SCREENING PART 2 FORM
PROJECT SPECIFIC INFORMATION REQUIREMENTS (PSIR)

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 or web sites 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 shapefiles, be legible, and should include grids, be of appropriate scale, indicate the scale, include latitude and longitude references, NTS Maps numbers, title, legend and a north arrow. To the extent possible, avoid hand-drawn demarcations and faxed maps; 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 Coordinates and Maps See Attached Figures.

1. The preferred method for submitting project coordinates 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 coordinates for the project proposal which reflect the entire project area as defined by:

   - Area/sites of investigation;
   - Boundaries of the foreseen land use permit/right-of-way area(s) to be applied for;
   - Location of any proposed infrastructure or activity(s); and,

- Boundaries of the mineral claim block(s) where proposed activities will be undertaken.

2. Map of the project site within a regional context indicating the distance to the closest communities.
3. Map of any camp site including locations of camp facilities.
4. Map of the project site indicating existing and/or proposed infrastructure, proximity to water bodies and proximity to wildlife and wildlife habitat.

Project General Information

5. Discuss the need and purpose of the proposed project.
   The objective of the current project is to explore for economic copper and lead-zinc deposits in northern Somerset Island.
6. Discuss alternatives to the project and alternative methods of carrying out the project, including the no-go alternative. Provide justification for the chosen option(s).
   Previous exploration has defined areas where copper and lead-zinc mineralization is present. More detailed exploration work, including diamond drilling, is justified. A small temporary camp will be required in order to carry out mineral exploration activities in the area.
7. Provide a schedule for all project activities.
   June to September 2015 and expected to be similar for the next few years.
8. List the acts, regulations and guidelines that apply to project activities.
   Canada Mining Regulations
   - **Article 13 – Nunavut Land Claims Agreement**
   - **NWB – Water Licensing in Nunavut**
   - **DFO – Freshwater Intake End of Pipe Fish Screen Guidelines**
   - **DFO – Fisheries Act – s.35**
   - **RWED – Environment Protection – Spill Contingency Regulations**
   - **Public Health Act Camp Sanitation Regulations**
   - **Public Health Act Water Supply Regulations**
   - **Territorial Land Use Act and Regulations**
9. List the approvals, permits and licenses required to conduct the project.
   Past Approvals include: AANDC LUP N2010C0003, NIRB File No 10EN013 and NWB Licence 2BE-ST1015. All new permits and licences are currently under application.
   Mineral Claims: AB 1 - AB 47 (K16471 – K16517) and Aston 1 – 10 (F95596 – F95605).
   Prospecting Permits: 8340, 8341, 8342, 8343

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: **N/A**
    - Bridge Maintenance
    - Clear Span Bridge
    - Culvert Maintenance
    - Ice Bridge
    - Routine Maintenance Dredging
    - Installation of Moorings

    Please see DFO's OS for specific definitions of these activities available from DFO's web-site at http://www.dfo-mpo.gc.ca/regions/central/habitat/os-eo/index-eng.htm

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. **N/A**

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).
    Access to the Property is typically restricted to privately chartered helicopter, Twin Otter or similar fixed wing aircraft from Resolute Bay or Arctic Watch Lodge. See attached figures.
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 (if applicable) and provide a map showing location of airstrip.
    The proposed new camp location does not have a pre-existing airstrip, but a ~ 200 m Airstrip to accommodate fixed wing aircraft (Twin Otter or similar) will be required. The location for the camp and subsequent airstrip were chosen due to the proper terrain, which was already suitable for a tundra-tire equipped fixed wing aircraft to land without requiring any construction/modification. See attached Figures.
14. If an airstrip is being constructed, provide the following information: **N/A**
    a. Discuss design considerations for permafrost
    b. Discuss construction techniques
    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).
    d. Describe dust management procedures.
    e. Provide a map showing location of proposed airstrip.
15. Describe expected flight altitudes, frequency of flights and anticipated flight routes.
    Twin Otter flight per week will service the camp from Resolute Bay. All flights will be flown at altitudes of at least 9,000 feet.

