Preliminary Screening Report Form

Preliminary screener: MVLWB **Reference / File number: MV2012C0009** **TITLE: Mineral Exploration, Lac de Gras, NT** **ORGANIZATION: Harry Winston Diamond Mines Ltd.** **MEETING DATE: March 28, 2013**	**EIRB** **Reference number:**

Type of Development:
(CHECK ALL THAT APPLY)

- ☒ New
- ☐ Amend, EIRB Ref. #
- ☒ Requires permit, licence, or authorization
- ☐ Does not require permit, licence, or authorization

Project Summary

The proposed operation consists of the following:

- Mineral exploration including geochemical and geoscience surveys;
- Diamond drilling and reverse-circulation drilling programs;
- Fuel storage;
- Equipment storage;
- Use of vehicles;
- Water usage of less than 100m3/day;
- Waste management;
- Operation of a camp; and
- Reclamation activities.

This operation has not been previously permitted.

All activities will take place within 64° 01' 36" N and 110° 54' 47" W by 64° 28' 31" N and 110° 47' 31" W; this includes all claims and camp locations.

The objective of this work is to determine the source of Kimberlite Indicator Mineral anomalies. Prospecting, geochemical, and geoscience surveys will be conducted. Investigative drill testing of glacial stratigraphy will be conducted using a waterless reverse circulation drilling rig. A portable diamond drilling rig may be used to conduct follow-up testing at select targets. The diamond drilling program will consist of approximately 25 holes per year (for a maximum potential of 7 years is 175 drill holes) to an average depth of 250m. The reverse circulation program will consist of approximately 400 holes throughout the life of the project, to depths of between 50 and 100m.

Fuel will be stored in a base camp and off-site fuel caches. The maximum amount of fuel stored for this project is:

- 51,250 litres of diesel in 250x 205 litre drums;
- 2,050 litres of gasoline in 10x 205 litre drums;
- 51,250 litres of Jet B aviation fuel in 250x 205 litre drums; and,
- 10 cylinders of 45kg propane cylinders.

Equipment planned to be used for this project includes:

- 1 x Hornet waterless Reverse Circulation rig or equivalent;
- 1 x Boyles 25A diamond drill rig or equivalent;
- 1 x A-Star 350BA helicopter or equivalent;
- 1 x Pisten Bully 100 snow tractor or equivalent;
- 2 x Honda ATV's or equivalent;
- 2 x Bombardier snow machines or equivalent;
- 1 x Diesel Kubota 20 kW generator or equivalent;
- 1 x Yamaha 4400 W gas generator or equivalent;
- 1 x Yamaha water pump or equivalent; and,
- 1 x Ryobi water pressure pump or equivalent.

Waste management plans include:

- Use of a duel chamber, diesel incinerator;
- Incineration of paper, cardboard, and untreated wood;
- Daily incineration of food and food waste;
- Backhauling recyclables, hazardous wastes, machinery wastes, tires, incinerator ash, and non-burnable materials to Yellowknife for proper disposal; and,
- Use of Pacto-type toilets- waste can be incinerated on-site.

Operation of a Camp plans include:

- The maximum number of people on site will be 15;
- Water is to be sourced from a lake adjacent to the camp;
- Construction of a sump to collect greywater from the kitchen, showers, and clothes washer.

Access to the site is by air or winter road with operations occurring between March and October.

Reclamation plans include:

- Removal of equipment, camp infrastructure and fuel caches;
- Backfilling of hand-dug holes;
- Cleanup of spills, if required; and,
- Final and complete inspection of base camp by supervisor.

Scope

Mineral exploration including geochemical and geoscience surveys, diamond drilling, reverse circulation drilling, fuel storage, equipment storage, use of vehicles, operation of a camp, and associated abandonment and reclamation. All activities will take place within 64° 01' 36" N and 110° 54' 47" W by 64° 28' 31" N and 110° 47' 31" W; this includes all claims and camp locations.

