SCREENING PART 2 FORM
PROJECT SPECIFIC INFORMATION REQUIREMENTS (PSIR)

(AMENDMENT TO ADD BULK-SAMPLING COMPONENTS)

1. SUBMISSIONS

The Proponent must submit all information pertaining to the Project as a whole. The information requirements below are designed for the purpose of environmental assessment and are not limited to the scope of a single permit or license application.

IMPORTANT: Please be advised of the following:

1. NIRB does not accept references to an ftp site as a submission.

2. The Proponent must provide NIRB with 1 (one) electronic copy and 1 (one) hardcopy of the required information in English.

3. All maps should be legible, and should include grids, be of appropriate scale, indicate the scale, include latitude and longitude references, title, legend and a north arrow. To the extent possible, avoid hand-drawn demarcations; and,

4. Please complete all required information in each section below. If the required information is not applicable to the project proposal, please indicate this in the response with "n/a". If the request has been provided in a different section or report, please note the section or report where the response can be found.

2. GENERAL PROJECT INFORMATION REQUIREMENTS

Project Co-ordinates and Maps **(An Excel file with proposed drillhole UTMs accompanies this application as *Appendix 11*).**

1. The preferred method for submitting project co-ordinates information is through the use of a Geographic Information System (GIS) compatible digital file. Although an ESRI ArcView 3.x shape file (in decimal degrees) is the preferred interchange format, the NIRB has the capacity to receive over 100 GIS and CAD related formats, including MapInfo and AutoCAD, provided proper format and projection metadata is also submitted. The NIRB requires co-ordinates for the project proposal which reflect the entire project area as defined by:

   - the area/sites of investigation;
     Property situated in: 25O/15-16; 25P/13; 26A/04-05, -12; 26B/01-03, -06-11, -14-16. New CH-6 TEMPORARY CAMP to be situated at: 64° 19' 24.76" N lat. –

66° 31' 30.19" W long. in 26B/07. (This camp is one of <u>4 new components</u> sought by this amendment.)

- the boundaries of the foreseen land use permit/right-of-way area(s) to be applied for; (EXISTING PROPERTY BOUNDARIES)
  Chidliak property block co-ordinates: *from* **63° 45' 00"N** *to* **64° 52' 30"N;** *from* **65° 44' 00" W** *to* **67° 30' 00"W.**
- the location of any proposed infrastructure or activity(s);
  PROPOSED new CH-6 TEMPORARY CAMP = 64° 19' 24.76" N. lat. - 66° 31' 30.19" W. long. Proposed bulk-sample drillsites and winter-access trails are within the approved Project Scope area screened in 2008.
- the boundaries of the mineral claim block(s) where proposed activities will be undertaken. ***(see above).***

2. Map of the project site within a regional context indicating the distance to the closest communities.
   (see *<u>Maps 1a and 1c</u>* attached with application).
3. Map of any camp site including locations of camp facilities.
   ***<u>Maps 5 and 7</u>* (attached with application) depict proposed CH-6 TEMPORARY CAMP location in relation to the CH-6 kimberlite, cuttings deposition area and proposed water sources, as well as anticipated layout of the camp. Selection of the site was based upon 2 field visits by an Arctic geotechnical engineer and an assessment by Peregrine's archaeologist. (Peregrine is organising community visits to Iqaluit and Pangnirtung in November 2011 to discuss the CH-6 camp and other bulk-sampling components.)**
4. Map of the project site indicating existing and/or proposed infrastructure, proximity to water bodies and proximity to wildlife and wildlife habitat.

***<u>Map 1b</u>* shows the overall Chidliak property in relation to Inuit-Owned Lands, local use sites near the north coast and the Canadian Wildlife Service (CWS) Bird Site #29. *<u>Map 2b</u>* (a composite airphoto map) depicts the kimberlites, camps and access trails within the Bulk-Sample Focus Area in relation to the McKeand River system. It must be noted that only Sunrise Camp has a continuous water source. Discovery Camp receives water from the proximal glacial rill in summer; in winter, water will be hauled from Sunrise Lake. CH-6 Temporary Camp will have water conveyed by water tank from one of two potential water sources, 5km and 5.6km away. Peregrine's wildlife surveys since 2009 indicate sparse vegetation, limited water supply and prominent glacial rubble and boulderfields throughout the interior of the property which coincides with the Bulk Sample Focus Area; this correlates with limited caribou observations during systematic surveys within the Chidliak Regional Study Area. Raptors such as eagles, hawks and Peregrine falcons are restricted to cliff habitat outside the Bulk Sample Focus Area. Results from the 2011 wildlife surveys will be made available to NIRB and our regulators when available, likely at the end of 2011 or early 2012. A preliminary habitat survey across the property in 2009 revealed that vegetation is sparse, with most of the property being classed as "bare rock" or "sparsely vegetated" (*cf. "2009 Baseline Environmental Programme, Chidliak Project, South Baffin Island, Nunavut", November 2009, EBA – supplied to regulators at year-end 2009).* A preliminary fish study (catch-and-release to determine presence/absence, along with habitat characterisation downstream of the existing camps and several kimberlites) was conducted in 2010 at 7 water-quality and streamflow stations mainly within the Bulk Sample Focus area; juvenile Arctic char were documented at 4 locations, with potential for fish presence in winter at the 4 locations rated from low to moderate. Focused fish studies will commence depending on results of the 2012 bulk sample, which will serve to inform study design, once kimberlites of further interest are validated.**

Project General Information

5. Discuss the need and purpose of the proposed project.

   As discussed in the Project Description (*attached with application*), the purpose of the amendment is to obtain permission to add 4 new components to the Chidliak Project. These components and justification for them is as follows: (1) Additional Equipment: A reverse-circulation (RC) drill with air assist will be deployed to collect kimberlite bulk sample between 21 February and 31 May 2012 as chips in total volume of approx. 600 tonnes from CH-6 and CH-7 kimberlites and 1 or more of the following, CH-31, CH-44 and/or CH-45; the sample will allow Peregrine to obtain at least 200 carats of diamonds from each kimberlite body sampled in order to allow a preliminary assessment of diamond value, although as little as 50 carats might be collected from some kimberlites, if this smaller sample size can still permit assessment of diamond quality. Peregrine also will be transporting 5 pieces of heavy equipment to site to conduct trail-building, moving loads and hauling fuel and water. (2) Expansion of Discovery Camp: Increase of camp numbers from 24 to 40 to support conduct of the bulk sample, principally at the CH-7 kimberlite and any of the adjacent kimberlites sampled; Discovery also will serve as a logistical base. A Designated Fuel Station will be operated there to serve the programme. Peregrine already has permission from INAC (AANDC) to increase camp numbers to 30 in emergencies. (3) Establishment of CH-6 Temporary Camp to serve bulk sampling of the CH-6 kimberlite in February-March 2012 and thus eliminate the need to transport CH-6 drill crew and geoscientists back and forth constantly from Discovery Camp, 12km SE. (4) Expansion of Existing Winter Trail Network: Existing trail network of 3.8km will be expanded by 23 km to allow overland transport of goods, fuel, water, cuttings and bagged kimberlite across the Bulk Sample Focus Area and lessen the need for heli-slinging in dark winter conditions.

   Although less work could conceivably be conducted in a field season, this is not cost effective nor is it good value for shareholders. The objective in remote areas such as the Chidliak property is to do as much work as is feasible and within budget during the time that the field staff are on site, which is the wisest use of resources. Even more extreme, the company could opt to do no work at all. From a regulatory perspective, neither of these options is acceptable, as holding claims under the NWT and NU Mining Regulations requires that the proponent spend a certain amount per claim to further the national objective of exploration, or else the proponent loses that claim.

6. Discuss alternatives to the project and alternatives to project components, including the no-go alternative. Provide justification for the chosen option(s).

   See answer to Question #5 above.

7. Provide a schedule for all project activities. (Assumes amendment approval in early Feb 2012):

   - DEC 2011-JAN 2012: Conduct already-approved activities: (1) Aerial reconnaissance of Sunrise Camp Lake ice, followed by Herc strip construction (7 people) and camp opening (5 people). (2) Drive in 3 pieces of heavy equipment – Sno-Cat, Morooka, Challenger via the local, existing "Pang Trail" (*cf. Map 6 for existing trail routing*).

- <u>15 FEB-01 MAR 2012:</u> (1) After approval of amendment: Mobilise by Herc: RC drill, 2 x 10m^3 water tanks and 2 x 15 m^3 fuel tanks, sleighs, other equipment, 100 drums of fuel. (2) Camp nos. = 16. (3) Build winter-trail network. (4) Build drill pads. (5) Open Discovery Camp (18 people), build Fuel Station, groom Discovery airstrip for winter landings. (6) Build CH-6 Temporary Camp. (7) Transport drill to CH-6. (8) Close Sunrise Camp temporarily, if possible.
- <u>21 FEB-21 MAR 2012</u>: (1) Drill CH-6, collect bulk sample. (2) Camp nos. – 30 (CH-6), 10 (Discovery). (3) Close CH-6 camp.
- <u>21 MAR-01 JUN 2012</u>: (1) Drill CH-7 and 1 or more of CH-31, CH-44, CH-45, based at Discovery. (2) Camp nos. = 40. (3) Winter exploration drilling? *(depending on time and resources).*
- <u>JUL-SEPT 2012:</u> (1) Store drill, winter equipment at Discovery. Close CH-6 camp. Disassemble CH-6 camp if no further use required. (2) Summer exploration. (3) Environmental baseline, archaeology.
NOTE: Standard shift rotation = 14 days, though some local workers prefer a 3-week shift: Peregrine is flexible to the needs of its workforce.

8. List the acts, regulations and guidelines that apply to project activities.
   Peregrine will obey all legislation which applies to Chidliak, including but not limited to the NWT and NU Mining Regulations, Nunavut Land Claims Agreement, Territorial Lands Act, Territorial Land Use Regulations, Nunavut Waters Act, Northwest Territories Waters Regulations, Fisheries Act, DFO Fish Screen Guidelines, Public Health Act and Camp Sanitation Regulations, Guidelines for Canadian Drinking Water Quality, Nunavut Wildlife Act, Nunavut Environmental Protection Act, Transportation of Dangerous Goods Act, Canadian Environmental Protection Act, Migratory Birds Convention Act and Regulations, Species at Risk Act, Nunavut Archaeological and Palaeontological Sites Regulations, *etc.*

9. List the approvals, permits and licenses required to conduct the project.
   INAC (AANDC) Class A Land-Use Permit *#N2008C0005* and NWB Water Licence *#2BE-CHI0813* continue in force; Peregrine this autumn will seek a 1-year extension to the existing land-use permit. With this application, Peregrine is seeking to <u>amend these authorisations to allow 4 new components associated with 2012 bulk sample programme</u>. (QIA Land Licence *#Q10L1C008,* which also is in effect, does not apply to the amendment area (Bulk Sample Focus Area), as the Bulk Sample Focus Area is exclusively on Crown land).

DFO Operational Statement (OS) Conformity

10. Indicate whether any of the following Department of Fisheries and Oceans (DFO) Operational Statement (OS) activities apply to the project proposal:
    - Bridge Maintenance **N/A**
    - Clear Span Bridge **N/A**
    - Culvert Maintenance **N/A**
    - Ice Bridge **N/A**
    - Routine Maintenance Dredging **N/A**
    - Installation of Moorings **N/A**

    Please see DFO's OS for specific definitions of these activities available from either NIRB's ftp site at http://ftp.nunavut.ca/nirb/NIRB_ADMINISTRATION/ or DFO's web-site at http://www.dfo-mpo.gc.ca/canwaters-eauxcan/index_e.asp

11. If any of the DFO's OS apply to the project proposal, does the Proponent agree to meet the conditions and incorporate the measures to protect fish and fish habitat as outlined in the applicable OS? If yes, provide a signed statement of confirmation.

NOTE: Peregrine will voluntarily follow the DFO NU Mineral Exploration OS not listed above, and will supply a signed Notification Form to DFO within 10 working days of commencement of the 2012 bulk-sampling programme, as required by DFO.

Transportation

12. Describe how the project site will be accessed and how supplies will be brought to site. Provide a map showing access route(s).

    Maps 2a, 7 and 8 **depict the winter-access trails;** ***Map 6*** **depicts the local "Pang Trail" that Peregrine will use to drive the first 3 pieces of heavy equipment to site;** ***Map 1c*** **shows the spatial relationship between Iqaluit and Discovery and Sunrise camps, and Pangnirtung and Discovery and Sunrise camps. Supplies and most equipment will travel to site by Herc (briefly, for a 2-week period that the Herc is available), by DC-3 and by Twin Otter. Employees from Iqaluit and Pangnirtung will travel to/from site via Twin charter, as has occurred over the past 2 years. Limited use of a helicopter, such as an A-Star, will be for the purpose of transporting drill crews and to remain on site in case of medical or other emergency. Skidoos will be used within Discovery, Sunrise and CH-6 Temporary Camp to convey materials to and from airstrips. Heavy equipment such as the Morooka and Challenger will be used to move cuttings from the drill to the designated cuttings-deposition areas, to move the drill, to haul water and fuel, and to clear snowdrifts on the access trail network. The Sno-Cat will be the main piece of equipment assigned to building and maintaining the winter trails. The CAT Skidsteer already at Discovery Camp and the new CAT 930 loader at Sunrise camp will be used to unload aircraft; the new CAT 938 loader will be used to move drill pipe and other heavy loads at the RC drill setup. It is thus apparent that the 2012 bulk-sampling programme will differ from past Chidliak programmes in its shift away from extensive helicopter use and toward focused overland winter access to worksites and camps associated with the bulk-sample drilling.**

13. If a previous airstrip is being used, provide a description of the type of airstrip (ice-strip/all-weather), including its location. Describe dust management procedures and provide a map showing location of airstrip.

