**APPENDIX TO NUNAVUT WATER BOARD**

**WATER LICENCE APPLICATION – PRINCE OF WALES PROJECT, CHARTRAND LAKE PROJECT, DEVON ISLAND PROJECT**

## 3. Main Components of Undertaking

De Beers Canada Exploration Inc. intends to set up a 2 temporary, portable fly camps for up to 10 located at:

Prince of Wales:
Fly camp-A: 73º 19.0' N and 98º 54.5' W
Fly camp-B: 72º 20.5' N and 98º 01.5' W

Chartrand Lake
Fly camp-A: 69º42.5' N and 94º13.0'W
Fly camp-B: 69º46.5' N and 95º2.5' W
Fly camp-C: 95º16'11"W and 70º45'50"N;
Fly Camp-D: 92º54'15"W and 70º55'6"N;
Fly Camp-E: 93º18'45"W and 70º29'6"N

Devon Island
Fly camp-A: 75º 06.0' N and 89º 01.0' W
Fly camp-B 76º 18.0' N and 92º 18.0' W

The duration of the sampling program will be from approximately July 1 to July, 31 2006. Soil sampling and geological mapping will be undertaken on Crown and IOL lands adjacent to these locations using a helicopter. The purpose of work in the area is exploration for kimberlites which are the host rock for diamonds. De Beers has 175 Prospecting Permits on Prince of Wales Island, 22 on Boothia Peninsula (Chartrand Lake Project) and 324 on Devon Island, the Grinnell Peninsula, and Cornwallis Island where it would like to conduct kimberlite exploration.

With respect to Inuit Owned Lands (IOL's) for the Prince of Wales project, administered by the community exploration program will affect the following RB-29; RB-28; RB-27; RB-26; SB-58; SB-57; RB-25; SB-56; SB-55.

For the Chartrand Lake project it will affect the following: SB-19, SB-20, SB-21, SB-22, SB-23, SB-24 and SB-25. For the Devon Island project it will affect the following: GF7, GF8, GF9, GF10, GF64, GF65, GF66; RB05, RB06, RB12, RB15, RB16, RB18. It is possible that sampling will be undertaken on these IOL's and applications for access to this land has been submitted to the KIA and QIA, as applicable.

Inuit Owned Lands on the eastern portion of Devon Island will not be affected as sampling activity will not occur on the following IOL's: AB10, AB11, AB12, AB13, AB14; GF01, GF19, GF20, PI4.

The camp will be serviced by a Twin Otter equipped by a wheel package.

For the Prince of Wales project, the 2006 sampling program will consist of two helicopter-supported sample crews. Sampling will be done by foot traverse from site to

site collecting samples. Samples will be approximately 10 litres in volume and will be collected every 25 square kilometres.

For the Chartrand Lake project, the sampling program in 2006 will consist of stream sampling with a 3 man sample team flown by helicopter and by means of foot traverse from site to site collecting samples. A stream sample will consist of about 10 litres of sand and gravel collected from a stream every 10 square kilometres.

For the Devon Island project, the 2006 sampling program will consist of two helicopter-supported sample crews. Sampling will be done by foot traverse from site to site collecting samples. Samples will be approximately 10 litres in volume and will be collect every 5-10 square kilometres.

At each site, De Beers will ensure that no litter is left behind, and that the sample hole is filled in once again before leaving the site. The samples will be flown back to the campsite and then flown by aircraft to Resolute or Taloyaok where they will be shipped south on the sealift for analysis in De Beers' laboratory in Sudbury, Ontario.

The camp will consist of arctic pup-style tents for sleeping and several Weatherhavens to serve as kitchen and office tents. Water for the camp will be drawn from the water body using a submersible pump.

Grey water from the kitchen and shower facilities will be disposed of in gravel-lined sumps at the camp. Human waste will be disposed of in a pit privy. A portable diesel powered generator will supply power to the camp. All garbage from the camp will be flown from the work area and disposed of in the municipal landfill at Resolute for the Prince of Wales and Devon Island projects and Taloyoak for the Chartrand Lake project.

At the end of the field season the camp will be removed including all fuel caches.

**3a. Project Summary**

De Beers Canada Inc. (DBC) is a Canadian diamond exploration company which has explored for kimberlites (the host rock for diamonds) in the NWT and Nunavut since the early 1990's.

