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NUNAVUT WATER BOARD  
NUNAVUT IMALIRIYIN

## WATER LICENCE APPLICATION FORM

Application for: (check one)

☒ **New**    ☐ **Amendment**    ☐ **Renewal**    ☐ **Assignment**

### LICENCE NO:

(for NWB use only)

#### 1. NAME AND MAILING ADDRESS OF APPLICANT/LICENSEE

**Diamonds North Resources Ltd**  
**510-510 Burrard St.**  
**Vancouver, B.C.**  
**V6C 3A8**

Phone: 604 689 2010

Fax: 604 484 7143

e-mail: ggill@diamondsnorthresources.com

#### 2. ADDRESS OF CORPORATE OFFICE IN CANADA (if applicable)

Same as #1.

Phone: \_\_\_\_\_

Fax: \_\_\_\_\_

e-mail: \_\_\_\_\_

#### 3. LOCATION OF UNDERTAKING (describe and attach a topographical map, indicating the main components of the Undertaking)

**South Coppermine River Artea of Nunavut**  
**NTS Mapsheets 86J and K**

Latitude: 66 degrees 32 min Longitude: 115 degrees 23 min 30 sec NTS Map No. 86J and K  
Scale 1:250,000

#### 4. DESCRIPTION OF UNDERTAKING (attach plans and drawings)

In 2006 Diamonds North conducted regional airborne magnetic surveying and till sampling over portions of the Hepburn property. Results from these surveys indicate that there are several anomalous magnetic features within the property boundary. Diamonds North plans to continue exploration over the next 5 years with follow up work including detailed airborne geophysics, ground magnetics, prospecting and drilling of the most favorable targets to determine if the magnetic features are sourced by kimberlite and to determine their diamond content. As some of the targets picked occur within lakes, some of the geophysical surveying will be conducted prior to breakup while land based targets will be surveyed during the spring and summer months. Diamond drilling of ice based targets may occur if the former geophysical surveying suggests that the target(s) remain valid. Land based targets will surveyed in detail using either a helicopter borne magnetometer or ground based crews. Drilling of these anomalies may occur after break up and into the summer/fall months. The drill to be used during this stage of the program will be a Hagby-Gopher hydraulic drill (or equivalent) capable of coring 56 mm (2.205") diameter core or a Hornet reverse circulation drill. The drill will test approximately 10-15 targets in each of the years covered by the applied for permit. Coring will continue to a depth of 100-150 metres on each hole to determine if the geophysical anomaly is indeed kimberlite.

The drill will be mobilized to each site via helicopter and crews will be moved daily between camp (located in the Northwest Territories) and the drill. It is estimated that only one day will be required to test each target with a Reverse Circulation (no water required) or 2-3 days with a diamond drill.

Surface disturbance from the drilling phase of the program will be very localized and minimal. Each drill site will cover approximately 10 m<sup>2</sup> and drill pads will be returned as near as possible to their original state. Pad construction will involve the emplacement of two parallel wooden timbers (6" x 6" x 10-12') onto the ground on which the frame of the drill and shack will be placed. The only ground clearing needed for this type of drill set-up will involve the removal of any larger, protruding boulders by hand and/or minor brush clearing. Once drilling at a particular site is completed the timbers will be removed for use at the next drill site. All garbage and fuel drums will be backhauled to the camp and then to the approved landfill site in Yellowknife.

When drilling land based targets the drill will be positioned no closer than 30 metres of the high water mark of any waterbody and all drill cuttings, water return and sludge will be disposed of in a properly constructed sump or natural depression. Prior to and upon completion of any drill testing of any on-ice target a water sample will be collected and submitted to an approved laboratory for analysis. Drilling additives or mud shall not be used with holes drilled through ice unless they are re-circulated or contained and all drill cuttings will be removed from the ice surface.