    Existing airstrips – one land-based natural strip at Discovery Camp and a lake-based landing area on Sunrise Camp Lake – were already screened in 2008; landing areas in relation to camps are depicted in ***Map 2a*** **(Sunrise ice strip),** ***Map 3a*** **(Discovery land strip) and Map 5 (CH-6 Temporary Camp land strip). Dust management will not be relevant to the winter programme. The only summer-use strip is at Discovery Camp, and the snow-free period is so short (roughly mid-July to mid- or late August) that dust control has not been an issue to date.**

14. If an airstrip is being constructed, provide the following information:
    a. Discuss design considerations for permafrost **N/A**
    b. Discuss construction techniques **N/A**
    c. Describe the construction materials, type and sources, and the acid rock drainage (ARD) and metal leaching (ML) characteristics (if rock material is required for airstrip bed). **N/A**

d. Describe dust management procedures. **N/A**

e. Provide a map showing location of proposed airstrip. **Map 5 (CH-6 camp strip)**

15. Describe expected flight altitudes, frequency of flights and anticipated flight routes.

Flight altitudes would be on the order of 300m-600m above ground level, with ferry flights occurring approx. 3-4 times per week, depending on winter weather. Routes would represent the shortest distance to Sunrise, Discovery and CH-6 camps, depending on atmospheric conditions and at all times taking human safety into account. Wildlife surveys, which are part of the ongoing Chidliak environmental baseline programme, are typically flown at 150m across the 3 044km^2 Regional Study Area in order to count caribou and other wildlife and make habitat observations; no survey will be flown in winter conditions in 2012. Survey transects are flown systematically, from start to finish, not tarrying over any area but capturing data uniformly, at set line spacing (lines 4km apart) until the survey is concluded. Archaeological surveys are carried out over at least several consecutive days once per field year. Altitude would be on the order of 150m only when flying over areas of potential archaeological interest; the survey helicopter is taken to higher altitude if necessary to avoid potential disturbance to land-users or wildlife.

Camp Site

16. Describe all existing and proposed camp structures and infrastructure. **Three existing Chidliak tent camps already have been screened. The new winter CH-6 camp will be similar to all existing camps in structure and layout (***cf. Map 5***) and will be comprised of: 8 sleep tents (3-4 persons/tent), 1 medic tent, 2 dry tents, 1 Pacto (toilet) tent, 1 office tent, 1 generator shed, 1 dual-chamber incinerator, 1-2 manufactured fuel berms, 1 heli-pad and 1 natural winter landing strip. Potential footprint: 0.2ha-0.3ha**

17. Describe the type of camp:
    a. Mobile
    b. Temporary
    c. Seasonal or Limited Seasonal

    CH-6 Temporary Camp is intended for winter use to support bulk-sampling of the adjacent CH-6 kimberlite. The camp will be closed after completion of CH-6 drilling in March 2012 and may be disassembled *if* no further use is foreseen or simply closed until any potential future use has been decided.
    Permanent
    d. Other

18. Describe the maximum number of personnel expected on site, including the timing for those personnel.

Maximum no. of personnel = 30 at CH-6 camp. [*Please refer to schedule in Question #7 for timing of activity and camp use*.]

Equipment

19. Provide a list of equipment required for the project and discuss the uses for the equipment.

RC drill + 5 new pieces of heavy equipment for winter 2012 bulk-sampling project: Reverse circulation (RC) rotary drill which uses a combination of water and injected air to lift rock chips to surface in a closed-loop system; the recovered sample is bagged and transported off site for dense media separation; the relict cuttings (wet rock flour) also is bagged and conveyed to an engineer-selected cuttings-deposition area. 5 new pieces of heavy equipment will be as

follows: (1) Challenger 875C – for hauling water tanks on sleighs, fuel enviro-tanks on sleighs, the drill, and to clear snow on trails with a blade attachment, if there are areas of drifting; (2) Morooka MST 3000 (equipped with deck and picker) – for lifting/hauling bagged cuttings to cuttings-deposition areas, and will be a backup for the Challenger for moving sleighs and drill; (3) CAT 930 loader for unloading freight at Sunrise ice-strip and to assist with strip maintenance; (4) CAT 930 loader for support to drill programme, moving pipe and other large or heavy items, unloading freight and also movement of cuttings around the rig; and (5) Sno-Cat BR-350 for creating/grooming service-trail routes, clearing airstrip, transporting crews (when crews are not transported by helicopter). Other equipment already discussed in previous applications and also present will be: (1) regular DC-3 and Twin Otter service for mobe/demobe, ferry of supplies/equipment and fuel into camp/empties on backhauls; (2) Hercules L382 aircraft to bring in initial fuel order of 100 drums, drill rig, 2 of the 5 pieces of heavy equipment; (3) helicopter, (A-Star likely) based at one of the camps to transport drill crews when required in winter, environmental survey personnel and archaeologist, provide support for any summer exploration; remain on site for any emergencies; (3) snowmobiles (approx. 4) for travel to and from drillsites where possible and to move supplies and drums around camp; CAT 247B Skidsteer at Discovery will assist with all drum movement at the Designated Fuel Station; (4) drills: Boart Longyear LM-55 core drills (1-2) and North Span Hornet (lightweight waterless RC rig for short condemnation holes) for use for summer exploration; (5) diesel generator + backup for each camp for camp power; (6) petrol-powered pumps (for pumping water to camp kitchen and dry, and for backup/spill-plan inventory; and manual or battery-operated electric pump for transferring fuel).

20. If possible, provide digital photos of equipment.
    Photos of new equipment are provided in *Appendix 8, "Additional Equipment",* accompanying this application. Photos of Twin Otters and helicopters, as well as the core drills and Hornet drill already have been supplied to regulators.

Water

21. Describe the location of water source(s), the water intake methods, and all methods employed to prevent fish entrapment. Provide a map showing the water intake locations.
    (*Maps 5 and 7* depict CH-6 Temporary Camp and selected water sources for camp and drilling; water would be conveyed in a sleigh-mounted tank on the Challenger. *Map 3a* shows location of summer water intake for Discovery Camp. *Map 2a* shows selected winter water source for Discovery Camp and for use in winter drilling of CH-7 and any of 3 surrounding kimberlites; water would be conveyed in a sleigh-mounted tank on the Challenger. *Map 4* depicts existing water intake point at Sunrise Camp Lake. Flexible-hose water line will be used for conveying water from Sunrise Camp Lake to camp distribution system; similar hose will be used at Discovery Camp in summer. In all cases at all water sources, suction hose lowered into a waterbody will be screened at intake to prevent entrainment of fish (as per DFO Fish Screen Guidelines). Water pumped for camp consumption will be stored in a poly tank in the dry, from whence it will be chlorinated and distributed to the kitchen and dry tents in each camp. GPS co-ordinates of specific intake points at the CH-6 water source and alternate source and at the lake west of Sunrise Camp (to be used for Discovery Camp and the drilling of the CH-7,

CH-31, CH-44 and CH-45 kimberlites) will be recorded once the programme commences.

22. Describe the estimated rate of water consumption (m^3/day).

    No additional allotment is requested in this amendment. Use of water for domestic purposes for all Peregrine camps will not exceed the approved limit of 25m^3/day total. Only limited use of Aurora Camp in the north of the Chidliak property is anticipated in 2011. Water consumption for drilling will remain within the approved limit of 70m^3/day.

23. Describe how waste water will be managed. If relevant, provide detail regarding location of sumps, including capacity of sumps and monitoring.

    Just as at the existing camps, waste water from CH-6 Temporary Camp will report to natural sump areas, hand-dug or modified natural depressions (typical dimensions are 1m x 1m x1.5m). Waterbodies are in no danger of greywater migration from kitchen and dry sumps, in that the closest waterbody is approx. 2.5km SE. Sump contents will be treated with Javex, if required, to control odours which could attract wildlife in summer. In summer conditions at Sunrise and Discovery, Liqui-Bac microbial treatment for grease control is carried out. The CH-6 Temporary Camp sump pit will be covered in snow periods to prevent its being filled with snow. Soaps used will be biodegradable and phosphate-free. Kitchen waste will be incinerated at least daily. Where practical, cardboard boxes and packing will be recycled and office paper reused. No Styrofoam cups or dinnerware will be used. No food scraps or other refuse will be left at the worksite; what is packed in for a shift (*e.g.*, by drillers) will be packed out. Foreman and Peregrine drill geologist will ensure a drillsite is clean before it is closed. Camp sump(s) and incinerator are checked daily by camp attendant as part of his/her rounds and regularly inspected by the site supervisor. A final aerial check by helicopter will ensure cleanup has been completed across remote areas prior to end of the season and closure, or final closure, of CH-6 camp.

24. If applicable, discuss how surface water and underground water will be managed and monitored. **Underground = N/A**

    Surface water is generally discussed in Question #23 above. However, it should be added that when drilling does occur (RC or core drilling) drillwater is recirculated up to 80%, with relict drillwater and cuttings reporting to suitable sump locations (natural depressions, rock basins or fractured rock constrained by snow berm), and monitored such that drainage is away from watercourses. Although Peregrine's drill contractors are told not to employ drill additives unless absolutely necessary, should a drilling mud be required, only environmentally-benign products are sanctioned; drilling contractor is required to have prior clearance from Peregrine before bringing to site a new drilling additive not on Peregrine's MSDS list. (An updated copy of the Chidliak MSDS inventory accompanies this application as *Appendix 2*).

Waste Water (Greywater, Sewage, Other)

25. Describe the quantities, treatment, storage, transportation, and disposal methods for the following (where relevant):
    - Sewage

    CH-6 CAMP: Waterless Pacto toilets (2-3); sewage up to a volume of approx. 50L/day, depending on camp population, will be incinerated on site. Toilets are checked daily by camp attendants.

- Camp grey water
  CH-6 CAMP: Approx. volume of 0.20m^3/person/day. Cooking grease is removed from the waste stream for incineration and does not enter the greywater sump. The liquid component of greywater reporting to the sump will both evaporate and percolate through the gravelly soil during thaw periods. [*Sumps are discussed in Question #23 above*.]
- Combustible solid waste
  CH-6 CAMP: Combustible kitchen waste on the order of up to two 121-litre garbage bins by volume will be incinerated daily at camp.
- Non-combustible solid waste
  CH-6 CAMP: Non-combustible solid waste which can't be reused or recycled will be collected and removed on backhauls for proper disposal (authorisation was obtained from Iqaluit community landfill in spring 2009).
- Bulky items/scrap metal
  CH-6 CAMP: It is conceivable that up to 2/3 of a Twin-load of such scrap (500kg) could be accumulated during a programme and flown out for proper disposal, most likely at a contractor's storage yard (*e.g.*, broken parts, spent drill rod, *etc*.) Timbers would be stored on site for future needs until camp is removed or transferred for use at another camp.
- Waste oil/hazardous waste
  CH-6 CAMP: Volume of 2 drums' worth of solid waste filters, oily rags, absorbents, *etc.*, and 3 drums' worth of liquid waste (fuel- or oil-contaminated water) could be generated in the 2012 season; these drums would be labelled as to contents + properly manifested as Class 9 waste, sealed and removed on backhauls for proper disposal (Peregrine's expeditor or QC-Logistics receives and transfers to Nunatta Environmental Services in Iqaluit waste for oil/water separation or for onward shipment to a Registered Waste Receiver as per Peregrine's approved Waste Generator authorisation from GN-DOE).
- Contaminated soils/snow
  CH-6 CAMP: Volume of contaminated soils/snow would be difficult to estimate. However, contaminated soil is most easily treated by shovelling into haz-mat bags or refuge drums for removal off site or, if longer-term treatment is an option, by shovelling the soil (small volume) onto HDPE liners, which volume can be turned, over several seasons, to aerate it; soil could then be tested for compliance with industrial-soils criteria, and when hydrocarbon concentrations have been reduced to background levels, the soil can be returned to its original use or other camp uses. Snow can be shovelled onto bermed tarps or liner material, so that it is secured away from possible drainage to a watercourse. It can then be bagged and incinerated on site or placed in drums as it is melting and flown off site to Peregrine's remediation contractor, Nunatta Environmental, for oil-water separation.
- Empty barrels/ fuel drums
  CH-6 CAMP: Empty drums will be segregated from full drums, bungs tight, and flown to Discovery Camp for crushing in Discovery's new DD-30 drum crusher; a certain number of empty drums will be reserved for use as refuge drums (containers for waste fuel, scrap, any spilt hydrocarbons, should such occur).
- Any other waste produced **N/A**

26. If the project proposal includes a landfill or landfarm, indicate the locations on a map, provide the conceptual design parameters, and discuss waste management and contact-water management procedures. **N/A**

Fuel

27. Describe the types of fuel, quantities (number of containers, type of containers and capacity of containers), method of storage and containment. Indicate the location on a map where fuel is to be stored, and method of transportation of fuel to project site. (***See Maps 3a and 3b for views of the Designated Fuel Station intended for installation at Discovery Camp in February 2012).***

Table 1: Projected Fuel and Oil Use for 2012 Bulk Sample Programme - Chidliak

Fuels	No. of Containers	Capacity of Containers	
Diesel for camp stoves, equipment, drill	2000 drums	205L	(sample + exploration)
Aviation turbine fuel (Jet-B)	250 drums	205L	
Unleaded petrol (gasoline)	20 drums	205L	
Propane	65 cylinders	45kg	
Oxygen (medical)	3 cylinders	10kg	
Oxygen and Acetylene (welding, cutting)	4 cylinders	45kg	
Oils/lubricants/cleaners	200	1L to 5L (typical sizes)	

Empty drums, cylinders regularly backhauled.