Land Use Eligibility - Section 18 Mackenzie Valley Land Use Regulations

- a)ii)

Type of Disposition	Disposition Number(s)
☒ Mineral Claims	See Attachment 1 re Harry Winston Diamond Mines Ltd. Mineral Tenure Data
☐ Prospecting Permit (s)	
☐ Mineral Leases	
☐ Oil and Gas: EL/SDL/PL	
☐ Quarry Permit	
☐ Timber Permit	
☐ Other:	

Principal Activities (*related to scoping*)
(CHECK ALL THAT APPLY)

☐ Construction	☒ Exploration	☐ Decommissioning
☐ Installation	☐ Industrial	☒ Abandonment
☒ Maintenance	☐ Recreation	☒ Aerial
☐ Expansion	☐ Municipal	☐ Harvesting
☒ Operation	☐ Quarry	☒ Camp
☐ Repair	☒ Linear / Corridor	☐ Scientific
☐ Research	☒ Sewage	☒ Solid Waste
☐ Water Intake		
☐ Other:		

Principal Development Components (*related to scoping*)

- ☐ Access Road
  - ☐ construction
  - ☐ abandonment/removal
  - ☐ modification e.g., widening, straightening
- ☒ Automobile, Aircraft or Vessel Movement
- ☐ Blasting
- ☐ Building
- ☒ Burning
- ☐ Burying
- ☐ Channelling
- ☐ 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
- ☒ Waste Management
  - ☐ disposal of hazardous waste
  - ☒ waste generation
  - ☒ sewage
  - ☒ disposal of sewage
- ☒ Geoscientific Sampling
- ☐ Trenching
- ☒ Diamond drill
- ☒ Borehole core sampling
- ☐ Bulk soil sampling
  - ☐ gravel
  - ☐ hydrological Testing
- ☒ Site Restoration
  - ☒ fertilization
  - ☐ grubbing
  - ☒ planting/seeding
  - ☐ reforestation
  - ☐ scarify
  - ☐ spraying
  - ☒ re-contouring
- ☐ Slashing and removal of vegetation
- ☐ Soil Testing
- ☒ Stream Crossing/Bridging
- ☐ Tunnelling/Underground
- ☐ Other:

NTS topographic map sheet numbers:
76D/75M

Latitude / longitude and UTM system:
64□ ° 01' 36" N and 110° 54' 47" W by 64° 28' 31" N and 110° 47' 31" W, NAD 83

Nearest community and water body:
- Nearest community: Wekweti, NT
- Nearest Water Bodies: Lac de Gras, Mackay Lake, and Courageous Lake, NT

Land Status (*consultation information*)

☐ Free Hold/Private ☐ Commissioners Land ☒ Federal Crown Land ☐ Municipal Land

Transboundary/Transregional Implications

☐ British Columbia	☐ Alberta	☐ Saskatchewan	☐ Yukon
☐ Nunavut	☐ Wood Buffalo National Park	☐ Inuvialuit Settlement Region	
☒ Wek'èezhìi	☐ Gwich'in	☐ Sahtu	

Type of transboundary implication: ☒ Impact / Effect ☒ Development

☐ Public concern:

Physical - Chemical Effects

Impact **1) Ground Water**	*Mitigation*	*Location of condition*
☐ water table alteration		
☒ water quality changes	There is the potential for fuel and chemicals stored at site to contaminate groundwater. The risk of spills is reduced by using proper handling, storage, and disposal techniques. The impacts of spills can be reduced by having an appropriate, up-to-date Spill Contingency Plan and spill equipment in place and by training personnel in spill response. The Spill Contingency Plan and waste management practices are adequately described in the Application and are required under draft LUP conditions. Sealing drill holes that encounter artesian aquifers should mitigate impacts to aquifer water quality. This concern can be mitigated by a draft LUP condition.	26(1)(f), 26(1)(g), 26(1)(m)
☐ infiltration changes		
☐ other:		
☐ N/A		

Impact **2) Surface Water**	*Mitigation*	*Location of condition*
☐ flow or level changes		
☒ water quality changes	There is the potential for fuel, chemicals, and drilling wastes to contaminate surface water. The risk of spills is reduced by using proper handling, storage, and disposal techniques. The impacts of spills can be reduced by having an appropriate, up-to-date Spill Contingency Plan and spill equipment in place and by training personnel in spill response. The Spill Contingency Plan and waste management practices are adequately described in the Application and are required under draft LUP conditions. Both depositing drill cuttings in a natural depression and locating sumps at least 100 meters from the high water mark of any water course will limit potential for contamination. These concerns can be mitigated by draft LUP conditions. A condition has been included in the draft LUP regarding not erecting camps or storing large amount of materials on the ice of watercourses; this should reduce the potential for water contamination.	26(1)(d), 26(1)(e), 26(1)(m), 26(1)(g), 26(1)(f)
☐ water quantity changes		

