

## NIRB Application for Screening #125028

### Chidliak Project

**Application Type:** New  
**Project Type:** Exploration  
**Application Date:** 11/25/2016 1:46:47 PM  
**Period of Operation:** From 2017-02-01 to 2018-06-01  
**Proposed Authorization:** From 2016-11-25 to 2018-06-01  
**Project proponent:** David Willis  
 Peregrine Diamonds Ltd.  
 Suite 654 - 999 Canada Place  
 Vancouver BC V6C3E1  
 Canada  
 Tel: 6046084524, fax: 6044088881

### DETAILS

#### Non-technical project proposal description

**English:** This application is for an amendment to an existing permit. No new activities are being requested. Peregrine is only requesting a new location for authorized activities. The request is being made for safety and logistical reasons. 1) New location for a water source 2) New location for a heavy aircraft ice airstrip 3) New locations for a light aircraft ice airstrip  
**French:** Cette demande est pour la modification d'un permis existant. Aucune nouvelle activité n'est demandée. Peregrine demande seulement un nouveau emplacement pour ses activités autorisées. Tous les emplacements se trouvent dans la zone du projet. La demande se fait pour des raisons de sécurité et logistique. 1) Nouvelle localisation pour une source d'eau 2) Nouveau site pour une piste d'atterrissage de glace pour avions lourds 3) Nouveau site pour une piste d'atterrissage de glace pour avions légers  
**Inuktitut:** Cette demande est pour la modification d'un permis existant. Aucune nouvelle activité n'est demandée. Peregrine demande seulement un nouveau emplacement pour ses activités autorisées. Tous les emplacements se trouvent dans la zone du projet. La demande se fait pour des raisons de sécurité et logistique. 1) Nouvelle localisation pour une source d'eau 2) Nouveau site pour une piste d'atterrissage de glace pour avions lourds 3) Nouveau site pour une piste d'atterrissage de glace pour avions légers

#### Personnel

Personnel on site: 30  
 Days on site: 90  
 Total Person days: 2700  
 Period of operation: from 2017-02-01 to 2017-05-01  
 Proposed term of operation: from 2016-11-25 to 2018-06-01

## ACTIVITIES

### Project Activities

Location	Activity Type	Land Status	Site History	Site Archaeological or Palentological Value	Proximity to the nearest communities and any protected areas
Chidliak Project	Advanced Mineral Exploration	Crown	First Kimberlite Discovery in 2008. Current area consists of 403 claims for 413,086 hectares, area change on or about November 17, 2016	Archaeology sites identified on Project area through Peregrine sponsored archaeology surveys.	Approximately 200 kilometers north to Pangnirtung from Project Centre Approximately 120 kilometers southwest to Iqaluit from Project Centre
Requested New Herc Strip	Advanced Mineral Exploration	Crown	Lake has been in the Project Area since original prospecting permits. Bathemotry conducted at lake in 2011. Lake is in better terrain and closer to winter 2017 field operationsat CH-6. Selected for safety and logistical purposes.	Lake surface is being used Wrong geology for paleontological value Archaeology survey conducted at lake perimeter in 2014.	211 kilometers north to Pangnirtung (heading 13.49 degrees) 104 kilometers southwest to Iqaluit (heading 234.25 degrees)
Requested New Water Source	Advanced Mineral Exploration	Crown	Lake has been in project area since original prospecting permits. Bathemotry conducted at lake in 2011) Addition of a new large water source close to the CH-6 Camp and Ch-6 Kimberlite. The lake is located 12 kilometers west of the CH-6 Camp and CH-6 Kimberlite and is better suited for operational and safety purposes. Furthermore the lake is large and it is anticipate that total water withdrawal from the lake will be insignificant to the total lake volume (less than 1/15 of 1 perc	Lake water is being used Wrong geology for paleontological value Archaeology survey conducted at Lake perimeter in 2014.	211 kilometers north to PAngnirtung (heading 13.49 degrees) 104 kilometers southwest to Iqaluit (Heading 234.25 degrees)
Requested New Ice Airstrip (small fixed wing)	Advanced Mineral Exploration	Crown	Small Lake within project area and close to Ch-6 Camp. Will be used for smaller fixed wing aricraft to transport personnel and small supplies.	Surface of lake is being used. Wrong geology for paleontological value Archaeology survey conducted in 2014.	211 kilometers north to Pangnirtung (heading 10.37 degrees) 113 kilometers southwest to Iqaluit ( heading 239.22 degrees)

**Community Involvement and Regional Benefits**

Community	Name	Organization	Date Contacted
Iqaluit	See attached Chronology	Many	2016-11-24
Pangnirtung	See attached Chronology	Many	2016-11-24

**AUTHORIZATIONS****Project Locations**

South Baffin

**Project Authorization**

Authorizing Agency	Authorization Description	Current Status	Date Issued / Applied	Expiry Date
Aboriginal Affairs and Northern Development Canada	Class "A" Land Use Permit N2012C002 Exploration Camps, Core Drilling, RC Drilling, Large diameter RC drilling, treching, blasting, bulk sampling, winter trail, airstrip,	Active	2013-06-17	2017-06-16
Nunavut Water Board	Class 2BE Water Use and Waste Water Disposal Permit 2BE-CHI1218 Water use for Drilling and domestic use and waste water disposal 25 m3 per day domestic 221 m3 per day drilling	Active	2012-12-24	2018-06-01

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

Mineral Type	Description
Diamonds	Amendment, new location for authorized activities. Requested for safety and logistical reasons.

## MATERIAL USE

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

Equipment Type	Quantity	Size - Dimensions	Proposed Use
Core Drill	2	Lantech LDS-1000	Core Drilling
RC Drill	1	Hornet	RC Drilling
LDD RC Drill	1	Cooper 14 Foremost CT-550	Large diameter drilling
Challenger Tractor	3	MT875C	Cargo Transportation
Kubota Tractor	2	BX2660	Snow clearing
Mooroka Track Carrier	1	MST300VD	Cargo Transportation
Prinirth Snow-Cat	1	BR350	Snow clearing, transportation, grooming
Wheel Loader	2	938H, 930H	Loading and moving cargo
Skidsteer	1	247B	Cargo, snow clearing
Excavator	1	320B	Excavation
Hammer Drill	1	Tracked	Hammer drilling
Crane	1	5540	Cargo lift

## Detail Fuel and Hazardous Material Use

Fuel / Material	Type	Number of Containers	Container Capacity	Total Amount	Units	Proposed Use
Diesel	fuel	2000	205	410000	Liters	Equipment, Generators
Aviation fuel	fuel	250	205	51250	Liters	Fixed wing & Helicopters
Gasoline	fuel	20	205	4100	Liters	Small equipment fuel
Propane	fuel	65	100	6500	Lbs	Cooking and heating
Acetylene	hazardous	40	20	800	Gallons	Welding
Oxygen	hazardous	3	1	3	Gallons	Medical & Welding
Oils, lubricants & cleaners	hazardous	200	1	200	Liters	Lubricating & Cleaning

## Project Water Consumption

Daily Amount (m3)	Proposed Water Retrieval Methods	Proposed Water Retrieval Location
2460	Water pump	This is an amendment request, see map.

## WASTE

### Waste Management

Project Activity	Type of Waste	Projected Amount Generated	Method of Disposal	Additional Treatment Procedures
Advanced Mineral Exploration	Combustible wastes	50kg per day	Recycling and Incineration	Hig temp. incinerator
Advanced Mineral Exploration	Greywater	200 litres per day	sand & gravel filter, earth filter	None
Advanced Mineral Exploration	Hazardous waste	10 empty drums per day	Ship to certified waste handler in Iqaluit	Nunatta Environmental Services
Advanced Mineral Exploration	Non-Combustible wastes	20kg per day	Ship to landfill	Sort into metals plastics etc.
Advanced Mineral	Overburden (organic)	2-3 cubic meters per day	Cuttings contained at	transported to pre-

Exploration	soil, waste material, tailings)		drill	approved rock basin
Advanced Mineral Exploration	Sewage (human waste)	40kg per day	Pacto bags	Incinerate

### Environmental Impacts

This is an amendment for a permit that has already been issued. No new activities are being requested. We are only requesting a new location for an activity that is already authorized. Peregrine is requesting a new water source for its activities and two new ice airstrip locations. This is being requested for safety and logistical reasons. This is a large water source upon which bathymetry was done in 2011. Environmental impacts of this amendment are negligible if best work practices are followed. Mitigation measures start with education and training of personnel in best work practices. Maintenance of an organized, clean and safe work site. Following government protocols and guidelines and permit terms and conditions.

## **DETAILS PART 2**

### **Project General Information**

This project commenced in 2008 with the first kimberlite discovery. It is now in its 8th year. Project is still seasonal with operations occurring in the winter and summer months. Current project consists of 403 mineral claims with an aggregate area of 413,086 hectares. Work activities since 2013 have focused with Project priority area near the geographic centre of the claim block.

### **DFO Operational Statement of Conformity**

Three documents: 1) DFO Protocol for Winter Water Withdrawal from Ice-covered waterbodies in the NWT & Nunavut (2010) 2) Fisheries and Oceans Canada Nunavut Operational Statement - Mineral Exploration Activities (Version 1.0, 2009) 3) Department of Fisheries and Oceans - Freshwater Intake End-of-Pipe Fish Screen Guidelines (1995)

### **Transportation**

Access to the Project area is by: 1) Aircraft: Fixed wing & Helicopter 2) Winter trail

### **Camp Site**

Four camp sites are authorized. 1) Discovery Camp (2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016) 2) Sunrise Camp (2009, 2010, 2011, 2012, 2013, 2014, 2015) 3) Aurora Camp (2011) 4) CH-6 Camp (2013)

### **Equipment**

A list of Equipment has been provided earlier in the application. All equipment is mobile and can be demobilized. Most equipment is only utilized during the winter. Most equipment is tracked and low ground pressure.

