SCREENING PART 2 FORM
PROJECT SPECIFIC INFORMATION REQUIREMENTS (PSIR)

(AMENDMENT TO ADD NEW TENT CAMP)

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 (MapInfo files accompany the application).

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: 26A/04-05, 26A/12; 26B/01-03, -05-11; -14-16; 25O/15-16; and 25P/13. NEW CAMP to be situated at: 64° 36' 33" N. lat. - 66° 34' 36" W. long. in 26B/10.

- 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° 30' 00" W** *to* **67° 30' 00"W.**
- the location of any proposed infrastructure or activity(s);
  PROPOSED NEW CAMP = 64° 36' 33" N. lat. - 66° 34' 36" W. long. Ground geophysics and lake-based drilling in winter are intended to proceed in March-April 2011; these activities were already screened for the Chidliak Project 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 Map 1, attached with application).
3. Map of any camp site including locations of camp facilities.
   Map 2 and Photo 1 (attached with application) depict proposed NEW CAMP site. Selection of the site was based upon a field visit by an Arctic geotechnical engineer, Peregrine's archaeologist and the Chidliak operations manager. Further, once the site was selected, Peregrine representatives travelled to Iqaluit and Pangnirtung to discuss the site with local land-users. A sketch map will be produced when the new camp is operational.

4. Map of the project site indicating existing and/or proposed infrastructure, proximity to water bodies and proximity to wildlife and wildlife habitat.
   Maps 1 and 3 depict the location of the proposed NEW CAMP in relation to neighbouring topographic features. At the suggestion of the Pangnirtung HTA in February 2010, Peregrine extended its environmental-baseline Wildlife Study Area northward, and in summer 2010 completed an aerial caribou survey over the northern portion of the property in the vicinity of the proposed NEW CAMP and adjoining lakes and land on the west side of south Ptarmigan Fjord. The environmental report of 2010 studies by EBA Engineering Ltd. (EBA) will be completed in late autumn 2010 and provided to regulators and local interest groups, along with a summary in Inuktitut. Survey results indicate few caribou sightings across the property in 2010, with a single caribou observed 6km south of the proposed NEW CAMP and one set of caribou tracks recorded 7km east of the proposed NEW CAMP. 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).* Aquatic studies commenced in 2010, and this information will be available in the 2010 EBA environmental report. Fish studies (catch-and-release to determination presence/absence, along with habitat characterisation downstream of the existing camps and several kimberlites) commenced in "North Lake", the lake immediately north of the proposed NEW CAMP. It is expected that fish studies will continue in 2011, with likely inclusion of "Camp Lake" within the scope of the aquatics programme. Based upon environmental surveys to date and crew wildlife logs, it is not anticipated that more than a few caribou might approach the proposed NEW CAMP or adjoining work areas (winter drill sites) and a lesser

number of polar bears, should use of the camp continue in the summer 2011 period when bears move inland from Ptarmigan Fjord. Inuit Bear Monitors will continue to be employed as required, and field crews will continue to be sensitive to any animal presence, as required by Peregrine and by the terms and conditions of Peregrine's permits and licences.

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 operate a new tent camp proximal to northern drill targets on the Chidliak property. Actual activities – such as operation of a camp, lake-based and land-based drilling, geophysical surveying, prospecting and sampling – already were screened by NIRB in 2008 (*#08AN008).* These standard exploration activities are necessary in order to determine if the Chidliak Project area, or any part of it, holds economic potential. Exploration thus occurs in planned stages over a number of years, as property areas such as Chidliak are remote, subject to harsh weather conditions, and experience a highly variable fieldwork window and short summers. Without this level of care and effort, new kimberlite orebodies, which may host diamonds, will not be discovered, and potential economic resources for Nunavut and Canada will remain unproven.

   Although less work could conceivably be conducted in a field season – *e.g.*, decreasing the size and scope of ground geophysical surveys, 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 and Prospecting Permits under the Canada Mining Regulations requires that the proponent spend a certain amount per claim or Prospecting Permit, to further the national objective of exploration, or else the proponent loses that claim or Prospecting Permit. Peregrine views erection and operation of the NEW CAMP in the north of the property as a key element in ensuring the safe and efficient exploration of that distant area of the property.

