Chidliak 2013 Baseline Environmental Program Summary

The Chidliak Project site (the project site), owned and operated by Peregrine Diamonds Ltd. (Peregrine) is situated on Hall Peninsula, southeast Baffin Island, Nunavut approximately 120 kilometres (km) northeast of Iqaluit (Figure 1). EBA, A Tetra Tech Company (EBA) was retained by Peregrine to conduct the 2013 studies on the project site to gain an understanding of the environmental baseline conditions, which would then function as a key management tool for planning exploration activities to avoid or minimize impacts to the surrounding environment. Baseline environmental studies at the project site began in 2009 and have continued annually.

Peregrine has concentrated their exploration activities to the Southern Focus Area; an area inland approximately 546 square kilometres (km^2) (26 km wide x 21 km length) (Figure 1). Baseline environmental surveys were carried out during one field event from August 15 to 16, 2013. Field surveys were conducted both within the Southern Focus Area as well across a regional study area approximately 2,637 km^2 in size (Figure 1). Mr. Amie Nashalik (from Pangnirtung) and Mr. David Willis, Peregrine's Lands Administrator assisted throughout the baseline studies.

During this field event, the following baseline surveys were conducted:

Surface Water Quality Sampling

The objective of the surface water quality program was to conduct baseline surface water grab sampling down-gradient of exploration activities and at reference lakes/streams. A total of 12 water quality stations were sampled (two additional sampling stations were dry and therefore not sampled) for routine, nutrients, total metals, total organic carbon, and oil and grease on August 15 and 16 (Figure 1). The laboratory results indicated that all sampled parameters were within the federal guidelines for Freshwater Aquatic Life (CCME FAL) at all sampling stations, except pH and total aluminum. In general, the surface water quality within the study represents natural background conditions.

To satisfy Peregrine's water licence requirements, water quality samples were collected from the CH6 exploration site (CH6 trench). This small trench (approximately 450 square metres (m^2) is located within a mid-slope barren rock habitat, with a gentle gradient to the north northwest. The nearest sensitive receiving environment is a small creek located at least 450 m to the northwest of the CH6 trench. At the time of the August 15 survey event, no water draining from the trench reached as far as the creek. Laboratory results from the water samples collected from inside and immediately down-gradient at the trench outflow indicated that all parameters met the water licence effluent quality criteria.

Camp Potable Water Quality Sampling

The objective of the potable water quality sampling was to ensure that the raw water at Discovery camp (the only camp in operation at the time of the field event; Figure 1) met the Canadian Drinking Water Quality guidelines for total coliforms, faecal coliforms, and *Escherichia coli* (*E. coli*). Potable water at Discovery Camp was disinfected using UV filtration (Trojan UV Max) and bleach systems. Potable water quality samples were collected on August 16 from the raw water source (the nearby stream) and from the taps in the bathroom, kitchen, and two Dry tents. Potable water quality samples have a short life, and must be analyzed by the laboratory within 24 hours of sample collection or else the bacteria within the samples continue to grow.

Upon reaching Ottawa for analysis, the 2013 potable water quality samples were delayed in transit to the laboratory, and subsequently the integrity of the samples was compromised. As a result, the laboratory analysis of the potable water samples showed total coliform levels were above guideline levels; however, *E.coli* and faecal coliform levels remained below the laboratory detectable level.

Aerial Caribou Survey

The main objective of the aerial caribou survey was to determine the distribution and relative abundance of caribou within the study area in relation to the main activity areas at the time of the survey event. A single aerial caribou survey was conducted on August 15, which included five north-south transects (length totalling 324 km) (Figure 1). The proposed sixth transect was not flown due to mechanical issues with the helicopter.

No caribou were observed at the time of the August 15 aerial survey; however, Peregrine staff reported six caribou observations totaling 13 caribou over a period of a month (when Peregrine staff was present in the study area). These caribou observations may have included multiple sightings of the same individuals.

Aerial Carnivore Survey

An aerial carnivore survey was carried out at the same time as the aerial caribou survey. As encountered, sites that possess potential carnivore denning habitat such as eskers were surveyed. No carnivores or carnivore dens were observed during this aerial survey, and no sensitive carnivore habitats were identified near the 2013 exploration or camp sites.

Peregrine staff reported observing one fox and one wolf in the camp wildlife logs.

Aerial Raptor Nest Reconnaissance Survey

A raptor nest occupancy survey was conducted opportunistically at four known raptor nest sites while flying to and from water sampling stations (Figure 1). The objective of this survey was to determine the frequency of occupation at these known nest sites and species use. Of the four known nest sites, one is located approximately 6 km from Sunrise Camp (the nearest exploration site) and the remaining three are well beyond 10 km from the Southern Focus Area.

During the nest reconnaissance survey on August 15, two adult Peregrine Falcons were observed near a cliff site approximately 45 km north of the nearest exploration activity site (Discovery Camp). In addition, a Rough-legged Hawk nest with four abandoned eggs was observed at the cliff site approximately 6 km from Sunrise Camp. This nest was located approximately 8 m above ground level. A Snowy Owl was also observed during the caribou survey, and two Gyrfalcons, two Snowy Owls, and eight Common Ravens were recorded in the camp wildlife logs.