CH-6 CAMP: Small amounts of drum fuel (diesel, Jet-B, petrol) will be kept in manufactured berms at camp and at the drill for immediate use.

DESIGNATED FUEL STATION: Most drums will be transported to the Discovery Camp station, which will be the fuel-storage, dispensing and transfer centre for the bulk-sample programme; the station will be under the control of a Fuel Specialist and a Fuel Specialist Assistant, who will be responsible for fuelling, fuel management, waste control, traffic control on travel paths through the station and to the equipment shed and service area, as well as spill supplies at the 4 storage berms and transfer berm. Drummed fuel will be pumped into the two double-walled enviro-tanks at the station; this transfer will occur within a lined drive-in berm. Whilst reserving a small number of empty drums as refuge drums, the remainder of empties will be crushed within containment (steel plate underneath to protect berm floor) and flown out on backhauls. The fuel enviro-tanks will travel on steel sleighs with guard rails to the drill rig and other outlying equipment requiring fuel. Driveable equipment will drive back to the station for refuelling.

GENERAL MANAGEMENT: Propane will be securely stored upright, caged or chained. Drums will be segregated as to fuel, with empties separated from full drums. Drums will be inspected upon receipt and daily or per shift for bung and drum soundness during the programme. (*See Inspection Log Standard Operating Procedure in Appendix 10, "Bulk Fuel Facility Management Monitoring Plan.")* Drums hooked up to tents and shacks will be secured, with absorbent-lined drip containers placed under valves, or moulded plastic drip-collection containers which over-fit the drum will be deployed. The RC drill rig will have a built-in containment pan underlying all major components. All auxiliary equipment will have containment systems (berms or enviro-tainers).

Spill kits and extra absorbents will be kept at key fuel-use or transfer locations, *i.e.*, at the fuel berms, helipads, incinerators and within camp compounds in such areas as the gen-shed. MSDS sheets for products which may be used on site will be available at the drillsite and in camps, digitally

and in hard copy. The updated Spill Plan and Emergency Response Plan will be on site for all staff, contractors.

SUNRISE FUEL DELIVERY: Most fuel, at least initially, will be flown to Sunrise Camp and transported to the Discovery station for storage, transfer and disbursement. Sunrise also will store a lesser amount of fuels at site in existing berms.

DRUM AND JERRY-CAN TRANSFER: Minor amounts of fuel transfer will occur in the field away from the Designated Fuel Station, within smaller designated berms set up for this purpose. Equipment requiring such refuelling will include snowmobiles, pumps and augers.

28. Describe any secondary containment measures to be employed, including the type of material or system used. If no secondary containment is to be employed, please provide justification.

    Please see Question #27 above.

29. Describe the method of fuel transfer and the method of refuelling.

    Transfer and refuelling by hand-wobble pump or grounded electric (battery) pump, with drip pans in place and absorbents on hand. Most refuelling and fuel transfer will occur at the Discovery Designated Fuel Station (*Maps 3a, 3b*) which becomes operational in February 2012.

Chemicals and Hazardous Materials*

**included but not limited to oils, greases, drill mud, antifreeze, calcium or sodium chloride salt, lead acid batteries and cleaners*

30. Describe the types, quantities (number of containers, the type of container and capacity of containers), method of storage and containment. Indicate the location on a map where material is to be stored, and method of transportation of materials to project site.

    CH-6 CAMP: As in the existing camps, items such as cleaners/ degreasers, antifreeze and oils for camp use are kept in their original, labelled containers, which are generally 1L to 5L in size. Up to about 200L of such chemicals/hazardous substances could be required or brought to site for possible use in the 2012 programme season, with about 50L of those specifically in the CH-6 CAMP. Drilling-related chemicals, muds and oils/greases will be stored in their original large tubs at drill-side, in the approx. volume of 200L; however, as noted in Question #24, Peregrine allows use of only environmentally-benign drilling additives, should such be required. Lead-acid batteries in use would be in corrosive-resistant sleeves and storage of spares would be in similar boxes. Other chemicals are stored in their containers or shipping means of containment on layers of absorbents (if applicable), in sturdy drip trays or on liner material. Spill kits and extra absorbents are kept at key use/transfer locations, *i.e.*, at the drill rig, each fuel cache/helicopter area, and at the camp. MSDS sheets for products on site will be available digitally and in hard copy; an updated MSDS inventory is included with this application. The updated Spill Plan and Emergency Response Plan also are present for all staff, contractors. Materials are transported to site via fixed-wing service, thence to worksites by heavy equipment or helicopter. Camp-based storage would be in the gen-shed or dry; minor quantities of soaps and cleaners are in the kitchen and Pacto sheds. A proposed CH-6 camp map is attached with this application as *Map*

***5*; this map will be updated, once camp is operational. Camp-based storage is similar at the Discovery and Sunrise camps.**

31. Describe any secondary containment measures to be employed, including the type of material or system used.

    Please see Question #30 above.

32. Describe the method of chemical transfer.

    Thick material, such as drill-rod grease, is typically transferred by hand, with absorbents placed under the immediate work area. Liquid material, such as oil or fuel for the camp generator, or antifreeze for snowmobiles, is typically funnel-poured, with a drip pan and absorbents in place, as well as protective goggles. Volumes of liquids, such as drilling-mud stabiliser or glycol coolants for stationary drill motors with compressors, can also be pump-transferred; for this procedure, all typical spill-control measures would be employed, such as non-reactive catch trays or cloths, control of nearby ignition sources, *etc.* Most fuel transfer will occur within the bermed Designated Fuel Station at Discovery Camp.

Workforce and Human Resources/Socio-Economic Impacts

33. Discuss opportunities for training and employment of local Inuit beneficiaries.

    CH-6 CAMP: It is anticipated that several new employment opportunities will result from creation of the additional camp. (Some 45 local persons from Iqaluit and Pangnirtung were employed on the Chidliak Project overall in 2011.) Employment, accompanied by on-the-job training, in addition to the environmental and safety training provided to all staff, will be provided for Inuit beneficiaries. Types of opportunities currently known are for camp attendant, geophysical assistant, geological assistant, equipment operator and cook's assistant, as well as short-term environmental assistants. For Chidliak overall, Peregrine expended significant effort in promoting several training initiatives in 2010, including a drillers' helpers' training initiative in Pangnirtung with GN-Education and Boart Longyear; a second initiative, for a Camp Leadership Training Pilot Project, was delayed, even though a training institution was chosen and a training plan was prepared, pending selection of a suitable partner and candidates. Those initiatives will be revisited for 2012, along with other more general training, such as for first-aid, firearms safety and food safety for kitchen staff.

34. Discuss workforce mobilisation and schedule, including the duration of work and rotation length, and the transportation of workers to site.

    ***For work schedule, please see Question #7 above*. The maximum length of a rotation by law is 6 weeks; however, such long rotations may not be suitable to those with families. A rotation of 2 or 3 weeks has been the norm for the past several years (both for the worker + his/her cross-shift), but the actual rotation will be determined in consultation with workers, based upon the anticipated length of the programme. Transportation to/from the worksite, along with accommodation and food in camp, will be supplied by Peregrine. Since 2009, Peregrine has transported workers directly to and from Pangnirtung, as well as to and from Iqaluit.**

35. Discuss, where relevant, any specific hiring policies for Inuit beneficiaries.

Peregrine supports the principles of the Prospectors' and Developers' Association's "E 3" or Excellence in Exploration initiative, and, as well, enforces an internal policy of hiring from the closest communities to the extent possible. To date, percentages of local employees from each community have varied year over year, depending on factors beyond Peregrine's control. Overall, however, the total number of local employees has increased every year since exploration began in 2008.

Public Involvement/ Traditional Knowledge

36. Indicate which communities, groups, or organisations would be affected by this project proposal.

    The communities most likely to be affected by this project, or interested in participating in it, will be Iqaluit (75km) and Pangnirtung (133km). Community input will include that from CLARCs and hunter-trapper organisations (Amarok Hunters & Trappers Association in Iqaluit, Pangnirtung Hunters & Trappers Association in Pangnirtung), as well as the Hamlet of Pangnirtung, with whom Peregrine established a Community Strategy Committee in 2009. Peregrine also meets regularly with the Qikiqtani Inuit Association (QIA) in Iqaluit, to solicit their input into activities. Local knowledge has been actively solicited since the beginning of the Chidliak Project, and, where provided, is used to inform/enhance the field programme and planning. (For example, due to a recommendation from the Pangnirtung HTA in 2009, the 2010 Environmental Regional Study Area was expanded further north.)

37. Describe any consultation with interested Parties which has occurred regarding the development of the project proposal.

    Visits to site by representatives of Iqaluit and Pangnirtung occurred in August 2011. Community visits are planned for a week in November 2011. (The November visits will be focused on discussing the proposed 2012 bulk-sampling programme with community groups and residents.)

38. Provide a summary of public involvement measures, a summary of concerns expressed, and strategies employed to address any concerns.

    Public involvement measures commenced in 2008 with the issuance of permits and licences and has consisted of regular visits to communities (hunters/trappers, community leaders, youth, elders) and site visits by various representatives of Iqaluit and Pangnirtung, the communities of interest for the Chidliak Project. Informal open houses have been well received in Pangnirtung since they began in 2009. A number of job recruitment fairs also have been conducted. Main concerns raised over time have been: (1) caribou are not around in the north Hall Peninsula area where they used to be; Peregrine's activity may have influenced this; and (2) flight altitudes sometimes appeared lower than the 300m to 600m accepted limit, and there appears to be too much flying around. When will the helicopter flying be over? Over time, Peregrine has responded as follows: (1) Wildlife surveys have indicated a consistently low density of a range of key species – caribou, wolves, raptors, waterfowl, breeding birds – in the Hall Peninsula interior, where most Chidliak activity occurs. Peregrine also advised that wildlife logs and past data from GN-Wildlife supported the current data, *i.e.*, that there was scant use of the area by caribou over time. This low density correlated, we explained, with preliminary habitat surveying across the property in 2009, which revealed that most of the property was comprised of

either bare rock or sparse vegetation classifications. Peregrine's strategy for addressing this concern: Adoption of *distance and height mitigations*, such as avoidance of occupied cabins and animals, when such are detected by a helicopter upon approach to a potential work area: *Land-users and wildlife have the right-of-way*. Peregrine explained that causes of changes in caribou movements over time were complex, and that Peregrine was hopeful that working together with land-users to ensure timing of use, and continued avoidance of any groups of caribou, would contribute to improved management. Peregrine further stressed that data from a planned future GN-Wildlife South Baffin caribou survey (2012? 2013?) would help to provide much-needed answers about the South Baffin caribou sub-populations and presence/absence. (2) In regard to flight altitudes and helicopter presence, Peregrine has explained that altitude deviations are not made lightly but are based on such factors as human safety and parameters of a specific survey, but otherwise, Peregrine continues to invite land-user input into its work scheduling. Peregrine's strategy for addressing this concern: *Actively encourages community to provide information on community schedules so that Peregrine may arrange its activities accordingly*. Peregrine also retains a local Community Liaison officer in Pangnirtung to assist that communication process. Example: Peregrine used such information in 2011 to time exploration activities along the north coast. As for the length of time that exploration may continue, this is highly variable and dependent on results, financing and assessment-work requirements that it must fulfil under the terms of mineral claims or Prospecting Permits it has been granted by the Crown.