Camp Site

16. Describe all existing and proposed camp structures and infrastructure
    Structures for the proposed camp will include approximately 6 sleeper tents, a medical tent, kitchen, dry, office, shop, core shack, generator housing, incinerator, and 2 outhouses. The majority of the structures will be insulated Weatherhaven tents, or similar, with plywood floors.
17. Describe the type of camp:
    a. Mobile
    b. Temporary
    c. Seasonal
    d. Permanent
    e. Other
18. Describe the maximum number of personnel expected on site, including the timing for those personnel involved with the project.
    Total number of personnel: 10 to 12 including Camp Builders, Geologists, Cook/first Aid attendant, Helicopter Pilot and Drillers.
    Timing: June 1-September 19, 2015
    Number of person days:~ 504 days

Equipment

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

Type	Size	Proposed Use
All-Terrain Vehicle (1-2)	Quad	Move core, equipment and fuel around camp
Helicopter (1)	A-Star, Bell 407, or similar	Transport equipment & personnel
Fixed wing aircraft (1 - occasional)	Twin Otter or similar	Transport equipment & personnel
Diesel generator (1 + 5 kW backup)	10 - 20 kW	Power for camp
Water pump - camp (1)	General purpose 2" water pump	Water for camp
Water pump - drill (1-2)	Standard for Zinex A-5 or similar	Water for drills
Diamond Drill with generator (1-2)	Boyles 17-A or similar	Drilling for core rock samples
Dual-chamber controlled air incinerator	Granite Environmental Vulcan 0.3 (or similar)	Incinerate combustible waste

20. If possible, provide digital photos of equipment.

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.

    The water intakes for the camp will use an electrically powered submersible pump with a fine screen (<1/4" openings) on the intake. The drill pumps use a 1" inside diameter suction hose on the diesel pumps with a fine screen on the foot valve. For drilling, fiberglass window screen with a nominal opening size of less than 1/16" is also generally wrapped around the foot valve to prevent the intake of silt and sand into the pump, which can cause considerable damage to the pump chambers. In addition, it is common practice for the drilling contractor to place the foot valve of the intake hose in a perforated 20 L pail, which further protects against harmful materials and fish from being entrained into water intake hoses.

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

    ~ 2 m^3/day for camp use and ~40 m^3/day per drill

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

    Camp greywater will be stored and treated in an excavated sump, which will allow for slow infiltration into the soil and will be located at least 31 m away from a water body. If available, coarse gravel will be placed in the bottom of the sump to provide filtration, and supports will be built on the sides to prevent slumping. Filters will be installed on kitchen drains to ensure solid food wastes do not enter the sumps and have the potential to attract wildlife. When full, greywater sumps will be covered with enough material to allow for future ground settlement.

24. If applicable, discuss how surface water and underground water will be managed and monitored.

Waste Water (Grey water, Sewage, Other)

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

    To control sewage pathogens, privy pits (outhouses) will be periodically treated with lime. When full, the pits will be covered with at least 30 cm of compacted soil.

    - Camp grey water

    excavated sump at least 31 m away from a water body

    - Combustible solid waste

    Dual-chamber controlled air incinerator

    - Non-combustible solid waste, including bulky items/scrap metal
    - Hazardous waste or oil

- Contaminated soils/snow

All contaminated soil will be stored in empty 205 liter drums, and will be transported to Resolute Bay for proper disposal.

- Empty barrels/ fuel drums

Empty drums will be collected and transported to Resolute Bay either for disposal at an approved site or for refilling.

- Any other waste produced

All wastes will separated into combustible, recyclable or hazardous. Combustible waste will be burned in a batch feed dual-chamber controlled air incinerator. All non-combustible and hazardous wastes, recyclables and incinerator residue will be removed from site to be properly disposed in an authorized facility in Resolute Bay.

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.

Fuel	Number of Containers	Capacity of Containers
Diesel	200	205 Litre drum
Gasoline	25	205 Litre drum
Aviation Fuel	200	205 Litre drum
Propane	50	100 lb Cylinder

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.

Arctic Insta-Berms, provided by Raymac Environmental Services Inc., will provide secondary containment for all fuel drums and during fuel transfer. All fuel caches will be stored a minimum distance of 31 m from the normal high water mark of any water body. Spill kits and firefighting equipment will be strategically located near where any fuel is stored or transferred.

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

Fuel will be transferred by hand held pump or grounded electric pump directly from fuel drums to helicopter, drill, etc. Spill kits and fire-fighting equipment will be available at each storage/refueling site. Smoking will be prohibited during fuel transfer and within the vicinity of any stored fuel.

30. Describe spill control measures in place.

No drilling will be performed, or sump created, within thirty one (31) metres of the normal high water mark of any water body. Additionally, all hazardous materials will be placed in secondary containment and stored a minimum of 31 metres from the normal high water mark of any water body. For additional information, see attached Spill Prevention and Response Plan.

Please refer to Environment Canada's fuel storage tank system regulations (*Storage Tank System for Petroleum and Allied Petroleum Products*) website at http://www.ec.gc.ca/st-rs/ for details on fuel storage requirements.

Chemicals and Hazardous Materials*

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

31. 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.

Chemicals to be used on site may include household-strength cleaning supplies such as Javex, ammonia-based window/countertop sprays, wash soaps, degreasers, etc. In addition, limited miscellaneous items such as insect repellent and aerosols will be available. All items will be stored in their original containers in their respective storage / use areas, and removed off-site with routine garbage backhauls. All hazardous materials, wet cell batteries, cleaners, lubricants and drill additives will be stored in a wooden walled and floored tent at the base camp. All Hazardous materials will be transported two and from camp via small fixed wing aircraft, such as a Twin Otter or similar. Hazardous materials will be slung to the drill sites from camp. All containers storing hazardous materials will be inspected for dents, punctures, etc prior to being slung to the drill site. Extreme care will be taken in the process of transferring all chemicals/chemical solutions/fuels/etc. Funnels will be utilized to direct small amounts of liquid to reduce the potential of spillage. Spill mats will be in place when transferring/refuelling.

Motor Oil

An inventory of approximately 100 L of motor oils and hydraulic oils will be maintained at the camp for the drill rig and generator at the camps. The products will be supplied in 1L or 20 L plastic containers stored in the generator enclosure. For the purpose of this project description submission, the inventory of lubricating oils will be approximately 1 case of twelve 1 L containers, and 4 pails of 20 L capacity. This inventory will be maintained during operations and resupplied as needed by regular air service to the site. These products will be used as crankcase oils in the diesel engines that power the electrical generator, diesel engines on the drill rigs, gasoline engines in small equipment such as portable electrical generators, outboard boat motors and turbine lubricants in helicopters and fixed wing aircraft. The containers will be stored on spill containment pallets.

Drill Mud/Additives

All drill additives will be non-toxic and biodegradable. The diamond drilling may use modest amounts of additives depending on rock conditions. When drilling is under way, the contractor responsible will store the required drilling muds, additives, oils and lubricants in a temporary shed at drill site or camp; upon annual termination of the project, these materials will be removed via back haul to Resolute Bay to be properly disposed of. The drill additives will be transferred according to the manufacturer's guidelines and the operating procedures of the drill contractor.

Antifreeze

No antifreeze will be used in the initial diamond drilling program as this will be carried out under summer conditions. Future diamond drilling programs will utilize non-toxic Beet Juice Antifreeze.

