CHIDLIAK 2012 BASELINE ENVIRONMENTAL PROGRAMME 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 75 kilometres (km) east of Iqaluit) (Figure 1). EBA Engineering Consultants Ltd. operating as EBA, A Tetra Tech Company (EBA) was retained by Peregrine to carry out the 2012 baseline environmental studies on the project site from July 14 to 16. These were a continuation of baseline environmental studies that have been conducted each year on the project site since 2009.

The 2012 studies included surveying surface water quality, caribou and carnivores, and raptor nests over a study area of approximately 2,639 square kilometres (km^2). In addition, preliminary habitat assessments at two of Peregrine's main exploration sites (CH-6 and -7) were conducted and potable-water quality samples were collected at the operating camp. Since Peregrine reduced their exploration activities in 2012 to a small area (12 km radius maximum) located roughly centered on Discovery Camp (named the Southern Focus Area) (Figure 1), the scope of the environmental studies were reduced from previous years'. The objective of the 2012 studies were to continue documenting baseline environmental conditions within the study area, and to identify and map any sensitive areas so that development activities may be planned to avoid or minimize potential effects.

Environmental studies were conducted from July 14 to 16, 2012.

SURFACE WATER QUALITY

The objective of this sampling programme was to determine baseline water quality conditions downstream of the exploration sites and within surrounding sub-watersheds during the July field event. Twelve of the 14 surface water quality stations were sampled for routine parameters, nutrients, total metals, total organic carbon, and oil and grease during the July field event (Figure 1). Two of the stations were dry and not sampled. Results from the water quality samples were compared to the Canadian Council of Ministers of the Environment (CCME) guidelines for the Protection of Freshwater Aquatic Life (FAL).

When these field results are compared to the CCME FAL guidelines, pH and total aluminum levels are above criteria levels at many of the water quality stations, except at two. In addition, total cadmium levels were above criteria level at one station. These same parameters (pH, aluminum, and cadmium) have been detected above CCME FAL guidelines since 2009, including in samples collected well outside the disturbance zone of previous exploration activity. The surface water quality conditions represent natural background conditions.

CAMP POTABLE WATER QUALITY

The objective of the potable water quality sampling programme was to determine if water quality at the operating camp(s) met the Guidelines for Canadian Drinking Water Quality (Federal-Provincial-Territorial Committee on Drinking Water of the Federal-Provincial-Territorial Committee on Health and the Environment 2010). Discovery Camp (Figure 1) was the only camp in operation at the time of the July field event.

Samples were collected from the four taps at the beginning and end of the camps' water distribution system, as well as at the water pump intake pipe (nearby stream). Samples were sent to Maxxam Analytics laboratory in Ottawa within 12 hours of collection and analyzed for total and faecal coliforms and *Escherichia* Coli (E. *coli*). Results indicated that all parameters from the Discovery camp water systems were below laboratory detection limits, except at the raw water source, therefore suggesting the UV and bleaching systems were an effective disinfectant. The potable-water quality samples from Discovery Camp were considered within the appropriate health criteria.

CARIBOU AND CARNIVORES

The objective of the aerial caribou and carnivore survey, conducted on July 14, was to determine the distribution and abundance of caribou and carnivores (and carnivore dens) in the study area (totaling 2,637 km^2) at the time of the survey. The survey included flying six parallel transects, totaling 404 km in length (or covering approximately 12% of the entire study area) (Figure 2).

No caribou were observed during the aerial survey; however, three observations totalling 12 caribou (including two calves) were recorded over a two day period following the survey (Figure 2). Based on the existing evidence, no sensitive caribou areas are known or suspected within the study area, including the Southern Focus Area.

No carnivores or their dens were seen during the aerial survey, or while on site during the July field event. No dens are known; however, denning may occur wherever appropriate habitat exists.

RAPTORS

Aerial cliff-nesting raptor surveys have been completed annually across the study area since 2009, and have identified four known and probable nest sites (Figure 2). Since 2009, Rough-legged Hawks, Common Ravens, and Peregrine Falcons had been documented occupying or likely occupying these nest sites. However, no raptor nests are known in the Southern Focus Area.

The objective of the aerial raptor nest reconnaissance survey was to identify if raptors were using the four known nest sites in 2012. The survey confirmed one nest site was occupied by a pair of Peregrine Falcons. Peregrine Falcons have been observed occupying this cliff since 2010 (Figure 2). A second possibly active nest was reported, since the pilot observed an unidentified raptor flush from the cliff where the known nest site is located. This stick nest was considered inactive in 2011, but was occupied by Rough-legged Hawks in 2010, and likely occupied by Common Ravens in 2009.

SPECIES AT RISK

Species at risk surveys were completed at the same time as the aerial caribou and raptor surveys. Since 2009, only Peregrine Falcon and polar bear have been documented in the study area. During the 2012 survey, only Peregrine Falcons were observed. However, on April 16, 2012 a sub-adult polar bear was observed near Sunrise Camp and was guided at a distance safely away from camp by two Inuit employees on snowmobiles. Since 2009, polar bears have been infrequent seen near the Chidliak camps.

HABITAT ASSESSMENTS

The objective of the preliminary habitat assessment was to document existing habitat type(s) occurring at the proposed CH-6 and CH-7 kimberlite sites (Figure 2). The ground-based survey involved walking transects to document dominant vegetation species, species compositions, and any sensitive areas within habitats encountered. Habitat at CH-6 was characteristic of Barren Rock with less than 1% plant cover. Habitat at CH-7 was considered Sparsely Vegetated Bedrock with 2-10% plant cover. These two habitat types were most common in the Southern Focus Area. Twenty-one plant species, including various lichens, mosses, and sedge species were observed.

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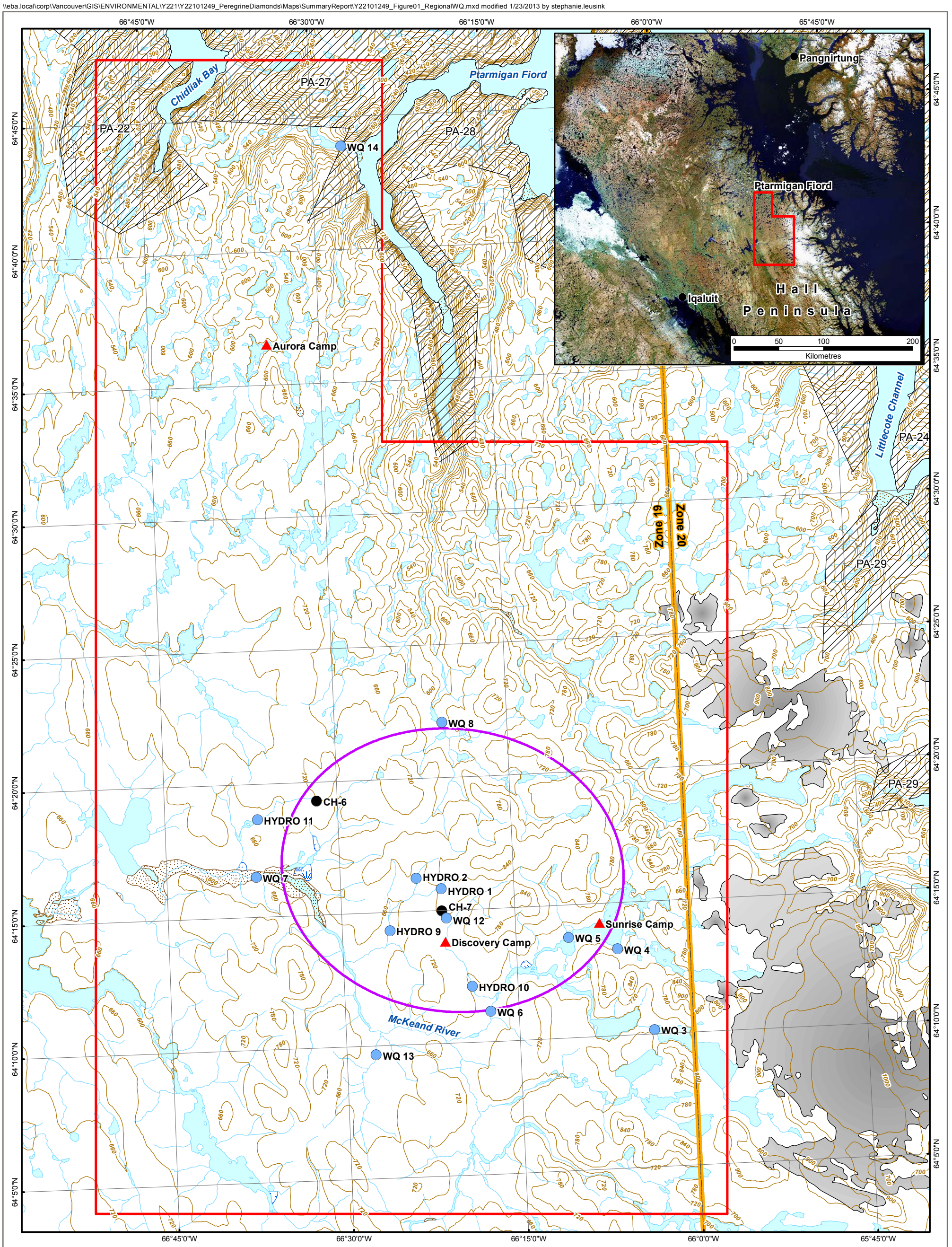

LEGEND

- Surface Water Quality Station
- Kimberlite Site (CH#)
- Camp Location
- 2012 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

NOTES
Base data source: 1:250,000 NTS

STATUS
ISSUED FOR USE

CHIDLIAK BASELINE STUDIES 2012

Regional Map and Water Quality Sampling Location Summary

PROJECTION	DATUM	CLIENT
UTM Zone 19	NAD83	PEREGRINE DIAMONDS LTD.

Scale: 1:250,000
5 2.5 0 5
Kilometres

FILE NO.
Y22101249_Figure01_RegionalWQ.mxd

PROJECT NO.	DWN	CKD	APVD	REV
Y22101249	SL	MEZ	KL	0

OFFICE	DATE
EBA-VANC	January 23, 2013

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Figure 1

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66°45'0"W 66°30'0"W 66°15'0"W 66°0'0"W 65°45'0"W

64°45'0"N 64°40'0"N 64°35'0"N 64°30'0"N 64°25'0"N 64°20'0"N 64°15'0"N 64°10'0"N 64°5'0"N

Chidliak Bay
Ptarmigan Fiord
Littlecote Channel
McKeand River
PA-22
PA-27
PA-28
PA-24
PA-29
PA-29
Aurora Camp
CH-6
CH-7
Discovery Camp
Sunrise Camp
Zone 19
Zone 20

LEGEND

Caribou Observation
- Sign
- Visual

Raptor Observation
- Peregrine Falcon, Visual
- Rough-legged Hawk, Visual
- Raptor Sensitive Zone

- Kimberlite Site (CH#)
- Camp Location
- 2012 Caribou Survey Transects
- 2012 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

NOTES
Base data source: 1:250,000 NTS

STATUS
ISSUED FOR USE

CHIDLIAK BASELINE STUDIES 2012

Wildlife Observation Summary

PROJECTION UTM Zone 19			**DATUM** NAD83	**CLIENT** Peregrine Diamonds Ltd.
Scale: 1:250,000 — 5 2.5 0 5 Kilometres				
FILE NO. Y22101249_Figure02_Wildlife.mxd				eba A Tetra Tech Company
PROJECT NO. Y22101249	**DWN** SL	**CKD** MEZ	**APVD** KL	**REV** 0
OFFICE EBA-VANC	**DATE** January 23, 2013			**Figure 2**