39. Describe how traditional knowledge was obtained, and how it has been integrated into the project.

    Peregrine commissioned a traditional knowledge (TK)/Inuit *Qaujimajatuqangit* (IQ) study with Pangnirtung in May 2010 and obtained a Nunavut Research Institute permit; the study is being supervised by the hamlet. Peregrine awaits completion of the study report, which is based upon Pangnirtung-led interviews with knowledge-holders. In addition, Peregrine held preliminary discussions with QIA-Lands in winter and spring 2010, and has attempted to further that discussion in 2011, about participation in a regional TK/IQ study that QIA was preparing to conduct; Peregrine is awaiting advancement of that regional study. In addition, local knowledge is always welcomed by Peregrine as it provides valuable guidance for field activities and can help the company plan for avoiding sensitive wildlife and heritage areas and lead to information about weather, areas of weak ice/good ice and best travel routes. Peregrine will be returning to Iqaluit and Pangnirtung in November 2011 to obtain further information on land-user sites for purposes of planning and avoidance.

40. Discuss future consultation plans.

    <u>Next community meetings</u>: Visit to Iqaluit and Pangnirtung is currently being organised for the week of <u>21 November 2011</u> (or other date suitable to the communities). Following that, the next set of community meetings will likely be in <u>February 2012</u>, just at the startup of the bulk-sampling programme, to seek input, and to recruit local personnel for the 2012 field season.

3. PROJECT SPECIFIC INFORMATION

The following table identifies the project types identified in Section 3 of the NIRB, Part 1 Form. Please complete all relevant sections.

It is the proponent's responsibility to review all sections in addition to the required sections to ensure a complete application form.

Project Type	Type of Project Proposal	Information Request
1	All-Weather Road/Access Trail	Section A-1 and Section A-2
2	Winter Road/Winter Trail	Section A-1 and Section A-3
3	Mineral Exploration	Section B-1 through Section B-4
4	Advanced Mineral Exploration	Section B-1 through Section B-8
5	Mine Development/Bulk Sampling	Section B-1 through Section B-12
6	Pits and Quarries	Section C
7	Offshore Infrastructure(port, break water, dock)	Section D
8	Seismic Survey	Section E
9	Site Cleanup/Remediation	Section F
10	Oil and Natural Gas Exploration/Activities	Section B-3 and Section G
11	Marine Based Activities	Section H
12	Municipal and Industrial Development	Section I

SECTION A: Roads/Trails

A-1 Project Information

1. Describe any field investigations and the results of field investigations used in selecting the proposed route (e.g. geotechnical, snow pack)
2. Provide a conceptual plan of the road, including example road cross-sections and water crossings.
3. Discuss the type and volume of traffic using the road/trail (i.e. type of vehicles and cargo and number of trips annually).
4. Discuss public access to the road.
5. Describe maintenance procedures.

A-2 All-Weather Road/Access Trail

6. Discuss road design considerations for permafrost.
7. Describe the construction materials (type and sources for materials), and the acid rock drainage (ARD) and metal leaching (ML) characteristics of the construction materials.
8. Discuss construction techniques, including timing for construction activities.
9. Indicate on a map the locations of designated refuelling areas, water crossings, culverts, and quarries/borrow sources.
10. Identify the proposed traffic speed and measures employed to ensure public safety.
11. Describe dust management procedures.

A-3 Winter Road/Trail

12. Describe the surface preparation, including the use of snow berms or compaction, and any flooding. If flooding is to be used, provide the location of the water source on a map.

Assuming adequate snow cover, a minimum amount of surface preparation will be required as there will be no wheeled vehicular traffic, only rubber-tracked heavy equipment pulling sleighs. Snow berms will not be required as the terrain of the chosen trail is relatively flat. Compaction will be gained mainly by continuous travel over the route by the tracked equipment with blades, principally the Morooka, Challenger and Sno-Cat, with water-spraying only on the deepest snow areas to gain compaction. Flooding is not planned. Water sources for trail-building and maintenance (*i.e.,* water to spray on deep snow patches) will be the same as those identified in this application (*see Maps 2a and 2b*). Optimally, width of the trail will be 8m-10m, depending on snow cover. Where width of the trail must be more narrow, snow areas will be utilised for pullouts.

13. Describe the operating time period.

Preparation of the access trails is anticipated to take 1 week. The total period of use is anticipated to extend from mid-February (on or before 15 February) for trail-building up to 15 or 31 May, depending on snow conditions and drilling progress.

14. Identify the proposed traffic speed and measures employed to ensure public safety.

The access trail network will not be a public thoroughfare, but for the safety of Peregrine and contractor travellers (equipment operators and any personnel transported via Sno-Cat), GPS tracking will be used. Reflective traffic markers will be placed every 25m and kilometre markers placed every 2km. Continual communication will be maintained by means of dispatch-controlled radio, and a sat-phone also will be supplied. Top speed of any piece of equipment is only 15 kph.

15. Discuss whether the selected route traverses any fish-bearing water bodies.

A preliminary fish and fish habitat study in 2010 at water-quality/hydro stations within the McKeand River system (in the access-trail area) identified that most spawning presumably would occur in lakes, as streams freeze to the bottom in winter, thus preventing overwintering. Most ponds are shallow and also are frozen to the bottom. Sunrise Camp Lake is known to contain Arctic char; other waterbodies which may support fish for their life cycles or for summer feeding (*i.e.*, juveniles, as encountered in 2010) remain to be selected for study, based upon 2012 bulk-sampling results. As indicated on *Map 2b (airphoto composite map),* the winter access trail will follow the frozen McKeand for the first approx. 6.9km at start of the trail (from Sunrise Camp Lake westward), then make 7 discrete crossings of tributaries or streams before reaching CH-6 Temporary Camp. West of camp, the trail would then cross a small stream at 3 points to access the contingency water source for CH-6 camp, if that water source is required. Peregrine is aware from its own experiences in exploration and water-quality sampling that many glacial rills and streams in the Focus Area are dry by the end of summer and thus could not support overwintering fish.

SECTION B: <u>Mineral Exploration /Advanced Exploration /Development</u>

B-1 Project Information

1. Describe the type of mineral resource under exploration.

Peregrine is primarily exploring for kimberlite, a host rock for diamonds.

B-2 Exploration Activity

2. Indicate the type of exploration activity:
   - Bulk Sampling (underground or other)

A bulk-sampling programme is to be conducted between February and May 2012 and is to be comprised of collection of kimberlite sample from at least three kimberlites with economic potential – or 100-200 tonnes from each, for a total of approximately 600 tonnes from an estimated 12-15 large-diameter (34 cm) drillholes. The goal is to obtain at least 200 carats of diamonds from each kimberlite body in order to allow a preliminary assessment of diamond value. The five kimberlites which could be sampled in 2012 are within a 16-km "focus area". Confirmed for sampling are CH-6 and kimberlite CH-7, which is 12 km southeast. Additional sample tonnage to complete the bulk sample could be collected from one or more of the following three kimberlites, all within an area of just 3.8km: CH-45, CH-44 and CH-31. All proposed work remains within the approved Project Scope area, and no increase in water allotment is sought. (*Further information on the bulk sample may be found in Appendix 9, "Bulk-Sample Monitoring Plan" accompanying this application.)*

- Stripping (mining shallow bedded mineral deposits in which the overlying material is stripped off, the mineral removed and the overburden replaced) **N/A**
- Trenching **N/A**
- Pitting **N/A**
- Delineation drilling
  Core rig already on site may be deployed for this activity later in 2012.
- Preliminary Delineation Drilling **N/A**
- Exploration drilling
  2012: Following bulk-sample, heli-portable diamond-drill core rigs (2 are already on site) may be deployed to test further priority geophysical or prospecting targets. The waterless short-hole Hornet RC drill also may return to site for condemnation drilling, if required.
- Geophysical work (indicate ground and/or air)
  2012: Followup ground geophysics may be conducted.
- Other **N/A**

3. Describe the exploration activities associated with this project:
   - Satellite remote sensing **N/A**
   - Aircraft remote sensing **N/A**
   - Soil sampling **N/A**
   - Sediment sampling
     Further surficial sediment sampling is possible in 2012 at selected locations, if warranted.
   - On-land drilling (indicate drill type)
     On-land winter bulk sampling by means of the CT350 Canterra (Foremost) large-diameter reverse-circulation (RC) drill is discussed in *sec. B-2 (2)* above. On-land summer drilling could be conducted by means of one or both of the two Boart LM-55 wire-line core drills already on site. One of the LM-55s already on site may be switched for a Boart LF-70, which already was identified to regulators in 2008. Lightweight North Span Hornet RC rig for short condemnation holes was added to drill inventory in August 2010, and its use may continue in 2012.
   - On-ice drilling (indicate drill type)
     Should exploration drilling occur at lake-based targets in spring 2012, the same Boart rigs as noted above would be used.
   - Water based drilling (indicate drill type) **N/A**
   - Overburden removal

Overburden would be removed via bulk-sample drilling; overburden is generally thin in the Focus Area. Intention is to deposit overburden with clean drill cuttings into the cuttings deposition area.

- Explosives transportation and storage **N/A**
- Work within navigable waters **N/A**
- On site sample processing **N/A**
- Off site sample processing

Diamondiferous kimberlite chip sample transported south for processing.

- Waste rock storage **N/A**
- Ore storage **N/A**
- Cuttings disposal

Cuttings from bulk-sampling of 3-4 of the economic-potential kimberlites in the Focus Area will be conveyed by tracked heavy equipment (Morooka MST 3000) to selected cuttings-deposition areas: a large rock basin for CH-6 cuttings, a large rock basin for CH-7 cuttings and potentially for cuttings from 1-2 of adjacent kimberlites, and a snow-bermed flat plateau of fractured rock for cuttings from CH-31 and CH-44 (if a third deposition area is required in the Focus Area).

- Portal and underground ramp construction **N/A**
- Landfilling **N/A**
- Landfarming **N/A**
- Other **N/A**

B-3 Geosciences

4. Indicate the geophysical operation type:
   a. Seismic (please complete Section E) **N/A**
   b. Magnetic
      Airborne magnetic and electromagnetic surveying, as well as ground surveys, could be conducted in 2012, if warranted.
      Gravimetric **N/A**
   c. Electromagnetic
   d. Other (specify)
5. Indicate the geological operation type: **N/A**
   a. Geological Mapping
   b. Aerial Photography
   c. Geotechnical Survey
   d. Ground Penetrating Survey
   e. Other (specify)
6. Indicate on a map the boundary subject to air and/or ground geophysical work.
   Air and/or ground survey grids would be determined when/if surveying is warranted; that information is not yet available.
7. Provide flight altitudes and locations where flight altitudes will be below 610m.
   If an airborne survey should proceed, altitudes are typically at 150m and are of short duration, weather permitting. Wildlife surveys follow a similar height parameter. Regardless of the nature of any airborne programme, caribou and other wildlife have the right-of-way in all surveys and operations: Should numbers of animals (or a polar bear) be observed entering an area where a survey is commencing, other flight lines or transects (away from the aggregation or bear) will be flown so as to avoid overflying the animals. [*Also see answer to Question #15 on Page 6.]*

B-4 Drilling

8. Provide the number of drill holes and depths (provide estimates and maximums where possible).

   For the bulk-sample, approx. 12-15 large-diameter (34cm) drillholes will be drilled to a maximum depth of 250m. (*Please refer to Appendix 11, which is the Excel table of co-ordinates provided to regulators for input into their GIS systems, as well as Appendix 9, "Bulk Sample Monitoring Plan".)*

9. Discuss any drill additives to be used.

   Peregrine controls use of drill additives by drilling contractors on its sites. For the 2012 bulk sample, only safe and environmentally-benign muds or additives will be used; not all products within a contractor's inventory will necessarily be brought to site or utilised. An updated MSDS inventory list accompanies this application as *Appendix 2* and an updated inventory list is attached to the updated Spill Contingency Plan. Notation on any additive use is required to be recorded in the drill log.

10. Describe method for dealing with drill cuttings.

    Cuttings from bulk-sample holes will report to engineer-selected natural rock sumps (two basins and potentially one plateau area of fractured rock) such that runoff filters slowly through the rock bases or active-soil layer and does not migrate beyond the deposition areas. None of the sumps proposed is proximal to water.

11. Describe method for dealing with drill water.

    As in previous years, drillwater in the 2012 bulk-sample programme will be recycled in the drilling circuit up to about 80%; the remaining 20% (or less) will exit as a component of cuttings fines to a waiting 1-tonne megabag on the Morooka deck for transport to a designated cuttings-deposition area.

12. Describe how drill equipment will be mobilised.

    The RC drill rig and ancillary equipment will be mobilised via Herc aircraft to the Sunrise ice strip (or via the DC-3 if the Herc is unavailable), from which the loads will be transported to the first drillsite at CH-6 on the deck of the Challenger tractor. Subsequent moves will be via the Challenger utilising the winter trails.

13. Describe how drill holes will be abandoned.

    Peregrine ensures that each drillsite is properly cleaned up when the hole is closed, not simply when the project closes, as per *Appendix 6,* the updated *Abandonment & Restoration Plan*. Bulk-sample holes will be closed with a steel cap welded to the top of the casing, which will be cut to ground level. Locations of drillholes are recorded as GPS co-ordinates for future reference. Final drillhole records are provided to regulators in the annual report.

14. If project proposal involves uranium exploration drilling, discuss the potential for radiation exposure and radiation protection measures. Please refer to the *Canadian Guidelines for Naturally Occurring Radioactive Materials* for more information. **N/A**

B-5 Stripping/ Trenching/ Pit Excavation N/A

15. Discuss methods employed. (i.e. mechanical, manual, hydraulic, blasting, other)
16. Describe expected dimensions of excavation(s) including depth(s).
17. Indicate the locations on a map.
18. Discuss the expected volume material to be removed.

19. Discuss methods used to determine acid rock drainage (ARD) and metal leaching (ML) potential and results.

B-6 Underground Activities **N/A**

20. Describe underground access.
21. Describe underground workings and provide a conceptual plan.
22. Show location of underground workings on a map.
23. Describe ventilation system.
24. Describe the method for dealing with ground ice, groundwater and mine water when encountered.
25. Provide a Mine Rescue Plan.

B-7 Waste Rock Storage and Tailings Disposal

26. Indicate on a map the location and conceptual design of waste rock storage piles and tailings disposal facility.

Cuttings from bulk-sample holes will be transported to designated cuttings-deposition areas in standard 1-tonne poly megabags. If possible, bags will be cut off and removed prior to deposit into the area; if not possible due to freezing, megabags would be retrieved in snow-free summer conditions. (Cuttings-deposition locations are depicted on *Maps 7 and 8* and shown in photographs in *Appendix 9, the "Bulk Sample Monitoring Plan".)*

27. Discuss the anticipated volumes of waste rock and tailings.

Peregrine has calculated that cuttings generated and reporting to deposition areas would be on the order of 400-500m^3 per hole.

28. Discuss methods used to determine acid rock drainage (ARD) and metal leaching (ML) potential and results. **N/A As cuttings deposition has not yet occurred, it is premature to conduct ABA testing to determine potential for acid or alkaline rock drainage (AARD) or metal leaching.**

B-8 Stockpiles **N/A**

29. Indicate on a map the location and conceptual design of all stockpiles.
30. Describe the types of material to be stockpiled. (i.e. ore, overburden)
31. Describe the anticipated volumes of each type of material to be stockpiled.
32. Describe any containment measures for stockpiled materials as well as treatment measures for runoff from the stockpile.
33. Discuss methods used to determine acid rock drainage (ARD) and metal leaching (ML) potential and results.

B-9 Mine Development Activities **N/A**

34. Indicate the type(s) of mine development activity(s):
    - Underground
    - Open Pit
    - Strip Mining
    - Other
35. Describe mine activities.
    - Mining development plan and methods
    - Site access
    - Site infrastructure (e.g. airstrip, accommodations, offshore infrastructures, mill facilities, fuel storage facilities, site service roads)
    - Milling process

- Water source(s) for domestic and industrial uses, required volumes, distribution and management.
- Solid waste, wastewater and sewage management
- Water treatment systems
- Hazardous waste management
- Ore stockpile management
- Tailings containment and management
- Waste rock management
- Site surface water management
- Mine water management
- Pitting and quarrying activities (please complete Section C)
- Explosive use, supply and storage (including on site manufacturing if required)
- Power generation, fuel requirements and storage
- Continuing exploration
- Other

36. Describe the explosive type(s), hazard class, volumes, uses, location of storage (show on map), and method of storage.

B-10 Geology and Mineralogy

37. Describe the physical nature of the ore body, including known dimensions and approximate shape.

Diamonds are the high-pressure form of carbon and are produced deep within the earth's mantle, more than 150 kilometres beneath the ground surface. They have been sought by man for the past two millennia. Diamonds occur in primary (hard-rock) and secondary (alluvial and marine placer) deposits. Although diamonds can be found in rocks as varied as high-pressure metamorphic garnet-biotite gneisses and meteorites, the only economically significant primary source rocks known to date are kimberlites and olivine lamproites. Both of these rock types form as magmas deep in the mantle and rapidly rise through it, sampling diamonds along the way. It must be stressed that diamonds do not form in the kimberlite or lamproite, they are simply transported to a level within the earth's crust where we can access them by these magmas.

The model for a single diamond-bearing volcanic system includes a feeder magmatic dyke intrusion, diatreme breccia, an overlying crater with epiclastic reworked sediments and a surrounding ring of pyroclastic ejecta. The size of the crater and the depth, shape and complexity of the diatreme vary considerably. Diamond-bearing magmas are believed to rise along zones of structural weakness.

The model commonly used to depict a typical kimberlite pipe is shown in Figure 1 **(below).**

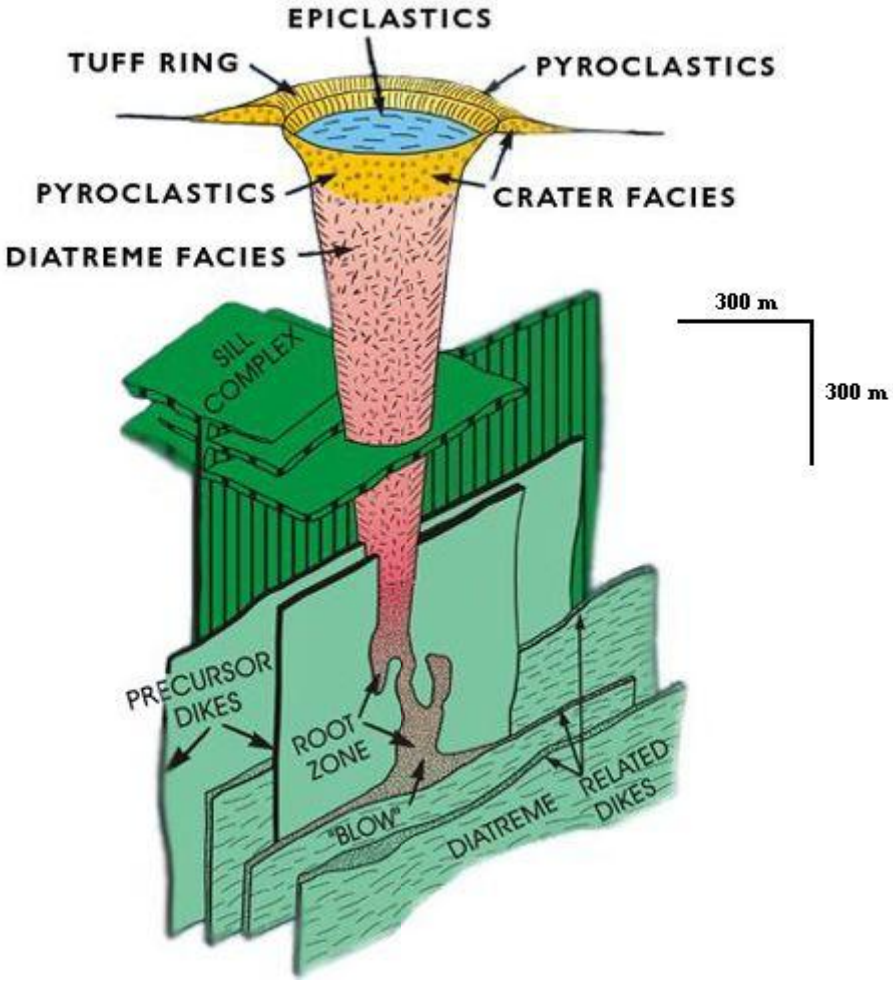

Figure 1 – Idealised model of a kimberlite pipe (from www.debeerscanada.com)

Kimberlites under consideration for bulk sampling in 2012 on the Chidliak Project include one or more of the following: CH-6, CH-7, CH-31, CH-44 and CH-45. Many of these bodies have had minimal drilling done on them, and their dimensions are not known in detail. However, brief discussions of these kimberlites are provided here:

CH-6

The CH-6 kimberlite was discovered by drilling in 2009, and has had the most drilling to date, with 13 holes drilled in 2009 and 2010. Further work has been performed during the 2011 drill season; however, the 2011 drill core has not yet been logged in detail. The body appears to have a roughly circular surface trace with steeply dipping sides, and a slight plunge towards the south, with a surface area of approximately 0.9 ha. The internal geology of the CH-6 kimberlite appears complicated and requires further work. Limestone xenolith content is variable: from <1% up to 5%, with rare limestone megaxenoliths.

The internal geology of the CH-6 kimberlite is complicated and is still being studied in detail. The majority of the kimberlite has low carbonate xenolith content (<5%), though minor zones of carbonate breccias and rare large carbonate xenoliths do occur.

CH-7

CH-7 has a surface expression of ~1 ha, estimated from ground geophysics, surface pitting, and drilling performed in 2010. The CH-7 kimberlite appears to have a more complicated structure than the CH-6 kimberlite, with a larger asymmetrical interpreted pipe-like structure to the southwest (south lobe) and a smaller structure to the northeast (north lobe). The north lobe appears to be composed of a single phase of coherent kimberlite. Drilling in the south lobe has intersected several phases of coherent and volcaniclastic kimberlite that are interpreted to form asymmetrical nested craters. Further drilling was performed in the 2011 season to understand the geometry of this body and the relationship between the north and south lobes.

CH-31

The CH-31 kimberlite was discovered in 2010 by prospecting – kimberlite cobbles were discovered at surface overlying a geophysical anomaly. The CH-31 kimberlite has an estimated surface expression of ~4 ha, interpreted from ground geophysics. In 2010, three core holes were drilled into the CH-31 kimberlite – one of which drilled across the body from north to south at a 45 degree angle, intersecting kimberlite to a depth of 417m. The kimberlite intersected in this hole contains variable amounts of carbonate xenoliths, from <5% to over 30%. Further core drilling has been performed in 2011 to better understand the geometry and geology of this body; the 2011 drill core has not been logged in detail.

CH-44

The CH-44 kimberlite was discovered in 2010 by small-diameter reverse circulation drilling, and has been core drilled in 2011. The body appears to have steeply dipping sides and a roughly circular surface trace estimated to be ~0.4 ha. Carbonate xenolith content of the kimberlite is variable, with most of the kimberlite containing from <1% to 5% carbonate xenoliths; rare zones contain > 5% carbonate xenoliths. Further drilling is required to understand the 3-dimensional form and internal variations in this kimberlite.

CH-45

The CH-45 kimberlite was discovered in 2010 by small-diameter reverse circulation drilling, and has been core drilled in 2011. There appear to be two main phases of kimberlite: A mostly carbonate xenolith-free magmatic phase that is magnetic and detected by ground geophysical surveys, and a carbonate xenolith-bearing (>15% carbonate fragments) pyroclastic phase that was not detected through ground geophysics. The contacts on the eastern side of the body appear to be steeply dipping; however, the three-dimensional extent of the carbonate xenolith-bearing phase is unknown and further drilling is required. Currently, the surface extent of the CH-45 kimberlite appears to be 0.3 ha.

38. Describe the geology/ mineralogy of the ore deposit.

Kimberlites are volatile-rich, potassic ultrabasic rocks that commonly exhibit a distinctive inequigranular texture resulting from the presence of macrocrysts (and sometimes megacrysts and xenoliths) set in a fine-grained matrix. The megacryst and macrocryst assemblage in kimberlites includes anhedral crystals of olivine, magnesian ilmenite, pyrope garnet, phlogopite, Ti-poor chromite, diopside, enstatite and diamond. Some of these phases may be xenocrystic in origin. Matrix minerals

include microphenocrysts of olivine and one or more of: monticellite, perovskite, spinel, phlogopite, apatite, and primary carbonate and serpentine.

Kimberlites on the Chidliak property contain varying amounts of country-rock xenoliths, including xenoliths of a now-absent carbonate cover. Significant carbonate-xenolith content is described in the overall geology of the body above.

Detailed mineralogy of the bodies on the Chidliak property has not yet been performed; however, there is no evidence that the bodies under consideration for bulk sampling have characteristics inconsistent with those of typical kimberlites.

39. Describe the host rock in the general vicinity of the ore body.

CH-6

Psammitic biotite +/- garnet +/- cordierite gneisses with local leucosome development. Serpentine and/or carbonate veins occur adjacent to the kimberlite. Local rust-staining on fractures.

CH-7

Felsic to intermediate biotite +/-garnet +/-cordierite gneisses with some development of pegmatitic leucosomes. Country rock is quite fractured and broken and contains carbonate +/- serpentine veining adjacent to kimberlite. Locally with *rare* rust staining along fractures throughout the whole section. Feldspars are locally-baked chalky white.

CH-31

Felsic biotite and amphibole gneiss with local pegmatitic leucosome development. Some local rust-staining along fractures.

CH-44

Mixed fine-grained, felsic biotite+amphibole +/-garnet gneisses and medium-grained biotite+/-amphibole mafic orthogneisses. Un-foliated to weakly foliated; minor sections with well-developed foliation. Locally has yellowish (limonite?) or reddish rust staining on some fractures. Occasional white veining, some of which contains carbonate, and dark serpentine veins, especially adjacent to kimberlite.

CH-45

Moderately to well foliated biotite +/- garnet +/- possible cordierite gneiss; possibly meta-sedimentary. Minor pegmatitic leucosome development. Yellow-orange limonitic rust-stained along fractures, but is locally more pervasive along foliation. Locally, adjacent to the kimberlite, it appears to be a country-rock breccias of mainly weathered gneiss fragments in an altered cement that includes carbonate+/- serpentine, and may include kimberlite. Minor serpentine +/- carbonate veining adjacent to kimberlite.

40. Discuss the predicted rate of production.

N/A: Recovery of a 200t (approx.) bulk sample from each ore body identified in this section is anticipated.

41. Describe mine rock geochemical test programmes which have been or will be performed on the ore, host rock, waste rock and tailings to determine acid generation and contaminant leaching potential. Outline methods and provide results if possible.

    Pending results of 2012 bulk sampling on CH-6, CH-7 and one or more of CH-31, CH-44 and CH-45, and identification of suitable core samples of kimberlite and

country rock from orebodies of further evaluation interest, it is premature to enter into ABA testing in 2011.

B-11 Mine **N/A**

42. Discuss the expected life of the mine.
43. Describe mine equipment to be used.
44. Does the project proposal involve lake and/or pit dewatering? If so, describe the activity as well as the construction of water retention facilities if necessary.
45. Discuss the possibility of operational changes occurring during the mine life with consideration for timing. (e.g. open pit to underground)
46. If project proposal involves uranium mining, consider the potential for radiation exposure and radiation protection measures. Particular attention should be paid to *The Nuclear Safety and Control Act*.

B-12 Mill **N/A**

47. If a mill will be operating on the property in conjunction with mining, indicate whether mine-water may be directed to the mill for reuse.
48. Describe the proposed capacity of the mill.
49. Describe the physical and chemical characteristics of mill waste as best as possible.
50. Will or does the mill handle custom lots of ore from other properties or mine sites?

SECTION C: <u>Pits and Quarries</u> **N/A**

1. Describe all activities included in this project.
   - Pitting
   - Quarrying
   - Overburden removal
   - Road use and/or construction (please complete Section A)
   - Explosives transportation and storage
   - Work within navigable waters
   - Blasting
   - Stockpiling
   - Crushing
   - Washing
   - Other
2. Describe any field investigations and the results of field investigations used in determining new extraction sites.
3. Identify any carving stone deposits.
4. Provide a conceptual design including footprint.
5. Describe the type and volume of material to be extracted.
6. Describe the depth of overburden.
7. Describe any existing and potential for thermokarst development and any thermokarst prevention measures.
8. Describe any existing or potential for flooding and any flood control measures.
9. Describe any existing or potential for erosion and any erosion control measures.
10. Describe any existing or potential for sedimentation and any sedimentation control measures.
11. Describe any existing or potential for slumping and any slump control measures.
12. Describe the moisture content of the ground.
13. Describe any evidence of ice lenses.
14. If blasting, describe methods employed.

15. Describe the explosive type(s), hazard class, volumes, uses, location of storage (show on map), and method of storage.
16. Discuss methods used to determine acid rock drainage (ARD) and metal leaching (ML) potential and results.
17. Discuss safety measures for the workforce and the public.

SECTION D: Offshore Infrastructure **N/A**

D-1 Facility

1. Describe any field investigations and the results of field investigations used in selecting the site (i.e. aerial surveys, bathymetric surveys, tidal processes, shoreline erosion processes, geotechnical foundation conditions)
2. Provide a conceptual plan, profile description and drawing(s) indicating shoreline, facility footprint, tidal variations, required vessel draft, keel offset, deck height freeboard
3. Discuss how anticipated loads on the seabed foundation and on the offloading platform will be incorporated into the design.
4. Describe how vessels will manoeuvre around the facility. (e.g. pull alongside or in front)
5. Discuss the anticipated life of the facility.

D-2 Facility Construction

6. Describe the types of material used for construction (i.e. granular or rock, steel piling or sheet piling, concrete). If material is granular, consider acid rock drainage potential, metal leaching potential, percentage of fines, size.
7. Describe dredging activities.
8. Indicate source of granular or rock material used in construction.
9. List quantities of the various types of material used in construction.
10. Describe construction method(s).
11. Indicate whether a site engineer will be on-site to inspect construction.
12. If proposed construction method involves dumping of fill into water, discuss measures for mitigating the release of suspended solids.

D-3 Facility Operation

13. Describe maintenance activities associated with the facility (e.g. dredging, maintenance to account for potential settlement of facility,)
14. Discuss whether the public will have access to the facility(s) and describe public safety measures.
15. Describe cargo and container handling, transfer and storage facilities.
16. Indicate whether fuel will be transferred from barges at this site and describe the method of that fuel transfer.
17. Discuss frequency of use.

D-4 Vessel Use in Offshore Infrastructure

18. Please complete Section H

SECTION E: Seismic Survey **N/A**

E-1 Offshore Seismic Survey

1. Indicate whether the survey is 2D or 3D at each site
2. Describe the type of equipment used, including:

- Type and number of vessels including length, beam, draft, motors, accommodation capacity, operational speeds when towing and when not towing
- Sound source (type and number of airguns)
- Type and number of hydrophones
- Number, length, and spacing of cables/ streamers

3. On a map, indicate the grid, number of lines and total distance covered at each site.
4. Indicate the discharge volume of the airguns, the depth of airgun discharge, and the frequency and duration of airgun operation at each site.
5. Discuss the potential for dielectric oil to be released from the streamer array, and describe proposed mitigation measures.
6. Indicate whether additional seismic operations are required for start-up of operations, equipment testing, repeat coverage of areas.
7. Indicate whether air gun procedures will include a "ramping up" period and, if so, the proposed rate of ramping up.
8. Indicate whether the measures described in the *Statement of Canadian Practice for Mitigation of Noise in the Marine Environment* will be adhered to for this project.

E-2 Nearshore/ Onshore Seismic Survey

9. For each site, indicate whether nearshore and onshore surveys will be conducted during the ice season or once the ice has melted
10. Describe how nearshore and onshore areas will be accessed.
11. Describe the survey methods to be used (e.g. explosive charge, vibration, air or water gun, other)
12. Describe equipment to be used
13. If applicable, indicate number, depth and spacing of shot holes
14. Describe explosive wastes including characteristics, quantities, treatment, storage, handling, transportation and disposal methods.

E-3 Vessel Use in Seismic Survey

15. Please complete Section H

SECTION F: <u>Site Cleanup/Remediation</u> **N/A**

1. Describe the location, content, and condition of any existing landfills and dumps (indicate locations on a map).
2. Identify salvageable equipment, infrastructure and/or supplies.
3. Provide a list of all contaminants to be cleaned up, anticipated volumes and a map delineating contaminated areas. This includes buildings, equipment, scrap metal and debris, and barrels as well as soil, water (surface and groundwater) and sediment.
4. Describe the degree of pollution/contamination, and list the contaminants and toxicity.
5. Describe technologies used for clean-up and/or disposal of contaminated materials. Include a list of all the physical, chemical and biological cleanup/ remediation methods, operational procedures, and the dosage/frequency of reagents and bacterial medium.
6. Identify and describe all materials to be disposed of off site, including the proposed off site facilities, method of transport and containment measures.
7. Discuss the viability of landfarming, given site specific climate and geographic conditions.
8. Describe the explosive types, hazard classes, volumes, uses, location of storage (indicate on a map), and method of storage (if applicable).
9. If blasting, describe the methods employed.
10. Describe all methods of erosion control, dust suppression, and contouring and re-vegetation of lands.

11. Describe **all** activities included in this project.
    - Excavation (please complete Section B-5)
    - Road use and/or construction (please complete Section A)
    - Airstrip use and/or construction
    - Camp use and/or construction
    - Stockpiling of contaminated material
    - Pit and/or quarry (please complete Section C)
    - Work within navigable waters (please complete Section H)
    - Barrel crushing
    - Building Demolition
    - Other

SECTION G: Oil and Natural Gas Exploration/Activities N/A

G-1 Well Authorisation

1. Identify the location(s) of the well centre(s) by latitude and longitude. Attach a map drawn to scale showing locations of existing and proposed wells.
2. Indicate if the site contains any known former well sites.
3. Include the following information for each well:
    a. Well name
    b. Surface location
    c. Proposed bottomhole location
    d. Ground elevation (in metres)
    e. Spacing area (in units)
    f. Identify the well type:
        i. Production
        ii. Injection
        iii. Disposal
        iv. Observation
        v. Storage
        vi. Experimental
        vii. Other (specify)
    g. Identify the well classification:
        i. Exploratory wildcat
        ii. Exploratory outpost
        iii. Development
    h. Drilling operation (deviation):
        i. Vertical
        ii. Directional
        iii. Horizontal
        iv. Slant
    i. Objective Zones (copy chart style below)

Objective Formation	Fluid (oil/gas/water)	Depth (mTVD)	Core (Y/N)

    j. Proposed Total Depth in mTDV and mMD.
    k. Formation of Total Depth
    l. Sour well? (yes or no)

i. If Yes: Maximum H_2S concentration in mol/kmol
Emergency planning zone radius in km

m. Blowout Prevention (Well Class I – VI)
n. Deviation Surveys
    i. Will be run at intervals less than 150m? (yes or no)
o. Wireline logs
    i. Will run logs in hole for surface casing? (yes or no)
    ii. Will run a minimum of 2 porosity measuring logs? (yes or no)

G-2 On-Land Exploration

4. Indicate if the site contains any known:
    a. Waste Dumps
    b. Fuel and Chemical Storage Areas
    c. Sump Areas
    d. Waste Water Discharge Locations
5. Attach maps drawn to scale showing locations of existing and proposed items identified in (2) above, as well as all proposed:
    a. Sumps
    b. Water sources
    c. Fuel and chemical storage facilities
    d. Drilling mud storage areas
    e. Transportation routes
6. If utilising *fresh water*, estimate maximum drawdown and recharge capability of the river or lake from which water will be drawn.
7. Indicate if permafrost is expected to be encountered under:
    a. Camp Facilities
    b. Well Site
    c. Access Routes
    d. Sumps
    e. Other: _____
8. Indicate any potential for encountering artesian aquifers or lost circulation within the surface hole (to casing depth).
9. Will drilling wastes contain detrimental substances (including, but not limited to, oil-based or invert mud and high salinity fluids)? If yes, indicate the substances and estimated volumes.
10. Indicate methods for disposal of drilling wastes:
    a. Sump
    b. Down Hole (requires NEB approval)
    c. On-Site Treatment (provide plan)
    d. Off-Site (give location and method of disposal)
11. If a sump is being used, attach the following information:
    a. scale drawings and design of sumps
    b. capacity in cubic metres
    c. berm erosion protection
    d. soil permeability and type
    e. recycling/reclaiming waters
    f. surface drainage controls
    g. abandonment procedures
12. Attach the proposed or existing contingency plan which describes the course of action, mitigative measures and equipment available for use in the event of system failures and spills of hazardous materials.
13. Attach an outline of planned abandonment and restoration procedures.

G-3 Off-Shore Exploration

14. Will drilling wastes contain detrimental substances (including, but not limited to, oil-based or invert mud and high salinity fluids)? If yes, indicate the substances and estimated volumes.
15. Attach the proposed or existing contingency plan which describes the course of action, mitigative measures and equipment available for use in the event of system failures and spills of hazardous materials.
16. Attach an outline of planned abandonment and restoration procedures.
17. Please complete Section H

G-4 Rig

18. Type of Rig. Draw works, make and model
19. Derrick/Mast make and model
20. H.P. available to draw-works

SECTION H: <u>Marine Based Activities</u> **N/A**

H-1 Vessel Use

1. Describe the purpose of vessel operations.
2. List classes and sizes of vessels to be used.
3. Indicate crew size.
4. Indicate operating schedule.
5. Provide a description of route to be traveled (include map).
6. Indicate whether the vessel will call at any ports. If so, where and why?
7. Describe wastes produced or carried onboard including the quantities, storage, treatment, handling and disposal methods for the following:
    a. Ballast water
    b. Bilge water
    c. Deck drainage
    d. Grey and black water
    e. Solid waste
    f. Waste oil
    g. Hazardous or toxic waste
8. List all applicable regulations concerning management of wastes and discharges of materials into the marine environment
9. Provide detailed Waste Management, Emergency Response and Spill Contingency Plans
10. Does the vessel(s) possess an Arctic Pollution Prevention Certificate? If yes, indicate the date of issue and the name of the classification society.
11. Describe the source of fresh water and potable water
12. Indicate whether ice-breaking will be required, and if so, approximately where and when? Discuss any possible impacts to caribou migration, Inuit harvesting or travel routes, and outline proposed mitigation measures.
13. Indicate whether the operation will be conducted within the Outer Land Fast Ice Zone of the East Baffin Coast. For more information on the Outer Land Fast Ice Zone, please see the Nunavut Land Claims Agreement (NLCA), Articles 1 and 16.
14. Indicate whether Fisheries or Environmental Observers will be onboard during the proposed project activities. If yes, describe their function and responsibilities.
15. Describe all proposed measures for reducing impacts to marine habitat and marine wildlife (including mammals, birds, reptiles, fish, and invertebrates).

H-2 Disposal at Sea

1. Provide confirmation you have applied for a *Disposal at Sea* permit with Environment Canada
2. Provide a justification for the disposal at sea
3. Describe the substance to be disposed of, including chemical and physical properties
4. Indicate the location where the disposal is to take place
5. Describe the frequency of disposals (disposals per day/week or month)
6. Describe the route to be followed during disposal and indicate on a map.
7. Indicate any previous disposal methods and locations
8. Provide an assessment of the potential effects of the disposal substance on living marine resources
9. Provide an assessment of the potential of the disposal substance, once disposed of at sea, to cause long-term physical effects.
10. Describe all mitigation measures to be employed to minimize the environmental, health, navigational and aesthetic impacts during loading, transport and disposal.

SECTION I: <u>Municipal and Industrial Development</u> **N/A**

1. Describe the business type, including public, private, limited, unlimited or other.
2. Describe the activity (e.g. development of quarry, development of hydroelectric facility, bulk fuel storage, power generation with nuclear fuels or hydro, tannery operations, meat processing and packing, etc.).
3. Describe the production process or service provision procedures.
4. Describe the raw materials used in this activity, the storage and transportation methods. If hazardous materials are included in raw materials, products or by-products; include safety regulations methodology.
5. Provide detailed information about the structure and/or building in which the activity will be conducted.
6. List the PPE (personal protective equipment) and tools to be used to protect personal health and safety.
7. Describe the firefighting equipment that are or will be installed.
8. Describe the noise sources, noise level in work area, technical measurements that will be adopted to abate the noise levels and regulatory requirements for noise abatement and noise levels.
9. Describe the type of gaseous emission that will be produced during this activity. Include the allowable thresholds and mitigation measures.
10. Describe odours that the activity might release and include corresponding allowable threshold. Describe mitigation measures if thresholds are exceeded.
11. Describe radiation sources that might be emitted during the activity. Include type and source and include mitigation measures. Also describe preventative measures for human exposure (i.e. PPE).
12. Discuss the employee safety and environment protection training program.
13. If the activity involves a bulk fuel storage facility, include drawings showing the bulk fuel storage facility location in proximity to natural water courses, high water marks, etc.
14. If the activity involves the development of a new quarry or expansion of an existing quarry, complete Section C.

4. DESCRIPTION OF THE EXISTING ENVIRONMENT

Describe the existing environment, including physical, biological and socioeconomic aspects. Where it is appropriate, identify local and regional study areas.

Please note that the detail provided in the description of the existing environment should be appropriate for the type of project proposal and its scope.

The following lists are intended as a guide only.

Physical Environment
Please note that a description of the physical environment is intended to cover all components of a project, including roads/trails, marine routes, etc

- Proximity to designated environmental areas, including parks; heritage sites; sensitive areas, including sensitive marine habitat areas (recreational areas; sport and commercial fishing areas; breeding, spawning and nursery areas; known migration routes of living ;marine resources; and areas of natural beauty, cultural or historical history and; other) and protected wildlife areas; and other protected areas.

Chidliak property at its northernmost limit is located approx. 133km S of Pangnirtung. QIA Land Licence #*Q10L1C008* currently authorises access to 5 northern IOL surface parcels and 3 southern IOL parcels. Iqaluit is located approx. 75km SW of the southwest corner of Chidliak property. Territorial parks are not close by, but the closest are Sylvia Grinnell and Qaummaarviit territorial parks (at Iqaluit) and Katannilik Territorial Park (between Frobisher Bay and Kimmirut, 215km from the southwest corner of the property). Peregrine maintains a Sampling Protocol with the Canadian Wildlife Service (CWS) in respect of Key Migratory Bird Terrestrial Habitat Site (#*29)* along the Western Cumberland Sound, the only designated environmental area on the property; this is distant from the proposed Bulk-Sampling Focus Area. There are no designated sensitive inland or marine-habitat areas or protected areas in proximity. The closest confirmed archaeological site is a tent ring 500m east of Discovery Camp, on a ridge and thus not in danger of camp activities. A suspected archaeological site (2 adjacent tent rings found by a Peregrine crew member after the archaeologist had left site) is 380m NW of CH-7 kimberlite and, though it is expected to be sufficiently removed from the winter-access trail, it will be flagged for avoidance by equipment travel on the access trail. There are no designated natural-beauty or cultural areas in proximity nor any commercial fishery in the Bulk-Sampling Focus Area. Local fishing rather than sport fishing is conducted at *Qamanialuk* (McKeand Lake), but this area is at least 10-12km west of the Bulk-Sampling Focus Area and will be unaffected by the bulk-sampling programme. Peregrine has all the GPS co-ordinates for waypoints that comprise the local "Pang Trail" which crosses the Chidliak claimblock north-south and east west, and thus is well aware of this routing (*see Map 6*); Peregrine has stated elsewhere in this application and previous versions that land-users have right-of-way on Chidliak and this will continue to be the case during the bulk-sampling programme. Polar-bear habitat (denning and summering) is at the northernmost marine edges of the property and thus outside the Bulk-Sampling Focus Area; during the winter programme, bears will not be in close proximity; nevertheless, all Peregrine camps exercise strict garbage control so as not to attract animals and, in summer, bear fences are activated at Sunrise, Discovery and Aurora camps. Caribou: South Baffin caribou may wander throughout their range in summer, without fidelity to specific routes, with some remaining close to their wintering areas in summer and others migrating hundreds of kms (*cf.* "Project Caribou: An Educator's Guide to Wild Caribou of North America, Case Study – South Baffin Island Herd: Friends of the Inuit" [Mike Ferguson and Elise

Maltin]). Because distribution of the South Baffin population is complex and not easily defined/qualified/quantified, sensitivity will be exercised at all times, which may result in the need to alter a day's flight plans or timing of access-trail travel and land-use activities. Local Inuit knowledge and scientific knowledge (the latter also involves environmental aerial surveys) will help to inform field activities. Local land-users have differing opinions as to the caribou sub-populations on the Hall Peninsula: Some feel that caribou numbers are less because of increased human presence (Peregrine, government geological surveys, commercial air traffic, *et al*), whereas some others state that climate change may play a part, changes in local harvesting practices also may play a part, as well as caribou changing their routes to follow availability of food resources – a theory of cyclic behaviour given credence by some South Baffin hunters in meetings with Peregrine.

- Eskers and other unique landscapes (e.g. sand hills, marshes, wetlands, floodplains). **N/A**
- Evidence of ground, slope or rock instability, seismicity. **N/A**
- Evidence of thermokarsts **N/A**
- Evidence of ice lenses **N/A**
- Surface and bedrock geology.

Much of the Chidliak property comprises upland surfaces and stepped plain or dissected upland surfaces. Glacial tills are found throughout the area, generally as thin veneers on bedrock. Ice flow directions in the area are dominated by the Hall Ice Divide, parallel to the length of the peninsula, with the primary ice flow direction parallel to the ice divide and then emanating to the north and south away from it.

The majority of the property is believed to be underlain by Archaean and Proterozoic Ramsay River Orthogneisses. Inliers of strata correlated with the Palaeoproterozoic Lake Harbour Group occur in north-south trending, discontinuously-mapped belts on the property. The majority of the mapped Lake Harbour Group rocks on the property are metasediments; however, two small areas of Lake Harbour Group mafic igneous rocks and one area of Lake Harbour Group ultramafic rocks have been mapped on the property. Rocks of the 1.86 to 1.85 Ga Cumberland Batholith occur along the western margin of the property.

- Topography.
  Please see Geology section above.
- Permafrost (e.g. stability, depth, thickness, continuity, taliks). **N/A**
- Sediment and soil quality. **N/A**
- Hydrology/ limnology (e.g. watershed boundaries, lakes, streams, sediment geochemistry, surface water flow, groundwater flow, flood zones).
  Streamflow measurements have been collected each summer at hydro stations within the McKeand River Basin that dominates the project area since 2009 via 5 hydro stations; typically, only 3 out of 5 stations have sufficient flow by July to warrant measurement. The hydrological regime of the Basin and Bulk-Sampling Focus Area within it is dominated by spring freshet snowmelt. A desktop regional hydrology study was prepared for Peregrine in 2010 *("Baseline Hydrology Assessment – Chidliak Project, South Baffin Island, Nunavut", EBA Engineering, February 2011*) and calculated the total mean annual runoff in the project area at 351mm. The total drainage area represented by the 5 stations = 99.6km^2.

- Tidal processes and bathymetry (freshwater) in the project area.
  EBA Engineering conducted a bathymetric survey in August 2011 of water sources proposed for use in the 2012 bulk-sampling programme. (*See Appendix 9, "Bulk-Sampling Monitoring Plan" for preliminary calculations and maps from that survey.)* The survey was able to conclude that depth of engineer-recommended water sources would be more than sufficient to support the programme; no drawdown of water sources would occur as a result of sampling-programme withdrawals – a conclusion of relevance to DFO and the non-disturbance of any overwintering fish.
- Water quality and quantity.
  Water quality can be considered pristine; water is almost uniformly of low hardness at all sampling locations, with low electrical conductivity, detectable aluminium and pH naturally below neutral; both winter-water quality and summer water-quality data have been collected at stations across the Chidliak property (14 stations as of 2011) since 2009. Large lakes and deep lakes are not numerous on the Chidliak property, and streams throughout the McKeand Basin water-sampling area are frequently dry in summer and thus ephemeral for the purposes of water collection. As indicated in the previous bullet-point, bathymetry in August 2011 was able to determine successfully the location of 3 water sources with sufficient depth, and in acceptable proximity, to supply needs of the bulk-sampling programme.
- Air quality.
  Air quality is undisturbed.
- Climate conditions and predicted future climate trends.

A remote-sensing meteorological station was established at Discovery Camp under a national climate-change pilot project in July 2010. That station failed in winter 2010 due to wind damage and battery drain, and has been repaired in August 2011, anticipating a full winter of data collection in winter 2012.

- Noise levels.
  Noise from aircraft, equipment and camps separated by distance is confined to a short, seasonal period of exploration activity. There are no communities close enough to be affected by this short-term noise. Peregrine will respect rights and usage needs of hunters/trappers who operate camps, cabins or who fish in or pass through the Bulk-Sampling Focus Area. Exploration plans and mitigations are discussed regularly with local hunters/trappers associations and local land-users and community leaders during regular community visits.
- Other physical Valued Ecosystem Components (VECs) as determined through community consultation and/or literature review.
  A list of VECs has not yet been compiled. This would evolve in due course through community consultation and continuing environmental-baseline surveys that will lead to preparation for environmental assessment, if the project warrants.

Biological Environment

- Vegetation.
  Plant studies and detailed habitat mapping would occur at a more advanced project stage. Preliminary habitat mapping occurred in 2009.
- Wildlife, including habitat and migration patterns.

Wildlife studies commenced in 2009 and will continue into 2012. Information from a Pangnirtung TK/IQ study of the Chidliak area is awaited and will inform Peregrine's understanding of habitat and migration patterns, as well as future environmental-baseline. (*Also refer to Question #39 on Page 14*).

- Birds, including habitat and migration patterns.
  Studies of raptors, waterfowl, waterbirds and breeding birds commenced in 2009 and continue. Density of bird life across the property is low, and lingering snow cover over the key June breeding period negatively affects reproductive opportunities and thus the productivity of the area.
- Species of concern as identified by federal or territorial agencies, including any wildlife species listed under the *Species at Risk Act (SARA)*, its critical habitat or the residences of individuals of the species.
  Polar bears hunt amid the ice floes of Cumberland Sound to the north of the Chidliak property, and den and summer on the shorelines. Polar bears have been documented in wildlife logs, both during exploration flying and in proximity of 3 existing Peregrine camps. An early-spring aerial bear survey was less successful, though tracks were observed NW, off the property. Surveys for harlequin ducks have produced no sightings over three seasons; several Peregrine Falcon territories were observed in 2009, a Peregrine Falcon nest site was added to the inventory in 2010, and both a Peregrine Falcon adult and two rough-legged hawks, one on a nest site, were observed in 2010. Short-eared owls were not observed. Returning to nesting habitat during 2011 summer surveys did not result in either observations of active nests or of birds on territory, though one Peregrine Falcon was observed in flight in 2011.
- Aquatic (freshwater and marine) species, including habitat and migration/spawning patterns.
  Based on the Nunavut Wildlife Resource and Habitat Values Report (NUNAMI, 2008), 10 fish species have been recorded on Baffin Island, although it must be noted that many waterbodies on the Chidliak property are shallow and freeze to the bottom in winter or are dry by summer. Fish sampling and fish habitat characterisation by EBA on select streams and 1 lake environment was conducted in summer 2010. The objective of the preliminary fish and fish habitat survey was to document fish presence and habitats downstream from several kimberlites and the Discovery and Sunrise camps. The survey was conducted in association with the late July hydrology programme (streamflow and water-quality stations). Since Arctic Char (all in parr life stage) were captured or observed at the 4 sampling sites, and several adults captured in Sunrise Camp Lake, it can be assumed that all of the rivers, streams, and associated lakes within the study area are likely to provide appropriate habitat for Arctic Char during one or more of their life history stages. Assumptions cannot be made on other fish species, as none were observed, caught or trapped.
- Other biological Valued Ecosystem Components (VEC) as determined through community consultation and/or literature review.
- **A list of VECs has not yet been compiled. This would evolve in due course through community consultation and continuing environmental-baseline surveys.**

Socioeconomic Environment

- Proximity to communities.
  Please see Question #36 on Page 13 and the Physical Environment section response (Pgs. 32-33), as well as Map 1c accompanying this application.