Lead Acid Batteries

Lead acid batteries will be present on the drill rigs and on the diesel engines for the electrical generators. In addition a small number of batteries may be needed for other portable items such as generators. Spares will be maintained on site. For the purpose of this project description, we have assumed that two spare lead acid batteries will be kept in the generator enclosure. Secondary containment measures are not contemplated given the small number of batteries in storage. At no time will any batteries be put in the garbage; nor will they be incinerated.

For additional information, see attached Spill Prevention and Response Plan.

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

Secondary containment measures for chemical products will be provided according to the nature of the chemical (liquid vs. solid), the quantity stored and the manner of use.

For liquid products such as lubricating oils, spill containment pallets will be provided underneath the product containers. For solids, tarps and/or polyethylene sheets will be placed under the pallets or the bags/pails of product where significant quantities are stored.

The generator will be inside a wooden generator shack. Fueling and oil changes of the generator will be undertaken inside this structure. As at all re-fuelling stations, appropriate Spill Kits will be located at the generator shack. Other Hazardous materials in camp will be also be stored in wooden floored structures such as the shop, core shack and kitchen.

All other material (soaps, cleansers, degreasers, javex, etc. will be securely stored in the storage area/tent until required.

33. Describe the method of chemical transfer.
    Chemicals will generally be transferred directly to the end use machinery from the containers that the products were provided in. Considering the nature of the operations, generally less than 20 L of product will be transferred at a time. Spill kits will be kept on hand to clean up any product spilled in the transfer process. For any solid products, the bags will be opened directly over the intended use tanks into which the product will be placed. Used chemical products will be returned to empty containers and stored for shipment off-site. Used motor oil will be accumulated in sealed, labeled 20 L pails for shipment off-site.
34. Describe spill control measures in place.
    Chemicals such as drill additives, detergents and other goods will be transported directly to the camp site via fixed wing aircraft. Small packages will be placed in the storage sheds at the camp. Larger packages will either be stored in the camp's buildings or placed outdoors on pallets, wrapped in polyethylene sheeting and tarped over. Immediately prior to use, bags or containers of chemicals will be transported to their place of use by carrying by hand for movement to the camp site. For the drilling materials, the containers will be slung with a helicopter and deployed at the drill site. Appropriate spill kits, including empty containers for contaminated soil, will be kept on hand to clean up any product spilled. For additional information, see attached Spill Prevention and Response Plan.

Workforce and Human Resources/Socio-Economic Impacts

35. Discuss opportunities for training and employment of local Inuit beneficiaries.
    Aston Bay will hire local Inuit beneficiaries wherever possible. The company will attempt to hire local Inuit from Repulse Bay for seasonal camp duties, core processing technicians and wildlife specialists. All persons will be fully trained onsite and be provided with appropriate personal protective equipment (PPE).
36. Discuss workforce mobilization and schedule, including the duration of work and rotation length, and the transportation of workers to site.
    The project is FIFO. Local hires will generally work a rotation of at least 2 weeks in camp with the next 2 weeks off. Other personnel may work up to six weeks at a time, depending upon the job and the time of year.
37. Discuss, where relevant, any specific hiring policies for Inuit beneficiaries.
    Aston Bay will hire local Inuit beneficiaries and purchase locally wherever possible.

Public Involvement/ Traditional Knowledge

38. Indicate which communities, groups, or organizations would be affected by this project proposal.
    The Aston Bay Project is located on Crown Land within the Qikiqtani Region, approximately 112 km south of the community of Resolute Bay. Additional interested Parties may include:
    - **Nunavut Planning Commission**
    - **Government of Nunavut – Culture Language Elders and Youth (GN-CLEY)**
    - **Government of Nunavut – Department of Environment (GN-DoE)**
    - **Environment Canada (EC)**
    - **Transport Canada (TC)**
39. Describe any consultation with interested Parties which has occurred regarding the development of the project proposal.
    To date, since the drilling program has yet to begin, there has been no consultation with interested parties. As the program progresses forward, Aston Bay would anticipate meeting with community representatives from Repulse bay to inform them of current plans/progress.
40. Provide a summary of public involvement measures, a summary of concerns expressed, and strategies employed to address any concerns.
    In 2010, Commander Resources submitted a Land Use Application for the Storm project. NIRB sent out a request for comments on the proposed program to their distribution list, which included

public and private potentially interested parties. Comments were received from the GN-CLEY, GN-DoE, EC and TC. No concerns from the affected communities have been expressed to date.