Fuel to be used for this operation will be cached in quantities of up to 40-50 of Jet-A and diesel at a cache site (as yet undetermined) centrally located near the potential drill sites. Only 2-3 drums of diesel and 3-4 100 pound bottles of propane will be located at the drill (Refer to Fuel Spill Contingency Plan). Method of transfer of fuel will be gravity feed or by manual pump. Helicopters will use conventional DC electric barrel pump.

It should be noted that surface disturbance from these operations will be very localized and minimal. Each drill site may cover 10 square metres. All pits or sumps will be backfilled and leveled and drill pads returned, as near as possible to their original state.

Drill equipment and fuel will be mobilized to a centrally located lake or esker and subsequently moved from site to site via helicopter. Field crews will be mobilized to each site via helicopter on a daily basis from the campsite located on the north side of Hepburn Lake in the Northwest Territories.

The campsite currently being used for the Hepburn project is located in the Northwest Territories at 66.355°N, 115.348W° and is fully permitted under Diamonds North's current Land Use Permit W2006C0005 for the Northwest Territories. No campsite will be erected within Nunavut for the purpose of the work outlined above.

**5. TYPE OF UNDERTAKING** (A supplementary questionnaire must be submitted with the application for undertakings listed in "**bold**")

<input type="checkbox"/> Industrial	<input type="checkbox"/> <b>Remote/Tourism Camps</b>
<input type="checkbox"/> <b>Mine Development</b>	<input type="checkbox"/> <b>Municipal</b>
<input type="checkbox"/> <b>Advanced Exploration</b>	<input type="checkbox"/> Power
<input checked="" type="checkbox"/> <b>Exploratory Drilling</b>	<input type="checkbox"/> Other (describe): _____

**6. WATER USE**

<input checked="" type="checkbox"/> To obtain water	<input type="checkbox"/> To divert a watercourse
<input type="checkbox"/> To modify the bed or bank of a watercourse	<input type="checkbox"/> Flood control
<input type="checkbox"/> To alter the flow of , or store, water	<input type="checkbox"/> Other (describe): _____
<input type="checkbox"/> To cross a watercourse	

**7. QUANTITY OF WATER INVOLVED** (litres per second, litres per day or cubic metres per year, including both quantity to be used and quality to be returned to source)

**Camp Use: No water as camp is located in the NWT.**

**Diamond Drilling:** Estimated consumption is 40 litres of water per minute while the diamond drill is operating. (No water will be required if a reverse circulation drill is used.) This would equate to approximately 60 cubic meters per 24 hour shift **IF** the drill was operating all day. Under normal operations that involve 8 hours of drilling per shift, 38,400 litres (38.4 cubic metres) – 60,000 litres (60.0 cubic metres) would be consumed daily. All drill water will be collected in hand dug sumps or natural depressions located 30 or more meters from the ordinary high water mark of any water body. No land based drilling will be conducted within 30 meters of the high water mark of any water body.

**8. WASTE** (for each type of waste describe: composition, quantity, methods of treatment and disposal, etc.)

☐ Sewage ☒ Waste oil  
☐ Solid Waste ☐ Greywater  
☒ Hazardous ☒ Sludges  
☒ Bulky Items/Scrap Metal ☒ Other (describe): Garbage

**Garbage/Waste Oil:** Burnable solid waste will backhauled to the camp in the NWT and be burned in vented, base-fuel feed barrel; non-burnable material, hazardous waste, waste oil and consumed drill equipment will be backhauled to the camp site in the NWT and then to an approved disposal site arranged by the expediting company hired to service camp.

**Sludges:** All sludge from drilling will be contained in a hand dug sump or natural depression located no less than 30 meters from the ordinary high water mark of any water body, allowed to settle and prevented from entering any water body.

**9. PERSONS OR PROPERTIES AFFECTED BY THIS UNDERTAKING** (give name, mailing address and location; attach if necessary)

None. Work area is remote.