☒ drainage pattern changes	The use of the Pisten Bully to pull the drill between drill holes may require passing over water courses. As the Pisten Bully will only be used during frozen ground conditions and where there is adequate snow cover, snow fills should be created if there is inadequate protection of the water course and/or its banks. Snow fills should be removed prior to spring freshet so as not to potentially alter surface drainage patterns. Alternatives to snowfills include locating another route around the water course or using the helicopter to move the drill rig (this latter option will be used between drill targets when the ground is not frozen and rutting/gouging is a risk). This concern can be mitigated through draft LUP conditions.	26(1)(f)
☐ temperature		
☐ wetland changes/loss		
☐ other:		
☐ N/A		

Impact **3) Noise**	***Mitigation***	***Location of condition***
☒ noise in/near water	No mitigation as proposed for the noise generated from the camp facilities, by the drilling operation or helicopter use, but the project will be discontinuous, short term, and limited to small individual areas.	n/a
☒ noise increase	No mitigation is proposed for the noise generated from the camp facilities, by the drilling operations or helicopter use, but the project will be discontinuous, short term, and limited to small individual areas.	n/a
☐ other:		
☐ N/A		

Impact **4) Land**	***Mitigation***	***Location of condition***
☐ geologic structure changes		
☒ soil contamination	There is the potential for fuel and chemicals stored at site to contaminate the land. The risk of spills is reduced by using proper handling, storage, and disposal techniques. The impacts of spills can be reduced by having an appropriate, up-to-date Spill Contingency Plan and spill equipment in place and by training personnel in spill response. The Spill Contingency Plan and waste management practices are adequately described in the Application and are required under draft LUP conditions. Drip pans should also be used under any equipment that is stored (i.e. for days, or in between seasons).	26(1)(m), 26(1)(g), 26(1)(i)
☐ buffer zone loss		
☒ soil compaction and settling	Foot and vehicle traffic and drilling during the summer has the potential to compact soils. Any clearing of will likely be limited to summer drill sites. The Application described that disturbed sites may be re-vegetated and the disturbed land be returned as close to original condition as possible.	26(1)(o)
☒ destabilization/erosion	The Applicant should ensure the ground is capable to support vehicle movements so that the land is not disturbed. Conditions regarding rutting and gouging have been included in the draft LUP to mitigate this risk. Backfilling and restoring sumps following their use will limit potential for localized erosion; there is a condition to mitigate this concern in the draft LUP.	26(1)(f), 26(1)(g)
☒ permafrost regime alteration	There should be adequate insulation of the ground surface beneath all camp structures to prevent vegetation from being removed, the melting of the permafrost, and the ground settling/eroding. This is a condition in the draft LUP to reduce this risk.	26(1)(f)
☐ explosives/scarring		
☐ other:		
☐ N/A		

Impact **5) Non-renewable natural resources**	*Mitigation*	*Location of condition*
☐ resource depletion		
☐ other:		
☒ N/A		

Impact **6) Air/climate/atmosphere**	*Mitigation*	*Location of condition*
☒ other: green house gasses	According to the Application, the Applicant will use a forced-air, fuel-fired incinerator to burn all combustible garbage except plastics. The exhaust from the incinerator and from equipment used will add to atmospheric loadings of pollutants. No mitigation is proposed for this. There is a waste management plan in the application; it contains provisions indicating that the Applicant plans to remove non-incineratable wastes off-site to an approved disposal facility. Conditions in the draft LUP have been proposed to reduce this impact.	26(1)(i)
☐ N/A		

BIOLOGICAL ENVIRONMENT

Impact **1) Vegetation**	*Mitigation*	*Location of condition*
☐ species composition		
☐ species introduction		
☐ toxin/heavy accumulation		
☒ other:	During the winter portion of the land use the Applicant should ensure there is adequate snow pack to support vehicle movements so that vegetation is not disturbed. Conditions regarding rutting and gouging have been included in the draft land use permit to mitigate this risk. A condition regarding locating the camp on durable land or another previously cleared area has also been included in the draft LUP to limit the amount of vegetation disturbed. For individual drill sites, no mitigation has been included because the disturbances are recognized to be limited to the local footprint of the drill.	26(1)(a), 26(1)(f)
☐ N/A		

Impact **2) Wildlife and Fish**	*Mitigation*	*Location of condition*
☒ effects on rare, threatened or endangered species	If any species at risk are encountered, the Applicant has indicated they will reduce activity in accordance with their Wildlife, Archaeological, and Environmental Awareness Plan provided in the Application, to minimize impacts to these species. The scope of the draft LUP reminds the Applicant of the requirement to abide by all applicable legislation (including regulations made under such legislation.) The following condition has been included in the draft LUP: The Permittee is to take all reasonable measures to prevent damage to wildlife and fish habitat.	26(1)(h)
☒ fish population changes	In accordance with the MVLUR section 26, it is within the MVLWB's authority to include conditions for the protection of fish habitat within land use permits. The draft LUP includes conditions to minimize habitat damage, manage drill waste, minimize erosion, prevent obstruction of natural drainage, prevent and respond to spills, etc.	
☐ waterfowl population changes		
☒ breeding disturbance	The Applicant is to take all reasonable measures to prevent damage to wildlife and fish habitat.	
☐ population reduction		