   In the case of the Chidliak property, areas of interest are being retained and converted to mineral claims as appropriate, with ground of no further interest released.

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 2011):

   - <u>14 to 27 February 2011</u>: Construct NEW CAMP.
   - <u>28 February to 30 April 2011</u>: Conduct ground geophysics by skidoo and on foot. Mobe in one of two drills parked at Sunrise Camp; conduct lake-based winter drilling on "North Lake" adjoining camp and at any other lake-based targets nearby.

- <u>30 April to 31 August 2011</u>: Close after winter drilling is complete. Reopen as soon in July 2011 as conditions allow. Drill land-based targets nearby, if warranted. Conduct any prospecting or fill-in geochemical sampling during same summer period, if warranted.
Also: Completion of 2011 environmental and archaeological surveys in same period. (Winter water-quality sampling would occur in association with any lake-based drilling.)

8. List the acts, regulations and guidelines that apply to project activities.
   Peregrine will obey all legislation which applies to Chidliak property, including but not limited to the Nunavut 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 Class A Land-Use Permit #*N2008C0008* and NWB Water Licence #*2BE-CHI0813* continue in force. With this application, Peregrine is seeking to <u>amend these authorisations to allow construction and operation of a NEW TENT CAMP</u>. (QIA Land Licence #*Q10L1C008* does not apply to the new camp, which is situated on Crown Land in NTS 26B/10.)

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.

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).
    With operation of the proposed NEW CAMP – which would be only 2.8km SW of the main area of drilling interest (*cf. Map 2*) – drillers and geologists would be able to commute back and forth by skidoo. This would lessen dependence on helicopters to support the drill programme. One helicopter

still would be required for initial mobe and demobe of the drill or transport of any heavy parts, as well as remaining on site in case of a requirement for medical support. A Twin Otter on wheel-skiis will be used to support the camp with groceries, small fuel loads and other supplies, with a Buffalo DC3 employed infrequently for larger fuel hauls; larger aircraft can easily land on and take off from "North Lake", with "Camp Lake" to the south able to accommodate smaller aircraft (Twin, Super Caravan or Skyvan). Campsite and any work sites will be accessed by air: fixed-wing for supply flights and helicopter for conveying field crews for the ground survey and sampling programme to work sites. Fixed-wing ferry flights will be from the other winter camp, Sunrise Camp, located approx. 50km SE. (Maps 1-3 accompany the application and contain scale bars for calculating distances).

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. The only airstrip associated with the proposed NEW CAMP will be ice-based, *i.e.*, aircraft will take off and land on either the "Camp Lake" or adjoining "North Lake", both of which have sufficient length and depth for winter landings and takeoffs; thus, the NEW CAMP airstrip scenario would be very similar to that of Sunrise Camp.

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. **N/A**
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. twice per week. Routes would represent the shortest distance to NEW CAMP from Sunrise Camp primarily and secondarily from Iqaluit, 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 in order to count caribou and other wildlife and make habitat observations; ideally, at least 3 surveys are flown per exploration-year. 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

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

    NEW CAMP would be seasonal, as are the two existing camps already screened. NEW CAMP would be similar to both existing camps, except accommodating 20 persons in 2011 rather than the 24 persons at Sunrise and Discovery camps. Current plans are for the NEW CAMP to support lake-based drilling in March-April 2011; camp could be closed and then reopened if any land-based drilling is proposed for summer 2011.

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

    Maximum no. of personnel = 20 at NEW CAMP. [Also refer to schedule in Question #7.]