In 2005, DBCE was awarded a number of prospecting permits on the Prince of Wales Island and Devon Island. The proposed 2006 programs will be first reconnaissance programs with sampling in the area covered by the prospecting permits. Much of the work this year will be conducted in the interior of Prince of Wales Island, away from the coast, on the western portion of Devon Island, on the northwestern tip of the Grinnell Peninsula and on Cornwallis Island.

In 2004, DBCE was awarded a number of prospecting permits on the Boothia Peninsula. The proposed 2006 program will include sampling in the area covered by the prospecting permits, concentrating in the southern and northern areas. Much of the work this year will be conducted in the interior of Boothia Peninsula, away from the coast.

The proposed work programs will begin in early July 2006 and will last until the end July. The camp will be serviced by a twin otter aircraft which will likely be based in Resolute

for the Prince of Wales and Devon Island projects and Taloyoak for the Chartrand Lake project.
De Beers intends to employ 5 local Inuit sample assistants for the combined projects.

Geological sampling will be undertaken from the camp on Prince of Wales Island and Devon Island during July and will involve 2 sampling teams supported by 2 helicopters. Each crew will consist of 2-3 De Beers Canada Geologists and 1 Inuit assistant. The teams will move from site to site by helicopter and by means of foot traverse to collect stream, beach, esker, and till samples and carry out geological mapping. The helicopters will refuel from the base camp or outlying fuel caches, and all empty fuel drums and samples will be removed from the area by aircraft.

The Chartrand Lake program includes airborne geophysics which is planned to take place in mid July. This will involve a helicopter or plane towing a sensor approximately 20 m off the ground in the region of the northern prospecting permits.

Geological sampling will be undertaken from the camp on Boothia Peninsula during July and will involve one geology team supported by a helicopter. The crews will comprise one or two De Beers geologists and one Inuit assistant. The teams will move from site to site by helicopter and by means of foot traverse in order to collect samples and carry out geological mapping. The helicopters will refuel from the base camp or outlying fuel caches, and all empty fuel drums and samples will be removed from the area by aircraft.

The work program will be adjusted as required to minimize the disturbance to wildlife or to avoid cultural areas considered sensitive by the local communities.

**4. Detailed Description of Undertaking**

De Beers Canada Exploration Inc. (DBCEI) is a Canadian diamond exploration company which has prospected and explored for diamonds in the NWT and Nunavut since the early 1990's. In 2005, DBCE was awarded 175 prospecting permits with an area of approximately 9,646,690 acres on Prince of Wales Island. The vast majority of the prospecting permits are on Crown land, with up to 9 Inuit Owned Lands (IOL's) overlapped by the permits: RB-29; RB-28; RB-27; RB-26; SB-58; SB-57; RB-25; SB-56; SB-55.

In 2004, DBCE was awarded 22 prospecting permits with an area of approximately 1,369,860 acres area on southwest, central west and central east portions of the Boothia Peninsula. The vast majority of the prospecting permits are on Crown land, with up to 7 Inuit owned lands (IOL's) overlapped by the permits: SB-19, SB-20, SB-21, SB-22, SB-23, SB-24 and SB-25.

In 2005, DBCE was awarded 324 prospecting permits on Devon Island, the Grinnell Peninsula and Cornwallis Island with an area of approximately 15,657,200 acres. The vast majority of the permits are on Crown land with up to 13 IOLs overlapped by the permits: GF7, GF8, GF9, GF10, GF64, GF65, GF66; RB05, RB06, RB12, RB15, RB16, RB18. Inuit Owned Lands on the eastern portion of Devon Island will not be affected as sampling activity will not occur on the following IOL's: AB10, AB11, AB12, AB13, AB14; GF01, GF19, GF20, PI4.

The proposed 2006 field program will involve the set up of a small temporary fly camps that hold approximately 10 persons which will move at least once over the course of the program. Two tentative temporary camp locations have be proposed for the Prince of Wales project at: A: 73º 19.0' N and 98º 54.5' W; and B: 72º 20.5' N and 98º 01.5' W. The camps for the Chartrand Lake project will be tentatively located at 2 or 3 of the following locations: Fly camp-A: 94º13.0'W and 69º42.5'N; Fly camp-B: 95º2.5'W and 69º46.5'N; Fly camp-C: 95º16'11"W and 70º45'50"N; Fly Camp-D: 92º54'15"W and 70º55'6"N; Fly Camp-E: 93º18'45"W and 70º29'6"N. The camps for the Devon Island project will be tentatively located at Fly camp-A: 75º 06.0' lat. and 89º 01.0' long; Fly camp-B: 76º 18.0' lat. and 92º 18.0' long.

The duration of the proposed programs will be approximately 30 days, from approximately July 1 to July 31, 2006. The Prince of Wales Project and Devon Island projects will consist of stream, esker, beach and till sampling and geological mapping using 2 helicopters. The camp will also be serviced with food and fuel by a twin otter aircraft landing on an unprepared tundra strip adjacent to the camp. No more than 18 drums of Jet-B helicopter fuel will be stored on site in 45 gallon drums at any given time. Spill kits and contingency plans are in place to deal with fuel spills in the event that they might occur. All De Beers personnel and its aircraft and helicopter subcontractors will have had specific training in dealing with fuel spills prior to beginning field work on the project, and all empty drums will be removed from the field by aircraft prior to the end of the field season for transport south via sea lift. De Beers also intends to employ at least one local Inuit assistant for each project.

The Chartrand Lake program includes airborne geophysics which is planned to take place in mid July. This will involve a helicopter or plane towing a sensor approximately 20 m off the ground in the region of the northern prospecting permits.

Geological sampling will be undertaken from the camp on Boothia Peninsula during July and will involve one geology team supported by a helicopter. The crews will comprise one or two De Beers geologists and one Inuit assistant. The teams will move from site to site by helicopter and by means of foot traverse in order to collect samples and carry out geological mapping. The helicopters will refuel from the base camp or outlying fuel caches, and all empty fuel drums and samples will be removed from the area by aircraft. The work program will be adjusted as required to minimize the disturbance to wildlife or to avoid cultural areas considered sensitive by the local communities.

The tentative fly camp locations proposed for Prince of Wales Island, Chartrand Lake and Devon Island projects are located near no known archaeological sites or presently known sites of carving stone. Discussions with local hamlet and HTO officials in Resolute and Taloyoak confirmed the area was likely not inhabited in the past and represents an area of very low archaeological potential. Discussions with the local communities also confirmed the area was not an active area of caribou calving or an area of raptor or migratory bird nesting and that caribou migration in the area is likely to occur in late September and October after De Beers has concluded its field investigations for the season. De Beers has also agreed to provide the local HTO's and other wildlife officials with any information which it might collect regarding the movements of wildlife in the work area during the field season.

The camp infrastructures will contain pup up tents for sleeping and up to 2 Weatherhavens which will act as an office tent, wash tent, and kitchen/dining tent. Water for the camp will be pumped up from a submersible pump located in the water body adjacent to the camp. Grey water from the kitchen and shower facilities will be collected in a gravel lined leach pit located well away (>31 metres) from the shore. Pit privies will be used for human waste collection. All kitchen garbage will be collected and flown to Resolute and Taloyoak (in the case of the Chartrand Lake project) for final disposal in the municipal landfill. A 10 kW diesel generator will provide electrical power for the camp.

As part of De Beers spill emergency procedures, any and all fuel spills, must be reported as required to the relevant authorities, and an internal report regarding the incident must be filed internally with the company. In order to ensure that spills are cleaned up in an efficient, environmentally responsible manner, all De Beers personnel are given mandatory training in spill prevention and spill clean-up procedures prior to entering the field. Spill kits containing absorbent material will also be located at the camp fuel cache and at any points of re-fuelling in the camp itself. Should a spill occur, personnel are instructed to take action immediately to control the source of the spill and then begin remedial action to isolate and remove the spill contaminated material into containers which will be flown from the work area for disposal in an approved landfill.

The 2006 field program for the Prince of Wales and Devon Island projects will consist of helicopter supported sampling and geological mapping conducted within the De Beers' permit area. Two sampling crews will be working in an area at any given time. Each sampling crew will consist of 1or 2 De Beers Canada Geologists and one local 1 Inuit assistant hired from Resolute. Geology teams will be working on the ground undertaking geological mapping and sampling. Two helicopters based in the camp will be used to ferry geologists on sampling traverses. At each sample site, the crews will collect a 10 L sample by digging a shallow pit, 10-15 cm deep in the ground.

The 2006 field program for the Chartrand Lake project will consist of helicopter supported sampling and geological mapping conducted within the De Beers' permit area surrounding the proposed camp locations. One geological team will be working in the area at any given time. A geology team consists of one or two De Beers Geologists and one local Inuit assistant hired from Taloyoak. At each sample site, the geologist will land with the helicopter and collect a 10 L sample from the surface soil horizon by digging a shallow pit, 10-15 cm deep in the ground.

At each sample site, the geologist will land with the helicopter and collect a 10 L sample from the surface soil horizon by digging a shallow pit, 10-15 cm deep in the ground. After the sample has been extracted and placed in a cloth bag, the sample pit is backfilled and the sample team places the sample in the helicopter and flies to the next sample location. The overall impact on the environment by this means of sampling is very small. Samples collected during each day of work are brought back to camp for transport to Resolute or Taloyoak via twin otter aircraft. In Resolute or Taloyoak, the samples are unloaded and packed into sea freight containers for shipment south to De Beers' sample processing facility in Sudbury, Ontario.

Should any wildlife such as caribou be seen while geological sampling activities are underway, geologists are instructed to note how many animals are present, their location

and to leave the area immediately. De Beers strictly prohibits the harassment of any wildlife from any of its aircraft or in any of its camps

Additional employment opportunities will also arise locally for expediting services and the provision of services external to camp such as fuel and hotel accommodation.

The proposed De Beers exploration camp for Prince of Wales Island, Devon Island and Chartrand Lake are envisaged as a series of temporary exploration fly camp facilities. At the end of the 2006 field season the camp will be removed, including all fuel caches.

## 8. Waste Disposal

Disposal of grey water from the kitchen and shower facilities in the De Beers camp will be made in gravel-lined hand dug sumps located well back (>31 metres) from the shore. Human waste will be disposed of in pit privies. The guidelines adhered to for the waste disposal will be drawn from *Land Use Guidelines for Mineral Exploration, Yukon and N.W.T.* (Indian and Northern Affairs Publication, 1994).

Formal written permission for De Beers to make use of the Resolute and Taloyoak landfills will be obtained in writing prior to the start of camp activities in July, 2006.

De Beers will have spill kits on hand at the proposed camp location in order to deal with potential spills from helicopter fuel stored in drums at the camp. All De Beers personnel and its sub-contractors (helicopter and aircraft contractors) will have specific training in dealing with fuel spills. In the event that a fuel spill should occur, contaminated soil and absorbent material from the spill will be flown by aircraft to a landfill facility specifically designated for fuel contaminated material in Iqaluit or to a suitable location further south if required.

## 10. Environmental Impacts and Mitigation Measures

The proposed camp locations described above are temporary facilities and will be entirely removed after De Beers has completed its work in the area.

The overall impact of De Beers' activities on the land will be very low. Helicopters based in the campsite will be used to transport geology teams from sample site to sample site. Additional soil sampling and geological mapping work will be completed from the camp on foot. None of the sampling work will be undertaken using ATV's or vehicles.

Spill kits containing absorbent matting will be used to handle any potential spills from 45 gallon drums of Jet-B aircraft which will be stored on site during the field season. De Beers employees and its sub-contractors will be trained prior to the start of field work in the area on how to recognize spills and how to deal effectively with spills should they occur. It is also company policy to report all spills to authorities, regardless of size.

De Beers will service the camp with food and fuel by twin otter aircraft and we do not intend to build any roads or improved airstrips at the campsite. A water body next to the camp will be used to provide water for the camp and grey water will be disposed of in gravel lined sumps located well beyond the shore (> 30 metres). All garbage will be removed on a regular basis to the municipal landfill in Resolute or Taloyoak.

De Beers has very strict policies for helicopters and aircraft regarding the harassment or chasing of any wildlife. The movements of migrating caribou in the work area will also be monitored and reported to the local Hunter and Trappers Organizations and other wildlife officials. A local Inuit sampling assistant working in the camp will also be free to report on the impact on De Beers' activities regarding the environment or local wildlife at any time. We consider these local assistants to be the eyes and ears of the each community on our activities.

The proposed De Beers exploration camp is a temporary camp. When the camp is no longer required, the tents, and all fuel caches and other equipment on site will be dismantled and flown out of the area by aircraft. Drainage sumps and privies will also be backfilled and restored as much as possible and no empty fuel drums will be left on site.

**39. Baseline Data**

As no 1:50 000 NTS map sheets exist in the area of the Prince of Wales project, air photo and Landsat 7 imagery will be used to produce base maps to aid the surficial geological mapping of this area.

During the summer field season all wildlife sightings will be recorded and forwarded to the Wildlife authorities.

An archaeological database of known sites for the area has been complied with the appreciated help of the Department of Culture, Language, Elders and Youth.