☐ species diversity change		
☐ health changes		
☒ behavioural changes	The Applicant shall not commence any drilling or movement of equipment within 500 meters of one or more caribou. Wildlife may be attracted to the food, garbage, and other materials at the camp. Food handling and garbage disposal methods will be used that do not attract wildlife. Wildlife may avoid the camp and drill sites due to noise. There is not mitigation but this may be beneficial as the habituation of animals should be avoided.	26(1)(q), 26(1)(i)
☐ habitat changes / effects		
☒ game species effects	The Applicant has included a Wildlife, Archaeological, and Environmental Awareness Plan with the Application. To mitigate impacts of this operation on wildlife, a condition has been placed in the draft LUP which states: The Applicant shall not commence any drilling or movement of equipment within 500 meters of one or more caribou.	26(1)(q)
☐ toxins/ heavy metals		
☐ forestry changes		
☐ agricultural changes		
☒ other:	To mitigate overall impacts of this operation on fish, a condition has been placed in the draft LUP which states: The Permittee shall construct and maintain the water intake(s) using DFO's Freshwater Intake End-of-Pipe Fish Screen Guidelines. .	26(1)(q)
☐ N/A		

Interacting Environment

Impact **1) Habitat and Communities**	***Mitigation***	***Location of condition***
☒ predator-prey	Predators may be attracted to wastes produced at the camp or drill sites, which may increase pressure on prey species. This effect can be reduced by proper storage and handling of garbage, including daily burning, as described in the Applicant's Waste Management Plan.	
☒ wildlife habitat/ecosystem composition changes	The Applicant is to take all reasonable measures to prevent damage to wildlife and fish habitat.	
☐ reduction/removal of keystone or endangered species		
☐ removal of wildlife corridor or buffer zone		
☐ other:		
☒ N/A		

Impact **2) Social and Economic**	***Mitigation***	***Location of condition***
☐ 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	Cabins used for traditional activities, including trapping, hunting or fishing or other privately owned or leased structures should be avoided by the Applicant. The draft LUP contains a condition regarding this avoidance, and gives a 300m buffer zone.	26(1)(a)
☒ public concern	The Prince of Wales Northern Heritage Centre recommended that the Applicant must conduct an Archaeological Impact Assessment prior to disturbing or drilling at any site. This was recommended because the project area is suspected to contain a high density of unrecorded archaeological sites; impact assessments should minimize the risk of project impacts on archaeological sites. The Applicant also committed to engaging the services of a qualified archaeologist to conduct an Archaeological Overview for the project area to identify the potential for archaeological sites, and to hiring a Heritage, Wildlife & Environmental monitor to contribute Traditional Knowledge to the program. The draft LUP contains a condition regarding these assessments. Conditions regarding the liability for the cleanup, remediation, and restoration of the activities associated with this project have been included in the draft LUP; the Applicant is responsible for all of these costs.	26(1)(j), 26(1)(l), 26(1)(o), 26(1)(q)
☐ other:		
☐ N/A		

Impact	***Mitigation***	***Location of condition***
3) Cultural and Heritage		
☐ effects to historic property		
☐ increased economic pressure on historic properties		
☒ change to or loss of historic resources	There is the potential to impact burial sites or other sites with archaeological and/or historical value. Conditions regarding avoidance of such sites have been added to the draft LUP to mitigate this risk. The Prince of Wales Northern Heritage Centre recommended that the Applicant must conduct an Archaeological Impact Assessment prior to disturbing or drilling at any site. This was recommended because the project area is suspected to contain a high density of unrecorded archaeological sites; impact assessments should minimize the risk of project impacts on archaeological sites. The Applicant also committed to engaging the services of a qualified archaeologist to conduct an Archaeological Overview for the project area to identify the potential for archaeological sites, and to hiring a Heritage, Wildlife & Environmental monitor to contribute Traditional Knowledge to the program. The draft LUP contains a condition regarding these assessments.	26(1)(j)
☒ change to or loss of archaeological resources	There is the potential to impact burial sites or other sites with archaeological and/or historical value. Conditions regarding avoidance of such sites have been added to the draft LUP to mitigate this risk. The Prince of Wales Northern Heritage Centre recommended that the Applicant must conduct an Archaeological Impact Assessment prior to disturbing or drilling at any site. This was recommended because the project area is suspected to contain a high density of unrecorded archaeological sites; impact assessments should minimize the risk of project impacts on archaeological sites. The Applicant also committed to engaging the services of a qualified archaeologist to conduct an Archaeological Overview for the project area to identify the potential for archaeological sites, and to hiring a Heritage, Wildlife & Environmental monitor to contribute Traditional Knowledge to the program. The draft LUP contains a condition regarding these assessments.	26(1)(j)

☐ increased pressure on archaeological sites		
☐ change to or loss of aesthetically important sites		
☒ effects to aboriginal lifestyle	Cabins used for traditional activities, including trapping, hunting or fishing should be avoided by the Applicant. The draft LUP contains a condition regarding avoidance of cabins, and gives a 300m buffer zone. Furthermore, to mitigate impacts of this operation on wildlife, a condition has been placed in the draft LUP which states: The Applicant shall not commence any drilling or movement of equipment within 500 meters of one or more caribou.	26(1)(a), 26(1)(q)
☐ other:		
☐ N/A		

Akaitcho Screening Board
Barrenground Caribou Outfitters
Chamber of Mines
City of Yellowknife
Dene Nation
Deninoo Community Council
Deninu K'ue First Nation
DFO
Enterprise Settlement Corporation
Environment Canada
Fort Resolution Métis Council
Hamlet of Fort Resolution
Fort Smith Métis Council
Fort Resolution Métis Council
True North Safaris
GNWT - Department of Transportation
GNWT - Environment and Natural Resources
GNWT - Health
GNWT - ITI
GNWT - MACA
GNWT - Prince of Wales Northern Heritage Centre
Hay River Métis Government Council
Hay River Metis Council
AANDC – Intergovernmental Affairs
AANDC – Mineral & Petroleum Resources Directorate
AANDC – Aboriginal and Territorial Relations
AANDC – Environment and Conservation
AANDC – Environment and Conservation
AANDC – South Mackenzie District Office
AANDC- RSA Section
Katlodeeche First Nation
Lutselk'e Dene First Nation
Mackenzie Valley Environmental Impact Review Board
North Slave Métis Alliance
Northern Projects Management Office
Northwest Territory Métis Nation
Salt River First Nations
Smith Landing First Nation
Tlicho Government - Kwe Beh Working Group
Tlicho Government - Lands Protection Department
Town of Fort Smith
Town of Hay River
WSCC – Employer Services
West Point First Nation
Yellowknives Dene First Nation (Dettah)
Yellowknives Dene First Nation (Ndilo)
Adventure Northwest
Akaitcho Territory Government
Community Government of Behchoko
Community Government of Gameti
Community Government of Wekweeti
Community Government of Whati
Kitikmeot Inuit Association
Lutsel K'e Dene First Nation
Tlicho Government
Tlicho Lands Protection Department
Wek'eezhii Renewable Resources Board
WLWB

Reasons For Decision
(List all reasons and supporting rationales for preliminary screening decision)

DECISION

The Mackenzie Valley Land and Water Board (the Board) is satisfied that the preliminary screening of Application MV2012C0009, Harry Winston Diamond Mines Ltd., Mineral Exploration, Lac de Gras Project, NT has been completed in accordance with section 125 of the *Mackenzie Valley Resource Management Act* (MVRMA).

The Board is satisfied that communities and First Nations affected by the Application have been notified and provided adequate time to provide comment on the Application as required by land claim and self-government agreements, the MVRMA, policy directions relating to Interim Measures Agreements, and any other applicable legislation and agreements.

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:

- The proposed development will not have a significant adverse impact on the environment; and
- The proposed development is not 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 MVRMA 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
☒	**Outside Local Government Boundaries**
☐	The development proposal might have a significant adverse impact on the environment, *refer it to the EIRB.*
☒	*Proceed with regulatory process and/or implementation.*
☐	The development proposal might have public concern, *refer it to the EIRB.*
☒	*Proceed with regulatory process and/or implementation.*
☐	**Wholly Within Local Government Boundaries**
☐	The development proposal is likely to have a significant adverse impact on air, water or renewable resources, *refer it to the EIRB.*
☐	*Proceed with regulatory process and/or implementation.*
☐	The development proposal might have public concern, *refer it to the EIRB.*
☐	*Proceed with regulatory process and/or implementation.*

Preliminary Screening Organization

Mackenzie Valley Land and Water Board

March 7, 2013

Signatures