Example of proposed Third Camp footprint (similar to that of Discovery Camp in its first year):

- **5 sleeper tents (5m x 5m, or 16' x 16');**
- **1 medic tent/first-aid shack (same dimensions);**
- **1 dry tent (same dimensions);**
- **1 Pacto tent, 2-3 toilets (same dimensions);**
- **1 kitchen tent (5m x 10m, or 16' x 32');**
- **1 office tent (5m x 5m, or 16' x 16');**
- **1 generator shed (3m x 3m, or 10' x 10');**
- **1 storage shed (same dimensions);**
- **1 recreation tent, if warranted (5m x 5m, or 16' x 16')**
- **1 incinerator**
- **2 fuel berms (one each for Jet-B and diesel, plus potentially a third smaller berm for petrol);**
- **1 heli-pad.**
- **1 electrified bear fence around perimeter (if use in summer is planned)**

Potential footprint: 0.2ha-0.3ha

Equipment

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

    No new equipment proposed for use at NEW CAMP: All is the same as previously outlined to regulators: (1) <u>Twin Otter</u> will be used to mobe/demobe, ferry supplies/equipment and fuel into camp/empties on backhauls); (2) <u>helicopter</u>, (A-Star likely) based at camp will be used to move drill and drill parts, ferry any crews requiring assistance to worksites or environmental or geological sampling or prospecting sites; be on hand for any medical needs; (3) <u>snowmobiles</u> (approx. 4) for travel to and from drillsites and to move supplies and drums around camp; (4) <u>drills</u>: Boart Longyear LM-55 core drill and North Span Hornet (lightweight waterless RC rig for short condemnation holes) already at Sunrise Camp; (5) <u>diesel generator + backup</u> for camp power; (6) diesel-powered <u>pumps</u> (for pumping water to camp kitchen and dry, and for backup/spill-plan inventory). [It is <u>not</u>

likely that the CAT 247B Multi-Terrain Loader based at Discovery Camp would be flown to NEW CAMP.]

20. If possible, provide digital photos of equipment.

    Photos showing Twin Otters and helicopters, as well as the drills, 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.

    (*See Map 2 and Photo 2).* Water for NEW CAMP will be drawn offshore of "Camp Lake" at the closest accessible deep point. Flexible-hose water line will be used for conveying water from "Camp Lake" to NEW CAMP. Suction hose lowered into 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, as already occurs at Sunrise and Discovery Camps. As NEW CAMP has not been set up, there is no specific camp map as yet with co-ordinates of intake and structures; however, the co-ordinates of NEW CAMP are: 64° 36 33" N. lat. - 66° 34' 36" W. long., in NTS 26B/10. (A photo of the campsite accompanies the application as Photo 1).

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

    No additional allotment is requested for NEW CAMP. Use of water for domestic purposes for all 3 camps will not exceed the approved limit of 25m^3/day total. (Water consumption for drilling will remain within the approved limit of 70m^3/day). In 2009, the small camp populations at Discovery and Sunrise consumed < 4m^3/day (total for both camps together).

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 two existing camps, waste water from NEW CAMP uses will report to a sump, hand-dug or modified natural depression (typical dimensions are 1m x 1m x1.5m); sumps from kitchen and dry will be at least 31m from OHWM, with drainage away from the lake. Sump contents will be treated with Javex, if required, to control odours which could attract wildlife. In summer conditions at Sunrise and Discovery, Liqui-Bac microbial treatment for grease control was carried out; this treatment regimen also could be employed at NEW CAMP sumps, if camp is occupied in summer conditions. The 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.

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 (*e.g.*, in 2011 for this project) drillwater is recirculated up to 80%, with relict drillwater and cuttings reporting to suitable sump locations (natural depressions or outcrops), and monitored such that drainage is away from watercourses. Although Peregrine's drill contractors are told not to employ drill additives, 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 drilling additive not on Peregrine's MSDS list. (Our regulators received copies of Peregrine's updated MSDS list in June 2010).

Waste Water (Grey water, Sewage, Other)

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

      NEW CAMP: Waterless Pacto toilets (2-3); sewage up to a volume of approx. 37L/day, depending on camp population, will be incinerated on site. Toilets are checked daily by camp attendants.
    - Camp grey water

      NEW 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

      NEW CAMP: Combustible kitchen waste on the order of at least one 121L garbage bin by volume will be incinerated daily at camp.
    - Non-combustible solid waste

      NEW 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

      NEW 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.
    - Waste oil/hazardous waste

      NEW CAMP: Volume of 2 drums' worth of waste oil/fuel, filters, oily rags, *etc.*, could be generated in the 2011 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 transfers to QC-Logistics or other authority for onward shipment to a Registered Waste Receiver as per Peregrine's approved Waste Generator authorisation from GN-DOE).

- Contaminated soils/snow

  NEW 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 for proper disposal with a suitable contractor.
- Empty barrels/ fuel drums

  NEW CAMP: Empty drums will be segregated from full drums, bungs tight, and flown out on backhauls, with a certain number reserved for use as refuge drums (containers for waste fuel, scrap, any spilt hydrocarbons, should such occur). Peregrine has purchased a barrel crusher which is now in Iqaluit and is exploring options of crushing drums that cannot be refilled for ease of outshipment.
- 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.

Table 1: Projected Fuel and Oil Use for 2011 Exploration Activities - Chidliak

Fuels	No. of Containers	Capacity of Containers	
Diesel for camp stoves, equipment	250 drums	205L	(incl. NEW CAMP)
Aviation turbine fuel (Jet-B)	600 drums	205L	(incl. NEW CAMP)
Unleaded petrol (gasoline)	15 drums	205L	(incl. NEW CAMP)
Propane	60 cylinders	45kg	(incl. NEW CAMP)
Oxygen (medical)	3 cylinders	10kg	
Oils/lubricants/cleaners	150	1L to 5L (typical sizes)	

Empty drums, cylinders regularly backhauled.

NEW CAMP: Current plans are for this camp to be in operation in winter 2011 only, a period of 6-8 weeks, but additional fuel resources can be transferred from Sunrise or Discovery, if required. Sizes are 205L/drum and 45kg/cylinder. Arctic-rated secondary-containment berms like those already in place at Discovery and Sunrise will be established at NEW CAMP. Fuel will be flown to camp via fixed-wing service and then positioned/rotated by

snowmobile and helicopter. 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 for bung and drum soundness during the programme. Drums hooked up to tents and shacks will be secured, with absorbent-lined drip containers placed under valves, or, in the case of the drilling contractor in 2011, moulded plastic drip-collection containers which over-fit the drum or other drip pans will be deployed. Spill kits and extra absorbents will be kept at key fuel-use or transfer locations, *i.e.*, at the fuel cache/helicopter area, and at NEW CAMP compound, such as gen-shed. MSDS sheets for products on site will be available digitally on NEW CAMP computers or in hard copy. The updated Spill Plan and Emergency Response Plan will be on site for all staff, contractors.

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.

    NEW CAMP: As with existing camps, transfer by hand-wobble pump, grounded electric pump or diesel pump, with drip pans in place and absorbents on hand.

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.

    NEW CAMP: As in the existing two 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 150L of such chemicals/hazardous substances could be required in a programme season, with about 50L of those specifically in the NEW 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.*, each drillshack, each fuel cache/helicopter area, and at the camp. MSDS sheets for products on site will be available digitally in the NEW CAMP or in hard copy; an updated MSDS inventory was supplied to regulators in June 2010. An 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 helicopter. Camp storage

would be in the gen-shed or dry; NEW CAMP has not yet been constructed, but a camp map will be prepared when the camp is operational.

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.*

Workforce and Human Resources/Socio-Economic Impacts

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

    NEW CAMP: It is anticipated that several new employment opportunities will result from creation of the additional camp. (Some 35 local persons from Iqaluit and Pangnirtung were employed on the Chidliak Project overall in 2010.) 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 and geological assistant. 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 has been delayed, even though a training institution was chosen and a training plan has been prepared, pending selection of a suitable partner; currently, preliminary discussion has begun with QIA's Kakivak Corp.