**Land Use Permit**

DIAND ☐ Yes ☒ No If no, date expected Application submitted November 8, 2006  
Regional Inuit Association ☐ Yes ☒ No If no, date expected N/A  
Commissioner ☐ Yes ☐ No If no, date expected N/A

**10. PREDICTED ENVIRONMENTAL IMPACTS OF UNDERTAKING AND PROPOSED MITIGATION MEASURES** (direct, indirect, cumulative impacts, etc.)

Cumulative environmental effects result from the combination of environmental effects from a number of different developments/activities. As the proposed program represents the only exploration activity in the area no cumulative effects are expected.

Potential localized impacts include minor to negligible effects on caribou, harvesting activities, waterfowl and the environment.

Diamonds North Resources Ltd. is fully committed to implementing its proposed diamond exploration project on the Hepburn property in an environmentally responsible manner to protect and sustain the environmental and cultural resources of the project area. The exploration program described above will have no to very low impact to the environment and/or wildlife. Water use-age will be minimal (38 - 60 cubic metres/day) and restricted to drill use only. Drill operations will be conducted in an environmentally friendly manner and fuel caches will be checked daily for potential leakage. Helicopter use-age for purposes of supporting drilling operations is and has been the standard practice of many exploration companies now and in the past with no impact to wildlife or the environment. Pilots will be instructed to avoid wildlife during operations. Congregations of wildlife are not expected in the area but will be avoided should any be encountered.

The total estimated surface disturbance for all of the drill sites (approximately 10 - 15 for each year of the permit) is estimated to be a maximum of 0.01 – 0.15 ha/year. The small quantities of benign drilling wastes (0.14 m<sup>3</sup>/ 100 m drilled) generated at each drill site will be deposited in natural depressions or sumps and will affect small areas of sparsely vegetated tundra within the footprint of the disturbed area at each drill site. It is Diamonds North's policy to perform progressive restoration so that each drill site is restored as near as possible to its original state before moving to the next setup. This includes the removal of all garbage, fuel drums and equipment. All sumps will also be backfilled.

In total, the residual environmental effects of Diamonds North's entire drilling program on the Hepburn property are expected to be negligible. No other mineral exploration activities or other industrial development projects are currently known or planned for the area, which further reduces the potential for cumulative effects.

There will be no deleterious effects to water quality due to the protection measures outlined by DIAND which includes restrictions as to how close to waterbodies the drill, sumps and fuel caches are allowed.

It is also recognized that portions of these areas may contain significant archaeological, cultural and historic sites. Any archaeological sites encountered will not be disturbed. If a site is found during operations, work in that vicinity will stop and the site reported and safeguarded and reported to the Prince of Wales Northern Heritage Centre. As the project area is located approximately 160 kms south of Kugluktuk no negative socio-economic impacts will occur. The Company will also encourage all contractors operating on the project to hire locally.

All garbage and empty drums will be backhauled to the campsite (in the NWT) and eventually to the landfill site in Yellowknife through our contract expeditor. During operations progressive reclamation will take place such as cleaning each drill site prior to work beginning at the next site. Before and after pictures of each site will be taken and made available for the public record. All sumps will be backfilled.

Mitigation measures to be undertaken to reduce, control or eliminate potential environmental effects include;