Raptors are sensitive to disturbance at their nest sites during nesting season and a conservative 1.5 km buffer was recommended near known raptor nests (including those identified from previous years) from early May to mid-August.

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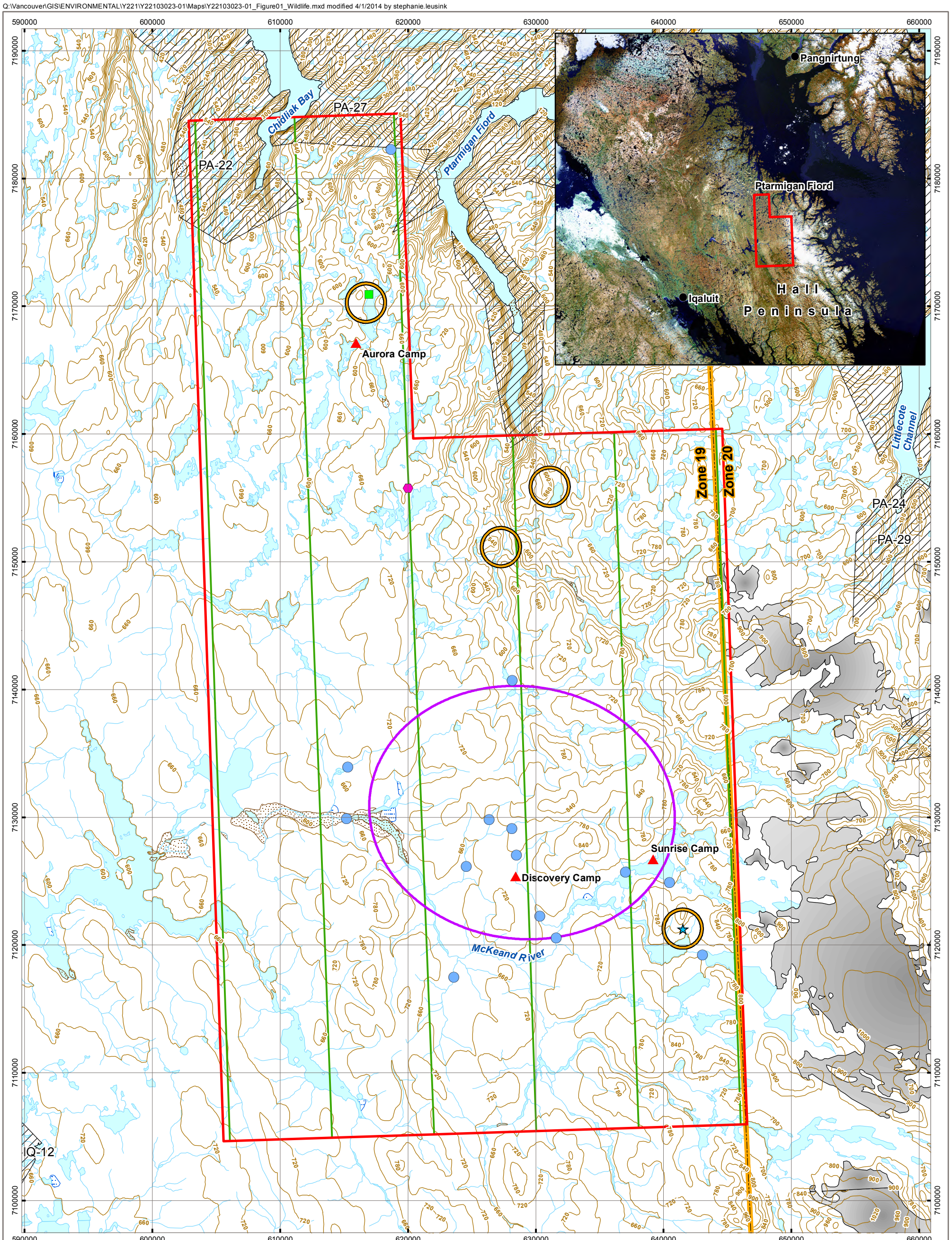

LEGEND

Raptor Observations

- Peregrine Falcon, Visual
- Rough-legged Hawk, Nest
- Snowy Owl, Visual
- Raptor Sensitive Zone
- Surface Water Quality Station
- Camp Location
- 2013 Caribou Survey Transect
- 2013 Study Area
- Southern Focus Area
- Inuit-Owned Lands (IOLs)
- UTM Zone Boundary
- Contour (60 m)
- Watercourse
- Sand
- Permanent Snow and Ice
- Waterbody
- Wetland

N W E S

GRID NORTH

NOTES
Base data source: NTS 1:250,000
Note: Caribou transects are based on True Geodetic North.

STATUS
ISSUED FOR REVIEW

CHIDLIAK BASELINE STUDIES 2013

2013 Baseline Studies Summary

PROJECTION	DATUM
UTM Zone 19	NAD83

Scale: 1:280,000
5 2.5 0 5
Kilometres

FILE NO.
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PROJECT NO.	DWN	CKD	APVD	REV
Y22103023-01	SL	MEZ	KL	0

OFFICE	DATE
Tt EBA-VANC	April 1, 2014

CLIENT
PEREGRINE DIAMONDS LTD.

TETRA TECH EBA

Figure 1