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 will be implemented (worker + cross-shift), but the actual rotation will be determined in consultation with workers, based upon the anticipated length of the programme to be operated out of NEW CAMP. 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, 2/3 of local employees have been hired from Pangnirtung, with 1/3 hired from Iqaluit.

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.

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

    NEW CAMP: As soon as the site for the new camp was selected, Peregrine advised the Hamlet of Pangnirtung (community closest to the site) and then met with the HTAs of Iqaluit and Pangnirtung in mid-September 2010, and held a radio call-in question-and-answer show in Pangnirtung (at hamlet's request), as well as an open house. It was important to Peregrine that this consultation occur prior to requesting amendment of the water licence and land-use permit.

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

    NEW CAMP: As noted in Question #37 above, Peregrine representatives advised the Hamlet of Pangnirtung as soon as proposed NEW CAMP site was selected, then held meetings with the Amarok HTA in Iqaluit and the Pangnirtung HTA shortly thereafter, in mid-September 2010; the Pangnirtung event included an open house and, as the hamlet requested, a radio call-in question-and-answer session in lieu of a public meeting. Concerns were raised by 5 callers and several Pangnirtung HTA members as follows: (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. Peregrine responded that a deciding factor in the selection of the proposed NEW CAMP site was that wildlife surveys in 2010 did not reveal caribou in the immediate vicinity, and that few caribou and caribou sign had been observed during the surveys, *e.g.*, 1 caribou 6km S of proposed campsite and 1 set of tracks 7km E of campsite. Archaeology survey in August 2010 revealed no sites around the campsite or the adjoining lakes, "Camp Lake" or "North Lake". 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

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 explained that the location of NEW CAMP adjacent to the proposed "North Lake" was itself a mitigation, in that this would result in less helicopter flying. Peregrine stressed that deviations from the 300m-600m altitude were acceptable where human safety of crews was involved and where low altitudes, such as 150m for wildlife and airborne surveys, were required for surveys to render valid data. Peregrine advised that data from an upcoming GN-Wildlife South Baffin caribou survey in 2011 or 2012 would help to provide much-needed answers about the South Baffin caribou sub-populations and presence/absence.

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 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 late November 2010 to obtain further information on land-user sites for purposes of planning and avoidance. It was a suggestion from the Pangnirtung HTA in February 2010 that led to the northerly expansion of the Chidliak wildlife study area.

40. Discuss future consultation plans.

    <u>Next community meetings</u>: Visit to Iqaluit and Pangnirtung is currently being organised for the week of <u>22 November 2010</u>. Following that, the next set of community meetings will likely be in <u>February 2011</u>, prior to the new field season, to explain planned activities and seek input, and to recruit local personnel for 2011 field season. Peregrine is currently in discussion with Amarok HTA in Iqaluit about assisting Peregrine with recruitment of Iqaluimmiut.

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 N/A

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.
13. Describe the operating time period.
14. Identify the proposed traffic speed and measures employed to ensure public safety.
15. Discuss whether the selected route traverses any fish-bearing water bodies.

SECTION B: Mineral Exploration /Advanced Exploration /Development

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)
     Further surficial mini-bulk samples (aver. 50T each) also may be collected at one or more selected kimberlites in 2011, as occurred in 2009 and 2010. (This activity already has been screened by NIRB).
   - 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 in 2011.
   - Preliminary Delineation Drilling **N/A**
   - Exploration drilling
     2011: Continued use of heli-portable diamond-drill core rigs as well as waterless short-hole RC drill (both types were used in 2010).
   - Geophysical work (indicate ground and/or air)
     Ground geophysics in north of property, based out of proposed NEW CAMP.
   - 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
     Surficial sediment sampling is possible in 2011 at selected locations, if warranted.
   - On-land drilling (indicate drill type)
     Boart LM-55 already on site. One of two 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 early August 2010, and its use may continue in 2011.
   - On-ice drilling (indicate drill type)
     Same Boart rigs as noted above.
   - Water based drilling (indicate drill type) **N/A**
   - Overburden removal
     Minimal overburden would be removed and stockpiled, mainly associated with putting in NEW CAMP.
   - Explosives transportation and storage **N/A**
   - Work within navigable waters **N/A**
   - On site sample processing **N/A**
   - Off site sample processing **N/A**
   - Waste rock storage **N/A**
   - Ore storage **N/A**

- Tailings disposal **N/A**
- 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
    Ground mag in north of property, based out of NEW CAMP.
    c. Gravimetric **N/A**
    d. Electromagnetic
    e. 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.
    Ground survey grids for 2011 have not yet been determined, but they would be in the north of Chidliak, in area of NEW CAMP.
7. Provide flight altitudes and locations where flight altitudes will be below 610m.
    Flight altitudes in general are between the accepted limits of 300m and 600m, except where human safety dictates flying at a lower altitude; north of property is plagued with fog and winds, which affect ability to fly high. Other determining factor on flight altitudes is survey parameters; for geophysical and wildlife surveys, for example, heights are typically 150m, but such surveys are of short duration. (A typical wildlife aerial survey is a 4-hour survey conducted an average of 3 times a year, or less.) Caribou have right-of-way in all surveys and operations: Should numbers of animals (or a polar bear) be observed entering an area where survey is commencing or under way, other flight lines (away from the aggregation) will be flown so as to avoid overflying the animals. [Also see answer to Question #15 above.]

B-4 Drilling

8. Provide the number of drill holes and depths (provide estimates and maximums where possible).
    Drilling plan for 2011 is not yet available, but will be provided to regulators at a later date. At least one lake-based target will be drilled at 2.8km distance from NEW CAMP (visible on Map 2); other accessible northern lake-based targets may be added to the winter drill programme, if warranted.

9. Discuss any drill additives to be used.
    NEW CAMP: As with Chidliak overall, any drilling to be conducted out of the new camp would be conducted with environmentally-benign muds or additives. (Updated MSDS inventory was supplied to our regulators in June 2010). Any new additives a drill contractor would wish to add would have to

have prior approval from Peregrine, and information on the new product would be circulated to regulators as an addendum to the MSDS inventory currently in effect. Data on any additive use is required to be recorded on the drill log.

10. Describe method for dealing with drill cuttings.
    Cuttings (natural country rock) will report to suitably-sized depressions or outcrops on land, so that any flow is away from waterbodies.

11. Describe method for dealing with drill water.
    As in previous years, drillwater in 2011 will be recycled in the drilling circuit up to about 80%; the remaining 20% will be pumped through a flex-hose sludge line to a predetermined sump. Output to sump is comprised of clean rock and clean sandy/silty water.

12. Describe how drill equipment will be mobilised.
    Drill equipment will be flown to site via fixed-wing, or transported via helicopter loads to "North Lake" from Sunrise Camp.

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 Abandonment & Restoration Plan. Lake-based coreholes in 2011 will be closed with grout plugs; land-based holes are cemented and casings cut. 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 **N/A**

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

27. Discuss the anticipated volumes of waste rock and tailings.
28. Discuss methods used to determine acid rock drainage (ARD) and metal leaching (ML) potential and results.

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 **N/A**

37. Describe the physical nature of the ore body, including known dimensions and approximate shape.
38. Describe the geology/ mineralogy of the ore deposit
39. Describe the host rock in the general vicinity of the ore body.
40. Discuss the predicted rate of production.

41. Describe mine rock geochemical test programs 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.

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: <u>Oil and Natural Gas Exploration/Activities</u> **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 utilizing *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. There are no protected areas in proximity to NEW CAMP or proposed northern exploration areas; an archaeological survey in August 2010 discovered no archaeological sites in proximity to NEW CAMP, "Camp Lake" or "North Lake". There are no designated natural-beauty or cultural areas in proximity to NEW CAMP or proposed northern exploration areas. There is no commercial fishery on "Camp Lake" or "North Lake". Peregrine is aware that Ptarmigan Fjord area (*Qasigijjat*) is an area used seasonally by some Pangnirtung families, and has requested that land-users assist our activities by sharing location information with Peregrine for purposes of

timing and avoidance; that process commenced in September 2010, as soon as NEW CAMP site was selected, and will continue as part of exploration planning. BEARS: Polar bear habitat (denning and summering) is at the northernmost (marine) edges of the property and will be treated with sensitivity; bear fences have been erected at the two existing camps to lower the risk of person-bear interaction on the ground. GN-Wildlife's report, "Davis Strait Polar Bear Population Inventory", 29 April 2009, indicates an increasing polar-bear population of approx. 2142 animals in 2007, based on animal capture and recapture, with animals located all along the north and east coasts of Hall Peninsula. <u>CARIBOU:</u> 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, sensitivity will be exercised at all times, which may result in the need to alter a day's flight plans or timing of land-use activities. Local Inuit knowledge and scientific knowledge (the latter also involves helicopter aerial surveys) will help to inform field activities. Local land-users have differing opinions as to the caribou sub-population in the north area of Chidliak: Some feel that caribou numbers are less because of increased human presence (Peregrine, *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.

- 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 at several hydro stations commenced in 2009 and continued in 2010. A desktop regional hydrology study was commissioned from a environmental consultant in 2010, and is in preparation.
- Tidal processes and bathymetry in the project area. **N/A**
- Water quality and quantity.
  Water quality can be considered pristine. Large lakes are not numerous on the Chidliak property. Initial bathymetry and drilling on "North Lake" indicates it is deep. Both "Camp Lake" and "North Lake" have sufficient depth to allow easy operation of ice strips in winter, and sufficient water supply to serve NEW CAMP. Summer water-quality stations and several hydro stations were established across the property in 2009 and sampled in 2009 and 2010. Winter water-quality sampling commenced in spring 2010 and will continue in association with proposed 2011 winter drilling in the north of the property.
- Air quality.
  Air quality is undisturbed.
- Climate conditions and predicted future climate trends. **N/A**
- Noise levels.
  Noise from aircraft and the camp generator, and any other exploration activity, 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 the NEW CAMP area. Exploration plans and mitigations are discussed regularly with local hunters/trappers associations and local land-users during regular community visits.
- Other physical 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.

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 continued in 2010. Studies will continue in 2011. 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 above).
- Birds, including habitat and migration patterns.
  Studies of raptors, waterfowl, waterbirds and breeding birds commenced in 2009 and continues. 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. The polar bear (*ursus maritimus*) is listed by COSEWIC as a species of special concern; however, polar bears are not listed in Schedule 1 of SARA; polar bears have not been part of environmental surveys to date. Surveys for harlequin ducks have produced no sightings over two seasons; several Peregrine Falcon territories were observed in 2009; a Peregrine Falcon nest site was added to the inventory in 2010. Short-eared owls were not observed.

- Aquatic (freshwater and marine) species, including habitat and migration/spawning patterns.
  Species in regional rivers and lakes include Arctic char, lake trout and Arctic grayling, although it must be noted that many waterbodies on the property are shallow and freeze to the bottom in winter. Fish sampling and fish habitat characterisation on select streams and lake environments commenced in summer 2010. The objective of the fish and fish habitat survey this year was to document fish presence and habitats downstream from several kimberlites and both existing camps. The survey was conducted in association with the late July hydrology programme (streamflow and water-quality stations). Since Arctic Char were captured or observed at all sampling sites, all of the rivers, streams, and the associated lakes within the study area are likely to provide appropriate habitat for Arctic Char during one or more of their life history stages.
- 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 and the Physical Environment section response (Pgs. 26-27).
- Archaeological and culturally significant sites (e.g. pingos, soap stone quarries) in the project and adjacent areas.
  Archaeology surveys were conducted in August 2009 and August 2010. Eighteen new sites were discovered on the property (McKeand Lake and Ptarmigan Fjord in 2009 and the sole previously-registered site (1976) was revisited. Eighteen new sites were discovered on the property (6 at McKeand Lake and 12 off the property on Tawsig Fjord) in 2010.
- 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 late November 2010 for further discussion.**

- Local and regional traffic patterns.
  Local and regional traffic across the property is comprised mainly 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. 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.
- 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) are 77km, 85km and 92km E, on Hall Peninsula, in the vicinity of Cornelius Grinnell Bay and Field Bay. Past exploration activity in the region of the Chidliak Project has been negligible. Effects of the Chidliak Project on the current distant though neighbouring properties, and future projects, can

be expected to be minimal, owing to a limited number of explorers over a vast area, the seasonal nature of the activity and the commitment of all players to environmental sustainability.