- 1) Adhering to the Caribou Protection Measures; specifically not working in any core calving areas.
- 2) Avoiding low level flights over areas known for waterfowl nesting.
- 3) Adhering to the Recommended Environmentally Acceptable Minimum Flight Altitudes.
- 4) Equipping all water intake hoses with an appropriate screen mesh size to ensure no entrapment of fish.
- 6) Provide necessary controls to prevent sedimentation and/or erosion of water bodies or adjacent land.
- 7) Using only lake water for drilling operations.
- 8) All drill waste will be disposed of and contained in natural depressions or hand dug sumps located at least 30 meters from any high water mark such that the waste does not enter any water bodies. As virtually 95% of the rock cored is brought to the surface and transported to camp (and then to the laboratory), the volume of drill waste created for a 100 meter long hole is only 0.14 cubic meters.
- 9) All trenches/pits/sumps will be backfilled and contoured when operations are complete.
- 10) Only environmentally acceptable and approved muds and additives (as per DIAND regulations) are to be used during drilling operations.
- 11) Drill holes to be plugged and permanently sealed if artesian flow is encountered.
- 12) All fuel caches will be located a minimum of 30 meters from the normal high water mark. Spill kits will be present at all fuel caches and drilling operations.
- 13) Diamonds North possesses and maintains a current Emergency Response Plan including a Fuel Spill Contingency Plan) that all employees and contractors are required to adhere to. These policies also include safety, emergency, fire and med-vac procedures.
- 14) Diamonds North also maintains a progressive reclamation policy which effectively restores, as near as possible, any disturbance at any site to its original state before operations begin at the next site.

NIRB Screening   X   Yes        No If no, date expected   Upon acceptance of Water Licence Application

## **11. INUIT WATER RIGHTS**

Will the project or activity substantially affect the quality, quantity, or flow of water flowing through Inuit Owned Lands and the rights of Inuit under Article 20 of the Nunavut Land Claims Agreement?

No. All work to be conducted in a professional and environmentally sound manner to ensure no impact to local water-bodies occurs and that water quality is not compromised. The property covers no Inuit Owned Lands.

### **11. (Continued)**

If yes, has the applicant entered into an agreement with the Designated Inuit organization to pay compensation for any loss or damage that may be caused by the alteration? If no compensation agreement has been made, how will compensation be determined?

N.A.

## **12. CONTRACTORS AND SUB-CONTRACTORS (name, address and functions)**

Although bids have not been tendered for the work at this time it is anticipated that most of the contractors utilized in 2007 will be contracted for the upcoming program. These may include the following:

### **Charter Aircraft:**

- 1) Air Tindi / Arctic Sunwest – Yellowknife, NWT
- 2) Great Slave Helicopters – /Yellowknife, NWT
- 3) First Air – Yellowknife, NWT
- 4) Canadian North – Yellowknife, NWT

### **Expediting:**

- 1) Discovery Mining Services – Yellowknife, NT

### **Suppliers:**

- 1) Weaver and Devore, NWT
- 2) West Coast Drilling Supplies Ltd. – Vancouver, B.C.

### **Drilling:**

- 1) Peak Drilling – Yellowknife, NWT
- 2) Major Midwest – Yellowknife, NWT
- 3) Northspan Explorations – Kelowna, B.C.

### **Airborne:**

- 1) Fugro – Toronto, Ontario
- 2) Terraquest – Markham, Ontario

Geological/Geophysical work to be conducted by in-house personnel.

## **13. STUDIES UNDERTAKEN TO DATE (list and attach copies of studies, reports, research, etc.)**

N.A.

**14. THE FOLLOWING DOCUMENTS MUST BE INCLUDED WITH THE APPLICATION FOR THE REGULATORY PROCESS TO BEGIN**

Supplementary Questionnaire (where applicable: see section 5) **X** Yes \_\_\_ No \_\_\_ If no, date expected

Inuktitut/English Summary of Project **X** Yes \_\_\_ No \_\_\_ If no, date expected

Application fee \$30.00 (c/o of Receiver General for Canada) **X** Yes \_\_\_ No \_\_\_ If no, date expected

**15. PROPOSED TIME SCHEDULE**

\_\_\_ Annual (or) **X** Multi Year (Seasonal Activity)

Start Date: January 1st, 2007 Completion Date: December 31<sup>st</sup>, 2012

Graham Gill

V. P. Operations

November 30, 2006

Name (Print)

Title (Print)

Signature

Date

For Nunavut Water Board use only

APPLICATION FEE

Amount: \$ \_\_\_\_\_

Receipt No.:

WATER USE DEPOSIT

Amount: \$ \_\_\_\_\_

Receipt No.: