SCREENING PART 2 FORM
PROJECT SPECIFIC INFORMATION REQUIREMENTS (PSIR)

PEREGRINE DIAMONDS' "SAMPLING PROJECT ON IOLs – HALL PENINSULA"

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 on CD).

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;
     Surface IOLs: PA-21, PA-22, PA-27, PA-28, PA-24, PA-29 and IQ-01, IQ-02, IQ-03, IQ-04, IQ-05, IQ-15.
   - the boundaries of the foreseen land use permit/right-of-way area(s) to be applied for;

The co-ordinates of Peregrine's Prospecting Permits block on the Hall Peninsula are as follows:

NW Corner – New Prospecting Permits:
63° 45' 00" (Lat.-degrees/minutes) 67° 00' 00" (Long.-degrees/minutes)

NE Corner – New Prospecting Permits:
64° 37' 30" (Lat.-degrees/minutes) 65° 00' 00" (Long.-degrees/minutes)

SE Corner – New Prospecting Permits:
63° 00' 00" (Lat.-degrees/minutes) 65° 00' 00" (Long.-degrees/minutes)

SW Corner – New Prospecting Permits:
63° 45' 00" (Lat.-degrees/minutes) 67° 00' 00" (Long.-degrees/minutes)

- the location of any proposed infrastructure or activity(s);

  Sampling on IOLs is the activity being applied for from QIA.

  Sampling on IOLs adjoining the new Prospecting Permits will be served out of Iqaluit; no camp will be erected. Sampling on IOLs adjoining the existing Prospecting Permits will be served out of one of two approved camps on Crown land: either the existing camp (64° 14' 00" N. lat. – 66° 21' 00" W. long.) or the new camp (64° 14' 25" N lat. – 66° 07' 45" W long.)

- 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, Map 2 and Map 2—1:250 000 Scale Version, attached with application).

3. Map of any camp site including locations of camp facilities.
   Photo 1 and Drawing 1 (attached with application) depict setup of existing camp. Map 3 shows the location of the existing camp and new camp. Only sampling on existing Prospecting Permits and portions of their adjoining IOLs will be conducted from one of these camps.

4. Map of the project site indicating existing and/or proposed infrastructure, proximity to water bodies and proximity to wildlife and wildlife habitat.

Maps 1-3 (attached with application) depict the existing and new Prospecting Permits and their spatial relationship to adjoining IOLs. Polar bear habitat exists along the coast (Map 4), with lessened probability as one proceeds inland. E-mail discussion was held with Elizabeth Peacock, Government of Nunavut polar-bear biologist, and mapping consulted (unpublished study, with map data from 2005-2007). The Government of Nunavut Environment Department website, as well as a paper entitled "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) was consulted for caribou information. In addition, based on Peregrine field observations to date, it is not anticipated that more than a few caribou might enter an area where sampling is intended, at the same time as the crew is approaching, and a lesser number of bears; however, Inuit Wildlife Monitors will be employed and helicopter-supported sampling will be sensitive to any animal presence (including that of wolves and wolverine) in proposed sample areas; such areas would be avoided until animals have moved on. Map 5 depicts Canadian Wildlife Service (CWS) Bird Site #29 in relation to both the Prospecting Permits and surface IOLs. Any sampling in the bird site would be based on

following advice and recommendations from CWS, including avoiding flying over islands off the coast.

Project General Information

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

As discussed in the Project Description (attached with application), the project activities on IOLs will be restricted to surficial sediment sampling in 2009. This early activity is necessary in order to determine the presence of indicators which might point to the need for ground geophysics and test-drilling in future. Exploration for kimberlites that may host economic quantities of mine-quality diamonds occurs in planned stages over a number of years, even a decade: Property areas such as those held by Peregrine on the Hall Peninsula 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 number of samples collected in a season – this is not cost effective nor is it good value for shareholders. The objective in remote areas such as the IOLs adjoining Peregrine's Prospecting Permits on the Hall Peninsula, is to do as much work as is feasible and within budget during the time that the field staff are in the area, 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.

In the case of the existing Prospecting Permits (also known as the "Chidliak Project"), Peregrine will be staking claims this summer in the oldest Prospecting Permits, so that the ground may be retained for further exploration. This activity is already approved, and is separate from the activity applied for in this application to the QIA.

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.

   The following is a tentative schedule, which is subject to adjustment closer to the sampling-project start date:

   - <u>01 July 2009 (or as close to that date as possible)</u>: Helicopter-supported 2-person crew for sampling on the new Prospecting Permits (also known as the "Qilaq Project"), begins collecting 10L samples at pre-selected points in the sampling area. Estimated time required to collect 150 samples on adjoining IOLs: 5 days, assuming 30 samples/day and commuting from Iqaluit. Number of samples estimated to be collected within the boundaries of the CWS Bird Site: approximately 42. Some samples may be deducted, if flocks of birds are present or direct disturbance may be reasonably predicted.

   - 10 <u>to 15 July 2009</u>: Separate helicopter-supported 2-person crew for sampling on the existing Prospecting Permits (also known as the "Chidliak Project"), begins collecting 10L samples at pre-selected points in the sampling area. Estimated time required to collect 120 samples on adjoining IOLs: 4 days, assuming 30 samples/day and commuting from Peregrine base camp on Crown land. Number of samples estimated to be collected within the boundaries of the

CWS Bird Site: approximately 24. Some samples may be deducted, if flocks of birds are present or direct disturbance may be reasonably predicted.

A small number of stream-sediment samples (up to 25 in total) may be collected on the new Prospecting Permits ("Qilaq Project"), should suitable sample sites be found. It is not currently known if any stream samples would be collected on IOLs.

- <u>24 August 2009</u>: All sampling complete by this date on Crown land and IOLs, and all samples now transported off site.

8. List the acts, regulations and guidelines that apply to project activities.

Peregrine will obey all legislation which applies to its activities on the new or existing Prospecting Permits and the adjoining IOLs, including but not limited to the NWT and 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 licences required to conduct the project.

A new QIA Land Licence I is being applied for with this application, to replace QIA Land Licence I *#Q08L1C01* which authorised similar sampling activity on IOLs and expired 03 March 2009.

Similar sampling activity on adjoining Crown Prospecting Permits is authorised under Class A Land-Use Permit *#N2008C0005* (expires 17 April 2010). Peregrine also holds NWB Type B Water Licence *#2BE-CHI0813* (expires 01 June 2013), which covers associated water uses authorised in the land-use permit.

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).

Campsite (only used for sampling on existing Prospecting Permits and adjoining portions of IOLs) and any sediment-sample sites will be accessed by air. Fixed-wing from Iqaluit will supply camp. Helicopter will be used for pickup/dropoff of sampling crews (1 crew for existing Prospecting Permits and adjoining IOLs, a separate crew for new Prospecting Permits and adjoining IOLs). There will be no camp associated with sampling on new Prospecting Permits and adjoining IOLs: This crew will be based out of Iqaluit.

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.

    A level, gravel area (see terrain, Photo 1) at the existing camp on Crown land, already approved under the INAC land-use permit, will continue to be used as an airstrip. The airstrip would only support sampling on existing Prospecting Permits and adjoining IOLs. The camp co-ordinates are: 64° 14' 00" N. lat. - 66° 21' 00" W. long., in NTS 26B/01. A dust-suppression programme is not likely to be necessary (as this was not required in 2008), but would be instituted, if necessary, by means of pumping water from the nearby water source. Updated mapping of the existing camp and new camp 15km E will be provided once the 2009 summer programme is in operation.

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 above ground level, with fixed-wing ferry flights occurring approx. twice per week into the camp on Crown land. Routes would represent the shortest distance to camp from Iqaluit, depending on atmospheric conditions and at all times taking human safety into account. One helicopter per crew would be used to support the sampling project, with flights into IOLs to collect sediment samples occurring daily over an approximately 9-day period; flights over the Canadian Wildlife Service Bird Site will be conducted only if sampling does not appear to cause disturbance. In all cases, distances and altitudes prescribed in the INAC land-use permit would be followed, and sample plans would be adjusted to avoid calving, post-calving mother-calf pairs, large flocks of birds and other special situations as outlined in the INAC land-use permit, in advice and recommendations from the Canadian Wildlife Service and as recommended by NIRB.

Camp Site

16. Describe all existing and proposed camp structures and infrastructure
17. Describe the type of camp:
    a. Mobile
    b. Temporary
    c. Seasonal

    Seasonal tent camp to support sampling only on those portions of IOLs adjoining existing Prospecting Permits. (In 2009, this would occur in July).
    d. Permanent

e. Other

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

    Maximum no. of personnel = 8 (4 per crew, including 2 pilots/crew). All sampling on IOLs to occur over approximately 9 days in July 2009. [Also refer to schedule in Question #7.]

Equipment

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

    Helicopter, 500D or Long Ranger: will be used to convey each of the 2 sampling crews from site to site; a total of up to 30 samples per day will be collected by each crew, with an average of 15 minutes per sample site. At the end of the sampling day, one crew would return to one of Peregrine's two approved camps on Crown land; the other crew would return to its base in Iqaluit. Helicopter also would be used to position Jet-B drums and rotate drums at a temporary fuel cache, potentially based on IOL, with all drums removed at the end of the 9-day sampling programme on IOLs. A Twin Otter will be used to mobe/demobe, ferry supplies/equipment and fuel into the camp used for the sampling "A" programme only.

20. If possible, provide digital photos of equipment.

    Photo 2 depicts a typical sampling helicopter.

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.

    Water use is currently approved for activities authorised under the Crown land-use permit. There is no anticipated water use for sampling on IOLs, but provision is made in this application for use of a nominal amount of water for emergency use, refilling water bottles by samplers and similar minor domestic uses. Camp water use is regulated under the current water licence, where all terms and conditions already in place will be followed when the camp is used to house a sampling crew. These conditions include use of clean poly line for conveying water from the proximal unnamed stream to camp. Suction hose lowered into the camp 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 distributed to the kitchen and dry. Drawing 1 of the existing camp on Crown land accompanies this application.

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

    Rate of 10m^3/day for camp consumption is already approved for all camp activities in 2009. Nominal amount of 0.25m^3/day is requested for emergencies and refilling of water bottles during sampling programme on IOLs in 2009.

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

    Waste water management in the existing camp on Crown land is already approved. There will be no waste water associated with activities on IOLs, as there will be no camp on IOL.

24. If applicable, discuss how surface water and underground water will be managed and monitored. **Underground = N/A**
    Surface water is discussed in Question #23 above.

Waste Water (Greywater, Sewage, Other)

25. Describe the quantities, treatment, storage, transportation, and disposal methods for the following (where relevant):
    Waste quantities, their handling and disposal, are authorised under the current Crown land-use permit. Any camp accommodation of samplers who would be sampling existing Prospecting Permits and portions of adjoining IOLs would be carried out in compliance with the application already submitted for the overall project and for those uses and volumes already authorised.

    Waste water will not be generated by the short-term sampling activities on IOLs in 2009, and any waste generated will be packed out aboard the helicopter when the helicopter leaves a sampling site. If a temporary fuel cache is established on IOL, empty drums would be rotated out regularly; nothing would be left in the field at the end of the short-term sampling programme on IOLs.

    - Sewage
      N/A.
    - Camp grey water
      N/A.
      Combustible solid waste
      N/A.
    - Non-combustible solid waste
      N/A.
    - Bulky items/scrap metal
      As noted above, empty drums at any temporary fuel cache would be rotated out, not left in the field at the end of the sampling programme.
    - Waste oil/hazardous waste
      It is not anticipated that any fuel will be spilt during the short-term sampling programme on IOLs. Should some leakage or spillage occur, supplies in the accompanying spill kit will be utilised, the contents shovelled into a refuge drum and the waste transported off-site for proper disposal.
    - Contaminated soils/snow
      [Refer to response immediately above.]
    - Empty barrels/ fuel drums
      Empty drums will be segregated from full drums, bungs tight, and flown out regularly, should a temporary fuel cache be established on IOL to serve the sampling programme. One empty drum will be reserved as a refuge drum until the cache is removed.
    - 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.

The temporary fuel cache on IOL will house Jet-B only, in 205L drums. It has not yet been determined which of the two sampling activities – the sampling on existing Prospecting Permits and adjoining IOLs (sampling "A") or the sampling on new Prospecting Permits and adjoining IOLs (sampling "B") – would potentially require a fuel cache on IOL. The number of drums associated with sampling "A" would be approximately 12 drums in total. The number of drums associated with sampling "B" would be approximately 15 drums in total. Fuel storage in the camps on Crown land already is authorised, and all associated terms and conditions will be followed in 2009. No matter where the temporary fuel cache is sited to support the sampling programme on IOL, a spill kit will be located there. Peregrine's current Spill Plan, Emergency Response Plan and Abandonment and Restoration Plan have been updated for the 2009 season, and also will apply to all sampling activities on IOLs, both sampling "A" and sampling "B".

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.

    If a suitable depression can be found, the temporary fuel cache on IOL (if such a cache is created), will be sited in this depression. [Location will be supplied, once cache is created.] The depression will be lined with poly-liner typically used for this purpose, or alternatively, drums will be positioned on a manufactured poly-plastic drum pallet with built-in drip tray.

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

    For helicopters, transfer by pilots using on-board grounded electric pump, with drip pans and absorbents deployed, as required.

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.

    Use of chemicals for activities on Crown land already is approved under the existing INAC land-use permit. For sampling on IOLs, chemical use is not required, and no camp will be established.

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

    Please see Question #31 above.

32. Describe the method of chemical transfer.

    N/A.

Workforce and Human Resources/Socio-Economic Impacts

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

    Employment, accompanied by on-the-job training (as required), in addition to the environmental and safety training provided to all staff, will be provided for Inuit beneficiaries for activities associated with the existing Prospecting Permits and adjoining IOLs and with the separate activities on new

Prospecting Permits and adjoining IOLs. Ideally, each sampling crew would be comprised of one geologist and one Inuit sampling assistant. Number of positions required overall for 2009 is currently being determined, and job descriptions prepared. Consultation has begun with the hamlet of Pangnirtung regarding hiring and possible rotations as well as community needs, and will continue throughout the year.

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

    For workforce 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 may be more suitable; however, this remains to be discussed and agreed upon with the hamlet of Pangnirtung. Transportation to/from the worksite, along with accommodation and food (whether in the camp for sampling "A" or in Iqaluit-based crew lodging for sampling "B") will be supplied by Peregrine.

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. Also note, as stated in Question #34 above, that Peregrine may develop a specific plan or policy in co-operation with the hamlet of Pangnirtung, as the activity should require.

Public Involvement/ Traditional Knowledge

36. Indicate which communities, groups, or organizations 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 (60km) 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). The Qikiqtani Inuit Association (QIA) will be involved in regard to granting access to 12 surface IOLs that adjoin Peregrine's Prospecting Permits on the Hall Peninsula (6 Pangnirtung parcels and 6 Iqaluit parcels). Local knowledge, where provided, will be used to inform/enhance the field programme and planning for sampling "A" and sampling "B". (The Amarok Hunters & Trappers told Peregrine in February 2009 they would be interested in sharing local hunter knowledge of the Prospecting Permit areas, to help Peregrine's activities, and this offer of assistance is gratefully acknowledged).

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

    Consultation with the Amarok Hunters & Trappers (HTA) in Iqaluit, the Pangnirtung HTA and the community of Pangnirtung began in February 2009; 2 visits were made to each of the HTAs between February 2008 and February 2009. Three visits were made to Pangnirtung in 2008; a meeting was held with the hamlet council and an open house conducted in February 2009. The QIA has been kept informed of all visits and details of visits. Peregrine has received support from the executives of both HTAs; Peregrine is also currently in consultation with the hamlet of Pangnirtung, in the hopes of building a relationship and working together. Peregrine introduced and

distributed a community newsletter in respect of its Chidliak Project (the largest of its two projects on the Hall Peninsula) in January-February 2009, in both English and Inuktitut. During its latest meetings with groups in February 2009, Peregrine outlined activities proposed and is currently receiving feedback from Pangnirtung. A further meeting with two Pangnirtung hamlet officers is scheduled to occur during Nunavut Mining Symposium in Iqaluit in March/April 2009.

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

The public will be involved through regular meetings, through the Chidliak Project Community Newsletter (associated with the largest of Peregrine's two projects on the Hall Peninsula), hiring of local persons and use of local services, such as expediting/supply, groceries, air services, and hotel and other accommodation. Issues and concerns are being recorded in a consultation log and addressed with communities through followup meetings and correspondence. Concerns raised and how these are being dealt with will be documented. Concerns generally expressed to date regard project activities on the land, or airborne over the land, which might disturb caribou or local land-users; in addition, some concern was expressed by Pangnirtung hamlet council that too many jobs also can be disruptive to the hamlet and will have to be planned for. Peregrine's primary strategy in avoiding disturbance to wildlife or local land-users is to give animals and land-users the right of way. Further, strict terms and conditions already have been provided by NIRB and are incorporated into Peregrine's existing land-use permit. Peregrine also is committed to a strategy of engagement, wherein concerns about land-usage overlap (spatial or temporal or both) can be resolved in co-operation with the community; the issue of too many jobs at once is a long-term one, but through its strategy of engagement, Peregrine can work with the community of Pangnirtung to develop a plan for dealing with hiring and encouraging the community to access government funds for job training adequate to the needs of present and future operations. Part of the strategy of engagement will be working with the community to manage expectations, as exploration programmes (Peregrine's core business) may not, statistically, lead to the eventual development of a mine, despite the best intentions and plans of all parties.

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

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, or planning the optimal time for use, and lead to information about weather and weather patterns, areas of weak ice/good ice and best travel routes. For the "Sampling Project on IOLs", as with all its exploration activities, Peregrine solicits local knowledge and incorporates it into everything from when to use certain travel routes to when to work in certain areas. Should the project advance, more formal traditional knowledge studies would be contracted with communities or community groups, to inform any future development planning.

40. Discuss future consultation plans.

Please see Question #37 above. Peregrine looks forward to local participation in the "Sampling Project on IOLs – Hall Peninsula" and in all its exploration activities and looks forward to continuing the consultation

process with its community neighbours (meetings, discussions, community newsletter, etc.). The future would involve finalising a hiring and opportunities strategy with the hamlet of Pangnirtung.

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

B-1 Project Information

1. Describe the type of mineral resource under exploration.
   Peregrine is primarily exploring for kimberlite, a host rock for diamonds.

B-2 Exploration Activity (on IOLs – purpose of this application)

2. Indicate the type of exploration activity:
   - Bulk Sampling (underground or other) **N/A**
   - 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 **N/A**
   - Preliminary Delineation drilling **N/A**
   - Exploration drilling **N/A**
   - Geophysical work (indicate ground and/or air) **N/A**
   - 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
     Helicopter-supported surficial sediment sampling on IOLs is intended to occur at selected locations in 2 areas over a combined total of 9 days: (1) in existing Prospecting Permits and portions of adjoining IOLs (sampling "A" – consisting of 120 samples at 2.25km spacing, potentially minus some of the 24 samples proposed for collection within an overlapping Canadian Wildlife Service bird site (Map 5), and (2) in new Prospecting Permits and portions of adjoining IOLs (sampling "B" – consisting of 150 samples at 5km spacing, potentially minus some of the 42 samples proposed for collection within an overlapping Canadian Wildlife Service bird site (Map 5). Thus, if all Bird Site samples were to be deducted, out of a potential total of 270 samples on IOL, the final total for collection on IOL would be 96 samples (sampling "A") + 108 samples (sampling "B") = 204 samples.
   - On land drilling (indicate drill type) **N/A**
   - On ice drilling (indicate drill type) **N/A**
   - Water based drilling (indicate drill type) **N/A**
   - Overburden removal **N/A**
   - 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 **N/A**
    c. Gravimetric **N/A**
    d. Electromagnetic **N/A**
    e. Other (specify) **N/A**

    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.
    N/A.
7. Provide flight altitudes and locations where flight altitudes will be below 610m.
    N/A.

B-4 Drilling

8. Provide the number of drill holes and depths (provide estimates and maximums where possible). **N/A**
9. Discuss any drill additives to be used. **N/A**
10. Describe method for dealing with drill cuttings. **N/A**
11. Describe method for dealing with drill water. **N/A**
12. Describe how drill equipment will be mobilised. **N/A**
13. Describe how drill holes will be abandoned. **N/A**
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: <u>Seismic Survey</u> **N/A**

E-1 Offshore Seismic Survey

1. Indicate whether the survey is 2D or 3D at each site
2. Describe the type of equipment used, including:
   - Type and number of vessels including length, beam, draft, motors, accommodation capacity, operational speeds when towing and when not towing
   - Sound source (type and number of airguns)
   - Type and number of hydrophones
   - Number, length, and spacing of cables/ streamers
3. On a map, indicate the grid, number of lines and total distance covered at each site.
4. Indicate the discharge volume of the airguns, the depth of airgun discharge, and the frequency and duration of airgun operation at each site.
5. Discuss the potential for dielectric oil to be released from the streamer array, and describe proposed mitigation measures.
6. Indicate whether additional seismic operations are required for start-up of operations, equipment testing, repeat coverage of areas.
7. Indicate whether air gun procedures will include a "ramping up" period and, if so, the proposed rate of ramping up.
8. Indicate whether the measures described in the *Statement of Canadian Practice for Mitigation of Noise in the Marine Environment* will be adhered to for this project.

E-2 Nearshore/ Onshore Seismic Survey

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

E-3 Vessel Use in Seismic Survey

15. Please complete Section H

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

1. Describe the location, content, and condition of any existing landfills and dumps (indicate locations on a map).
2. Identify salvageable equipment, infrastructure and/or supplies.
3. Provide a list of all contaminants to be cleaned up, anticipated volumes and a map delineating contaminated areas. This includes buildings, equipment, scrap metal and debris, and barrels as well as soil, water (surface and groundwater) and sediment.
4. Describe the degree of pollution/contamination, and list the contaminants and toxicity.

5. Describe technologies used for clean-up and/or disposal of contaminated materials. Include a list of all the physical, chemical and biological cleanup/ remediation methods, operational procedures, and the dosage/frequency of reagents and bacterial medium.
6. Identify and describe all materials to be disposed of off site, including the proposed off site facilities, method of transport and containment measures.
7. Discuss the viability of landfarming, given site specific climate and geographic conditions.
8. Describe the explosive types, hazard classes, volumes, uses, location of storage (indicate on a map), and method of storage (if applicable).
9. If blasting, describe the methods employed.
10. Describe all methods of erosion control, dust suppression, and contouring and re-vegetation of lands.
11. Describe **all** activities included in this project.
    - Excavation (please complete Section B-5)
    - Road use and/or construction (please complete Section A)
    - Airstrip use and/or construction
    - Camp use and/or construction
    - Stockpiling of contaminated material
    - Pit and/or quarry (please complete Section C)
    - Work within navigable waters (please complete Section H)
    - Barrel crushing
    - Building Demolition
    - Other

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

G-1 Well Authorisation

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

iv. Slant

i. Objective Zones (copy chart style below)

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

j. Proposed Total Depth in mTDV and mMD.
k. Formation of Total Depth
l. Sour well? (yes or no)
    i. If Yes: Maximum H_2S concentration in mol/kmol
    Emergency planning zone radius in km
m. Blowout Prevention (Well Class I – VI)
n. Deviation Surveys
    i. Will be run at intervals less than 150m? (yes or no)
o. Wireline logs
    i. Will run logs in hole for surface casing? (yes or no)
    ii. Will run a minimum of 2 porosity measuring logs? (yes or no)

G-2 On-Land Exploration

4. Indicate if the site contains any known:
    a. Waste Dumps
    b. Fuel and Chemical Storage Areas
    c. Sump Areas
    d. Waste Water Discharge Locations
5. Attach maps drawn to scale showing locations of existing and proposed items identified in (2) above, as well as all proposed:
    a. Sumps
    b. Water sources
    c. Fuel and chemical storage facilities
    d. Drilling mud storage areas
    e. Transportation routes
6. If 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.
  Peregrine's Hall Peninsula Prospecting Permits at their northernmost limit are located approx. 133km S of Pangnirtung at the closest point; surface IOLs in proximity are PA-21, PA-22, PA-27, PA-28, PA-24 and PA-29; Iqaluit is located approx. 60km from the closest southerly point. Territorial parks are not close by, but the closest are Sylvia Grinnell and Qaummaarviit territorial parks at Iqaluit (57.5km) and Kekerten Park on the north shore of Cumberland Sound (59km). Polar bear habitat (denning and summering) is at the northernmost (marine) edges of the Prospecting Permits and will be treated with sensitivity (see Question #4, Pg. 2). 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. 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. Local Inuit knowledge and scientific knowledge (derived from a wildlife survey across existing Prospecting Permits in 2009) will help to inform field activities.

- Eskers and other unique landscapes (e.g. sand hills, marshes, wetlands, floodplains).
  Please see Geology section below.
- 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 Prospecting Permit area is comprised of 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 Prospecting Permit area 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 Prospecting Permits. The majority of the mapped Lake Harbour Group rocks 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 existing Prospecting Permits. Rocks of the 1.86 to 1.85 Ga Cumberland Batholith occur along the western margin of the existing Prospecting Permits.

- 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). **N/A**
- 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 Prospecting Permits, and the entire northern edge of the Prospecting Permits is a marine area.
- Air quality.
  Air quality is undisturbed.
- Climate conditions and predicted future climate trends. **N/A**
- Noise levels.
  Noise from helicopters used for the sampling "A" and sampling "B" activities would be confined to a short period only during July 2009. There will be no camp on IOL. There are no communities close by. Peregrine seeks to obtain information from local land-users so that the days of helicopter-supported sampling do not interfere with local land-use activities.
- 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 data derived from future environmental studies.

Biological Environment

- Vegetation.
  Plant studies and habitat mapping would occur at a more advanced project stage.
- Wildlife, including habitat and migration patterns.
- **An initial wildlife study is planned across existing Prospecting Permits in 2009; wildlife surveying on the new Prospecting Permits would be initiated at a more advanced project stage. Information on wildlife habitat has been**

requested from the Government of Nunavut Wildlife Division (caribou), and Environment Canada and the Canadian Wildlife Service (migratory bird habitat); some polar-bear habitat information already has been supplied by Nunavut government biologist, E. Peacock. Peregrine has entered into a Geographic Data Agreement with the Canadian Wildlife Service (CWS), and is aware of the boundaries of the Western Cumberland Sound Archipelago Bird Site which overlaps Peregrine's northerly Prospecting Permits (Map 5). Please see answer to the wildlife section of Physical Environment (Pg. 22) and answer to Question #4, Pg. 2. As consultation proceeds in 2009, information from local residents and hunters is expected to enrich and complement scientific data.

- Birds, including habitat and migration patterns.
  Avian studies and habitat mapping would occur at a more advanced project stage, although initial observations will be obtained from a wildlife survey on existing Prospecting Permits in 2009.

- 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 Davis Strait. Government of Nunavut capture-and-release data show concentrations of bears all along the eastern coasts of the Cumberland Peninsula, Hall Peninsula and Meta Incognita Peninsula, where bears also 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.

- 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 within the Peregrine Prospecting Permits are shallow and freeze to the bottom in winter or are virtually dry by late summer. Aquatic studies, including habitat characterisation, would occur at a more advanced project stage.

- Other biological Valued Ecosystem Components (VEC) as determined through community consultation and/or literature review.
  Please see response to VEC question on Page 23.

Socioeconomic Environment

- Proximity to communities.
  The communities most likely to be affected by this project, or interested in participating in it, will be Iqaluit (60km) and Pangnirtung (133km).

- Archaeological and culturally significant sites (e.g. pingos, soap stone quarries) in the project and adjacent areas.
  There is a registered archaeological site in the northern area of the existing Prospecting Permits and a handful of other sites in the northern area of the new Prospecting Permits. Peregrine's manager of regulatory and environmental affairs has a Site Data Agreement with CLEY for 2009, for access to regional site data. Data received (which is confidential) will be incorporated into planning in advance of fieldwork, so that sites may be avoided; data will be used to inform an archaeological survey planned on the

existing Prospecting Permits in 2009. An Archaeological Protocol already is in place for Peregrine activities,

- Palaeontological component of surface and bedrock geology. **N/A**
- Land and resource use in the area, including subsistence harvesting, tourism, trapping and guiding operations.
  There are no tourist destinations on the Prospecting Permits. Seasonally, in winter, local residents, mainly Iqaluit hunters, travel the informally-named "Pangnirtung trail" by snowmobile; this trail links Iqaluit with the Cumberland Sound south coast, and crosses the northwest edge of the Prospecting Permit block. An east-west spur of the trail also cuts across the Prospecting Permits. Peregrine has advised land-users and residents on several occasions that Peregrine will not interfere with local use of the trail or local camping or harvesting in any way. Residents of Pangnirtung have identified to Peregrine that Ptarmigan Fjord, which lies in surface IOL PA-28, is used by families from the community at certain times during the autumn. Peregrine does not plan any activities past September, and the proposed sampling on IOLs will occur only over a 9-day period in early to mid-July. Peregrine is committed to working with the hamlet to establish a schedule that will not interfere with local land-users' enjoyment of Ptarmigan Fjord.
- Local and regional traffic patterns.
  Please see response above, referring to community travel along the "Pangnirtung trail" and between Pangnirtung and Ptarmigan Fjord.

- 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. For now, Peregrine will be in active discussion with the hamlet of Pangnirtung so that a planning strategy is developed
- Other Valued Socioeconomic Components (VSEC) as determined through community consultation and/or literature review.
  VSECs will be determined at a more advanced stage.

5. IDENTIFICATION OF IMPACTS AND PROPOSED MITIGATION MEASURES

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

7. CUMULATIVE EFFECTS

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

The closest known properties held by other explorers consist of a single block of Prospecting Permits on the Foxe Peninsula, north of Cape Dorset, and a small block of Prospecting Permits west of Kimmirut, near Crooks Inlet. The closest Prospecting Permit block is Peregrine's Kimmirut property, on Meta Incognita Peninsula, southwest of Frobisher Bay. South Baffin has been only lightly explored to date for mineral potential, and the largest operation of any kind is municipal, i.e., the City of Iqaluit. Due to the current economic downtown, there is likely to be a lull in mineral exploration in the South Baffin for possibly the next several years. A 3-year joint mapping and geophysics project on North Cumberland Sound is being planned by the Geological Survey of Canada and the Government of Nunavut (the Canada-Nunavut Geoscience Office [CNGO]); this project proposes to add to the sparse geoscience data and thus encourage future exploration to further define Nunavut's economic potential; it commences in summer 2009. Peregrine is aware of this government project, and will collaborate with the hamlet of Pangnirtung to ensure that local hiring and use of community services will not strain the community. Effects of Peregrine's "Sampling Project on IOLs – Hall Peninsula" can be expected to be minimal, owing to a limited number of explorers and projects over a vast area and the commitment of all parties to planning, environmental sustainability and social responsibility.

8. SUPPORTING DOCUMENTS

Where relevant, provide the following supporting documents:

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

NOTE: There are NO transboundary effects.

PROJECT ACTIVITY: Conduct sediment sampling by helicopter. (No camp on IOLs).

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 and Study Area is known); preliminary hydrology will be incorporated into the environmental studies for the existing Prospecting Permits in 2009.
Water quality.	**M** (mitigation measures have been described)
Climate conditions.	**U** (study in future as project advances and Study Area is known); once a semi-permanent camp is sited, a weather station would be installed.
Eskers + other unique or fragile landscapes	**M** (mitigation measures have been described)
Surface + bedrock geology	**M** (minimal disruption from sampling)
Sediment + soil quality.	**M** (mitigation measures have been described)
Noise levels	**M** (mitigation measures have been described)
Vegetation.	**U** (study in future as project advances and Study Area is known); preliminary habitat assessment will be incorporated with wildlife survey in 2009.
Wildlife, incl. habitat + migration patterns	**M** (initial study within existing Prospecting Permits in 2009)
Birds, incl. habitat + migration patterns	**M** (study within existing Prospecting Permits in 2009 will include some initial data on avifauna)
Aquatic species, incl. habitat + migration/spawning	**U** (study in future as project advances and Study Area is known); no fishing during the sampling.
Wildlife protected areas.	**N/A** (property is not in a special area)
Archaeological + cultural historic sites	**M** (mitigation measures have been described); initial archaeol. field study in 2009.
Employment	**P**
Community wellness	**P** (providing services brings $ into community; jobs may spark interest in careers that can bring long-term benefit)
Community infrastructure	**N/A** (project too small to impact community infrastructure)
Human health	**U** (at this stage, project is small; but discussions are beginning with community of Pangnirtung on mitigation that is appropriate to the early stage of the activity.)

There are a number of "unknowns" in the charts above, as the surface IOLs adjoining the Peregrine Prospecting Permits have either been sampled at low density or not yet sampled at all – that is, both the project on existing Prospecting Permits ("Chidliak Project", or sampling "A") and the project on the new Prospecting Permits ("Qilaq Project", or sampling "B") are both early stage. Environmental baseline studies are only just commencing on the Chidliak Project in 2009, and are likely years away for the Qilaq Project. Study areas remain to be determined, and this will be predicated on where mineral occurrences with resource potential are found. Socioeconomic data also is typically collected once a project becomes more advanced. In the meantime, Peregrine will conduct its "Sampling Project on IOLs – Hall Peninsula" in a consistently careful manner, following the strict conditions already placed upon it by the existing Crown land-use permit and follow generally-accepted mitigations and work with the

key community of Pangnirtung, and the Hunters & Trappers Associations (HTAs) of Pangnirtung and Iqaluit, to ensure local knowledge and local sensitivities are incorporated into planning.

Areas for mitigation are noted in the Project Activity chart above and are discussed in this "Part 2" form and in the accompanying Project Description. As the first environmental objective of any exploration programme is prevention of harm, Peregrine trains contractors and staff before they go into the field 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 careful operation of helicopters, proper siting of a fuel cache (should such be established), including siting of the cache a minimum of 30m from ordinary high-water mark of waterbodies; proper handling, storage, inspection and removal of fuel drums. Provision of spill kit, refuge drum and extra absorbents, as well as use of drip pans, also mitigate against impact to water. Similar mitigation measures are practised by Peregrine with respect to sediment soil quality and use of eskers and other sensitive landforms. Following sediment sampling, the shallow, hand-dug holes are closed and no debris left behind; in stream sampling, the sampled location is smoothed to its original contours. Archaeological sites, where co-ordinates are known, can be protected through avoidance – hence, Peregrine's 2009 Site Data Agreement with the Archaeology Division of CLEY. An archaeology protocol also exists to guide field personnel, should a suspected pre-historic or historic site be encountered.

In regard to mitigating against impacts to wildlife, Peregrine observes a policy on all its projects that wildlife (fauna and avifanua) always have right-of-way on project sites, and encounters are avoided to the extent possible. If a polar bear or groups of caribou (such as during post-calving or migration) are observed as the sampling helicopter is approaching a sampling point, plans will be altered so as to avoid disturbance, then the area returned to later. Information from government biologists and local HTAs also will be used to inform sampling programmes in order to adjust timing and lower the potential incidence of encounters or disturbance. Wildlife logs also will be kept during conduct of the "Sampling Project on IOLs – Hall Peninsula". Ferry flights are not conducted at low altitude, and sample-to-sample hops are flown as high as possible to avoid possible disturbance to bird colonies and other wildlife.