8. SUPPORTING DOCUMENTS

Where relevant, provide the following supporting documents:

- Abandonment and Decommissioning Plan (**included with application)**
- Existing site photos with descriptions **(included with application)**
- 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

	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
PROJECT ACTIVITIES																																
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: Set up NEW CAMP.

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, but would not be an issue with respect to the small proposed tent camp, NEW CAMP)
Hydrology/limnology.	**U** (study in future as project advances). Some hydro stations for streamflow measurements have been utilised since 2009. A regional hydrology study is currently under way.
Water quality.	**M** (mitigation measures – summer and winter water quality sampling – have been described) "North Lake" was sampled in 2010; "Camp Lake" water quality should be sampled in 2011.
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 adjoining for redundancy; data on basic parameters are collected real-time on an hourly basis. NEW CAMP would not part of this monitoring project 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; however, vegetation in area of NEW CAMP is sparse.
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** (environmental studies of fish and fish habitat commenced in 2010 and will continue as project develops; study focus will be refined as/if project develops. Study which commenced in "North Lake" could be expanded to "Camp Lake" in 2011.
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. No sites near NEW CAMP.
Employment	**P**
Community wellness	**P** (providing employment + services brings $ into community)
Community infrastructure	**N/A** (project is too small + not near community)
Human health	**N/A** (project is too small + not near community)

PROJECT ACTIVITY: Conduct field exploration programmes.

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)
Hydrology/limnology.	**U** (study in future as project advances). Some hydro stations for streamflow measurements have been utilised since 2009. A regional hydrology study is currently under way.
Water quality.	**M** (mitigation measures – summer and winter water quality sampling – have been described)
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 adjoining for redundancy; data on basic parameters are collected real-time on an hourly basis. This station, along with two similar stations at Baffinland's Mary River site, constitute a climate-change data-gathering research project ("Baffin Intelligent Monitoring Project") operated by Laurentian University and Symboticware remote-sensing systems contractor with Centre for Excellence in Mining Innovation.
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)
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** (environmental studies of fish and fish habitat commenced in 2010 and will continue 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)
Community infrastructure	**N/A** (project is too small + not near community)
Human health	**N/A** (project is too small + not near community)

PROJECT ACTIVITY: Secure/close camp + demobe.

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)
Hydrology/limnology.	**U** (study in future as project advances). Some hydro stations for

	streamflow measurements have been utilised since 2009. A regional hydrology study is currently under way.
Water quality.	**M** (mitigation measures – summer and winter water quality sampling – have been described)
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 adjoining for redundancy; data on basic parameters are collected real-time on an hourly basis. This station, along with two similar stations at Baffinland's Mary River site, constitute a climate-change data-gathering research project ("Baffin Intelligent Monitoring Project") operated by Laurentian University and Symboticware remote-sensing systems contractor with Centre for Excellence in Mining Innovation.
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)
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** (environmental studies of fish and fish habitat commenced in 2010 and will continue 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)
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 early-exploration Chidliak Project began in 2009, with fish studies commencing only 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. 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. Impact to water quality will be mitigated by initiating sampling of waterbodies near mineral occurrences and during winter drilling, and camps such as Sunrise Camp and NEW CAMP 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 an airborne survey (*e.g*., viewed ahead whilst on a survey flight line), 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. Wildlife logs will be kept in NEW CAMP and in crew helicopters to document any wildlife passage through the camp area or worksites.