- Archaeological and culturally significant sites (e.g. pingos, soap stone quarries) in the project and adjacent areas.
  Archaeological surveys have been conducted on Chidliak and the adjacent Qilaq property between 2009 and 2011. Eighteen new sites were discovered on Chidliak (McKeand Lake and Ptarmigan Fjord) in 2009 and the sole previously-registered site (1976) was revisited. Eighteen new sites were discovered in 2010 (6 at McKeand Lake and 12 off the property on Tawsig Fjord) in 2010. In 2011, 3 inuksuit clusters were discovered on the property (McKeand River at SE arm of McKeand Lake, so perhaps trail markers or caribou drive markers), 1 cache-and-inuksuk site 50km west of Discovery Camp and a further 2 sites at Tawsig Fjord. Several additional suspected sites were discovered on Chidliak by Peregrine's crew after the archaeologist left site. No sites are currently in danger, though a Peregrine-found site (2 tent rings 380m NW of CH-7) will be flagged this winter to ensure avoidance when the access trail is established; this site will be visited by Peregrine's contract archaeologist in summer 2012.
- Palaeontological component of surface and bedrock geology. **N/A**
- Land and resource use in the area, including subsistence harvesting, tourism, trapping and guiding operations.
  The Chidliak property is away from parks and thus is not a tourist destination. Hunting and other subsistence activities (fishing and berry-picking) tend to be centred around *Qamanialuk* (McKeand Lake) for land-users from Iqaluit and *Qasigijjat* (Ptarmigan Fjord) with lesser use of *Kangiqtuq* (Chidliak Bay) by land-users from Pangnirtung. Peregrine is actively engaged with land-users at present to obtain further information on local land-use and will be returning to the communities in November 2011 for further discussion.
- Local and regional traffic patterns.
  Local and regional traffic across the property is comprised of local seasonal use, mainly by boat in summer conditions between Pangnirtung and the north coast of Hall Peninsula, and mainly by skidoo trail in winter between Iqaluit and McKeand Lake. A smaller volume of skidoo traffic follows the "Pang trail" skidoo route across the Hall Peninsula between Iqaluit and Pangnirtung and east to the eastern coast, following the "Suka Trail" spur route. There also is regular air service by First Air and Canadian North, which fly over the Chidliak property to serve passengers travelling to and from Pangnirtung and Qikiqtarjuaq on the Cumberland Peninsula. (During its own seasonal operations, Peregrine maintains regular charter service for its local workforce between Iqaluit and the camps and Pangnirtung and the camps.)
- Human Health, broadly defined as a complete state of wellbeing (including physical, social, psychological, and spiritual aspects).
  Socioeconomic data collection and studies with communities would be commissioned at a more advanced project stage. At present, Peregrine is simply monitoring local health conditions and crises, such as suicides which occur in Pangnirtung, one of its two primary communities. Peregrine's local Community Liaison in Pangnirtung is an up-to-date source of local information on adult and youth wellbeing and sociocultural aspects.
- Other Valued Socioeconomic Components (VSEC) as determined through community consultation and/or literature review.
  A list of VECs has not yet been compiled. This would evolve in due course through community consultation.

5. IDENTIFICATION OF IMPACTS AND PROPOSED MITIGATION MEASURES

1. Please complete the attached Table 1 – Identification of Environmental Impacts, taking into consideration the components in Appendix A. Identify impacts in Table 1 as either positive (P), negative and mitigable (M), negative and non- mitigable (N), or unknown (U).
2. Discuss the impacts identified in the above table.
3. Discuss potential socioeconomic impacts, including human health.
4. Discuss potential for transboundary effects related to the project.
5. Identify any potentially adverse effects of the project proposal on species listed under the *Species at Risk Act (SARA)* and their critical habitats or residences, what measures will be taken to avoid or lessen those effects and how the effects will be monitored.
6. Discuss proposed measures to mitigate all identified negative impacts.

7. CUMULATIVE EFFECTS

Discuss how the effects of this project interact with the effects of relevant past, present and reasonably foreseeable projects in a regional context.

The closest known properties held by other explorers consist of a single block of Prospecting Permits on the Foxe Peninsula, north of Cape Dorset, and a small block of Prospecting Permits west of Kimmirut, near Crooks Inlet. There also is one carving-stone claim on the Hall Peninsula, NE of Iqaluit, about 80km from the SW edge of Chidliak property. There are no competitor holdings or lodges in proximity to the Bulk Sampling Focus Area. South Baffin has been only lightly explored to date for mineral potential, and the largest operation of any kind is municipal, *i.e.,* the City of Iqaluit. A 3-year joint mapping and geophysics project has been conducted on both the Hall and Cumberland Peninsulas by the Geological Survey of Canada and the Government of Nunavut (the Canada-Nunavut Geoscience Office [CNGO]); this project, nearing completion, proposes to add to the sparse geoscience data and thus encourage future exploration to further define Nunavut's economic potential. Peregrine is aware of this government project, as well as the government-funded Small Craft Harbour project which has been under way at Pangnirtung. There are no parks close to the Bulk Sample Focus Area. Effects of the 2012 bulk-sampling programme are expected to be minimal in combination with other regional activities due to the low level and intermittent nature of other human activity across a vast area, Monitoring Plans (*e.g.*, spill and fuel management, abandonment and restoration), visits by Beneficiaries so that they may see footprint and activities for themselves during programmes, commitment to mitigation measures such as avoidance and adjustment of timing of activities, and following height and distance guidelines to the extent possible. It is acknowledged that all Peregrine's personnel, government personnel, contractors, and competitors share a commitment to planning, environmental sustainability and social responsibility.

8. SUPPORTING DOCUMENTS

Where relevant, provide the following supporting documents:

- Abandonment and Decommissioning Plan (**included with application)**
- Existing site photos with descriptions **(photos of terrain around cuttings-deposition areas, which are indicative of the general terrain, are included in *Appendix 9, "Bulk Sample Monitoring Plan"*)**
- Emergency Response Plan **(included with application)**

- Comprehensive Spill Prevention/Plan (must consider hazardous waste and fuel handling, storage, disposal, spill prevention measures, staff training and emergency contacts) **(included with application)**
- Waste Management Plan/Program **(Waste Management Strategy already on file with regulators)**
- Monitoring and Management Plans (e.g. water quality, air pollution, noise control and wildlife protection etc.)
- If project activities are located within Caribou Protection Areas or Schedule 1 Species at Risk known locations, please provide a Wildlife Mitigation and Monitoring Plan

In addition, for Project Type 9 (Site Cleanup/Remediation), please provide the following additional supporting documents:

- Remediation Plan including cleanup criteria and how the criteria were derived.
- Human Health Risk Assessment of the contaminants at the site.

THE NUNAVUT IMPACT REVIEW BOARD
SCREENING PART 2 FORMS

TABLE 1 - IDENTIFICATION OF ENVIRONMENTAL IMPACTS

PROJECT ACTIVITIES	ENVIRONMENTAL COMPONENTS	PHYSICAL	designated environmental areas (ie. Parks, Wildlife Protected areas)	ground stability	permafrost	hydrology/ limnology	water quality	climate conditions	eskers and other unique or fragile landscapes	surface and bedrock geology	sediment and soil quality	tidal processes and bathymetry	air quality	noise levels	other VEC:	other VEC:	other VEC:	BIOLOGICAL	vegetation	wildlife, including habitat and migration patterns	birds, including habitat and migration patterns	aquatic species, incl. habitat and migration/spawnin	wildlife protected areas	other VEC:	other VEC:	other VEC:	SOCIO-ECONOMIC	archaeological and cultural historic sites	employment	community wellness	community infrastructure	human health	other VSEC
CONSTRUCTION																																	
OPERATION																																	
DECOMMISSIONING																																	

P *Positive*
N *Negative and non-mitigatable*
M *Negative and mitigatable*
U *Unknown*

MITIGATION FOR TABLE 1 IMPACTS:

Table 1is NOT fillable, so a simple set of charts for activities, components and impacts is produced below: Also refer to TEXT following the chart:

NOTE: There are NO transboundary effects.

PROJECT ACTIVITY: Bulk Sample within Focus Area.

Components which Might Sustain Impacts	**Rating (P, N, M, U or Not Applicable (N/A)**
Designated environmental areas.	**N/A** (property is not in a special area)
Ground stability.	**U** (no infrastructure requiring such testing)
Permafrost.	**U** (study in future as project advances and specific aspects become known.)
Hydrology/limnology.	**U** (sharpen study focus in future as project advances). 5 hydro stations for streamflow measurements have been utilised since 2009 and a preliminary desktop regional hydrology study has been undertaken.
Water quality.	**M** (mitigation measures – summer and winter water-quality sampling – have been described) Sampling will continue in 2012 to continue accumulation of data for future monitoring.
Climate conditions.	**U** (study in future as project advances) A pilot project remote-sensing met-station was installed at Discovery Camp in 2010, with a Campbell Scientific datalogger backup for redundancy; data on basic parameters are collected real-time on an hourly basis. First season of winter data is anticipated to commence in 2011.
Eskers + other unique or fragile landscapes	**U** (eskers are not a common habitat; unique/fragile landscapes, likely to be associated with small ecoregions, would be determined + quantified via future detailed habitat assessment)
Surface + bedrock geology	**N/A** (no harm from this activity)
Sediment + soil quality.	**M** (mitigation measures have been described)
Noise levels	**U** (study in future as project advances)
Vegetation.	**U** (study in future as project advances; preliminary assessment to date indicates sparse vegetation in Bulk Sample Focus Area.
Wildlife, incl. habitat + migration patterns	**M** (environmental studies under way since 2009; mitigation measures have been described)
Birds, incl. habitat + migration patterns	**M** (environmental studies under way since 2009; mitigation measures have been described, *e.g.*, sampling protocol with CWS and height and distance restrictions)
Aquatic species, incl. habitat + migration/spawning	**M** (preliminary assessment of fish and fish habitat occurred in summer 2010 and will re-commence as project develops; study focus will be refined as/if project develops.
Wildlife protected areas.	**N/A** (property is not in a special area)
Archaeological + cultural historic sites	**M** (mitigation measures have been described) Peregrine has had an archaeological protocol in place since 2008.
Employment	**P**
Community wellness	**P** (providing employment + services brings $ into community, sense of self-esteem)
Community infrastructure	**N/A** (project is too small + not near community)
Human health	**N/A** (project is too small + not near community)

Environmental studies for the Chidliak Project began in 2009, with an initial fish/fish habitat study occurring in 2010. Results of TK/IQ studies also are on the horizon. Mitigations will be designed or revised as project advances and centre of focus becomes clearer. Socioeconomic data also will be collected as the project advances.

Component areas for potential mitigation – water quality, sediment and soil quality, wildlife presence and distribution, fish and aquatics, presence of archaeological/historic sites, as well as mitigation post-drilling – have been addressed elsewhere in this document and in the application's Project Description and Monitoring Plans. As the first biophysical and social objective of any exploration programme is prevention of harm, Peregrine trains contractors and staff in environmental awareness and in maintaining the conditions imposed through permits and licences. Should spills occur, procedures are clearly laid out in Peregrine's Spill Contingency Plan and Emergency Response Plan and are noted in this document. Standard Operating Procedures (SOPs) such as those attached to the Fuel Management Monitoring Plan, will be in place. Impact to water quality will be pre-empted by continuance of sampling of downstream locations to determine background levels for future monitoring. Provision of spill kits, refuge drums and extra absorbents, as well as use of drip pans, also mitigate against impact to water. Environmentally-benign drilling muds also reduce chances of impact to water. Similar mitigation measures are practised by Peregrine with respect to sediment and soil quality and use of eskers and other glaciofluvial features, where present. Following both sediment sampling and drilling, pits/holes are closed and no debris left behind. Archaeological sites, where co-ordinates are known, can be protected through avoidance – hence, Peregrine's commitment to acquiring site data from the Archaeology Division of CLEY and through its own archaeological surveys. An archaeology protocol also exists to guide field personnel, should a suspected archaeological or historic site be encountered. At the end of 2009, Peregrine's archaeologist also prepared a site identification guide for field personnel, which was made available to field staff.

Although it has been identified in this document that wildlife are present in low densities on the Chidliak property, it must be stressed wildlife always have right-of-way on project sites and encounters are avoided to the extent possible. If caribou or bears are encountered during programme activities (spotted by aircraft or by equipment travelling the access trail), plans will be altered so as to avoid disturbance, then the area returned to later. Information from government biologists and local HTAs, as well as other land-users and via TK/IQ reports also will be used to inform surveys and overall planning, to lower the potential incidence of encounters. Peregrine will continue keeping Wildlife Logs for the 2012 bulk-sampling programme to document any wildlife passage through the camp areas, trails or worksites.