### **Water**

246 cubic meters per day authorized 1) 2212 cubic meters per day for drill water 2) 25 cubic meters per day for domestic usage

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

Waste Water 1) Sewage: Gathered in pack bags and incinerated 2) Grey Water: sand and gravel filter, earth filter 3) Drill Water; contained in natural depression or down hole

### **Fuel**

MSDS Sheets for each of the fuels are listed in the Spill Plan Primary Fuels: 1) Diesel 2) Jet A 3) Gasoline 4) Propane 5) Oxygen 6) Acetylene

### **Chemical and Hazardous Material**

A variety of chemicals are used at the camp. These range from domestic cleaners to helicopter lubricants. A list of fuels, chemicals and are contained in the Spill Plan along with MSDS Sheets. The most common hazardous products generated are empty fuel drums. Peregrine stockpiles these drums then sends them to certified waste handler Nunatta Environmental Services in Iqaluit for decanting of residual fuel and cleaning prior to disposal.

### **Workforce and Human Resources / Socio-Economic Impacts**

The workforce is from all over the country. Peregrine seeks to hire local northern workers for available positions. Northern workers have worked as geological field assistants, geophysical field assistants, camp maintenance personnel, cook's assistants, environmental assistants, heavy equipment operators and bear monitors. Since 2008 northern workers account for over 5890 person days on the project.

### **Public Involvement / Traditional Knowledge**

Peregrine engages regularly with the communities of Pangnirtung and Iqaluit and keep them advised as to the project. Engagement on this project commenced in February 2008 and continues to this day. A recent trip was completed to Iqaluit and a trip to Pangnirtung is forthcoming. No traditional knowledge studies have been conducted to date however five archaeology studies have been commissioned by Peregrine (2009, 2010, 2011, 2012, 2014)

## **SECTION B: Mineral Exploration: Project Information**

## **SECTION B: Mineral Exploration: Exploration Activity**

## **SECTION B: Mineral Exploration: Geosciences**

## **SECTION B: Mineral Exploration: Drilling**

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

CH-6 Trench

## **SECTION B: Mineral Exploration: Underground Activities**

None

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

CH-7 drill cuttings disposal, Monitoring plan has been submitted to NIRB

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

None

## **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**

Mapping: 1) Bedrock mapping by the Canada Nunavut Geoscience Office (Pub. 2016) 2) Surficial mapping by the Canada Nunavut Geoscience Office (Pub. 2015) 3) Ecological Land Classification Mapping 2014 4) Ecological Land Classification Mapping 2016 (report pending)

## **Description of Existing Environment: Biological Environment**

In recent years the majority of the work activities have been within the priority area at the centre of the project. Wildlife logs have been maintained to note observations of wildlife species. Limited wildlife has been viewed in the priority area and most sightings consist of birds. This could be due in part to large exposures of blockfield and bedrock with little vegetation growth. Caribou are of great concern to the residents of Pangnirtung and Iqaluit. During the course of Peregrine's work on the project there have only been limited sightings of caribou. All sightings have been documented in our wildlife logs and baseline environmental reports. The GN Department of Environment has commissioned caribou surveys on Baffin in 2012, March 2014, Sept 2015, April 2016, Sept. 2016, and another proposed for April 2017.

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

Project is remote from the communities of Pangnirtung (approx. 200 km north) and Iqaluit (120 km southwest). Pangnirtung is the focus of hiring initiative while Iqaluit benefits from land access to the project and purchase of goods and services. At present the work on the project is seasonal. If the project continues to grow there will be additional opportunities for employment and businesses.

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

Work is seasonal. Peregrine practises progressive reclamation and good field work practises. All efforts are made to maintain a safe, clean and organized work site. To date impacts have been minimal. All camps and equipment can be removed if abandonment and

reclamation is necessary. The most significant impact on the environment to date is the Ch-6 trench. The trench has been reclaimed; however, there has been subtle settling and water accumulates in the hollow. Monitoring of the trench area and the water contained within has been undertaken and all water quality testing has passed. Ecological mapping has commenced early in the exploration process to identify sensitive areas such that they can be avoided with future activities. All project personnel are given camp inductions upon arrival and best work practices are communicated at this time.

### **Cumulative Effects**

To date cumulative effects are minimal. The project is still seasonal.



IMPACTS

TABLE 1 - IDENTIFICATION OF ENVIRONMENTAL IMPACTS

CONSTRUCTION																									
-		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-
OPERATION																									
Advanced Mineral Exploration		-	-	-	-	-	-	-	M	-	-	-	-		U	U	U	-	-		U	-	-	-	-
DECOMMISSIONING																									
-		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-

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