions contained therein.

PRELIMINARY SCREENING DECISION	
<input checked="" type="checkbox"/>	Outside Local Government Boundaries
<input type="checkbox"/>	The development proposal might have a significant adverse impact on the environment, <i>refer it to the EIRB.</i>
<input checked="" type="checkbox"/>	<i>Proceed with regulatory process and/or implementation.</i>
<input type="checkbox"/>	The development proposal might have public concern, <i>refer it to the EIRB.</i>
<input checked="" type="checkbox"/>	<i>Proceed with regulatory process and/or implementation.</i>
<input type="checkbox"/>	Wholly within Local Government Boundaries
<input type="checkbox"/>	The development proposal is likely to have a significant adverse impact on air, water or renewable resources, <i>refer it to the EIRB.</i>
<input type="checkbox"/>	<i>Proceed with regulatory process and/or implementation.</i>
<input type="checkbox"/>	The development proposal might have public concern, <i>refer it to the EIRB.</i>
<input type="checkbox"/>	<i>Proceed with regulatory process and/or implementation.</i>

Preliminary Screening Organization



Chair, Wek'èezhii Land and Water Board