41. Describe how traditional knowledge was obtained, and how it has been integrated into the project.
    As this currently is only an initial, grassroots-type exploration program, no public involvement has been planned and no traditional knowledge has been obtained.
42. Discuss future consultation plans.
    As the program progresses, meetings are planned for Resolute Bay to determine interests and concerns of people with respect to this project.

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.

Table 1: Project Type and Information Required

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 N/A

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.
6. Describe whether any portion of the road will be located outside of the Nunavut Settlement Area and whether any other regulatory requirements must be met (e.g. CEAA).

A-2. All-Weather Road/Access Trail N/A

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

A-3. Winter Road/Trail N/A

13. 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.
14. Describe the operating time period.
15. Identify the proposed traffic speed and measures employed to ensure public safety.
16. 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.
   Copper. There may be minor exploration for lead and zinc.

B-2. Exploration Activity

2. Indicate the type of exploration activity:
   Diamond drilling, soil and rock sampling, geological mapping, and ground geophysical surveys
3. Describe the exploration activities associated with this project:
   - **Soil sampling**
   - **Sediment sampling**
   - **On land drilling (indicate drill type)**
   - **Off site sample processing**
   - **Drill core storage**

B-3. Geosciences

4. Indicate the geophysical operation type:
   a. **Ground Magnetic**
   b. **Ground Electromagnetic**

5. Indicate the geological operation type:
    a. **Geological Mapping**
6. Indicate on a map the boundary subject to air and/or ground geophysical work.
   See attached Figures
7. Provide flight altitudes and locations where flight altitudes will be below 610m.
   Aircraft will only fly lower than 610m when dropping off and picking up field crews or moving the drill.

B-4. Drilling

8. Provide the number of drill holes and depths (provide estimates and maximums where possible).
   For 2015, a drill program of 5,000 to 10,000 metres is estimated, utilizing one to two diamond drills. The average hole depth is expected to be approximately 200 m, up to a maximum proposed depth of 700 m. Approximately 20 holes at the Storm Copper Prospect and 20 holes at the Seal Zinc-Silver Prospect are estimated throughout the duration of the project.
9. Discuss any drill additives to be used.
   The exact drill additives are not known at this time. Aston Bay will ensure that the drilling contractor maximizes the use of non-toxic and biodegradable additives. The Aston Bay Fuel Spill Prevention and Response Plan will be updated with appropriate MSDS sheets once the additives have been determined.
   However, until confirmed, it is assumed that the following materials may potentially be present at the drill site:
   • drill fluid additive "550X polymer" (consists of copolyacrylamide / sodium acrylate; Non Toxic)
   • tube grease - Beacon 2, Z-50 pipe dope (Non Toxic)
   • circulation polymer – G-stop (Non Toxic)
   • antifreeze –Beet juice antifreeze (Non Toxic)
   • rod grease – Big Bear diamond drill rod grease (Non Toxic)
   • motor oil – super plus SAE 10W30 and 15W-40 (Non Toxic)
   • hydraulic oil –Harmony AW 22, 32, 46, 68 (Non Toxic)
   • Linseed Soap – (Non Toxic)
10. Describe method for dealing with drill cuttings.
    The drill waste, including water, cuttings and muds will be disposed of in a properly constructed sump or an appropriate natural depression; at least 31 m from the ordinary high water mark of any adjacent water body, where direct flow into a water body is not possible and no additional impacts are created.
11. Describe method for dealing with drill water.
    Drilling will utilize recirculation and filtration systems to minimize loss of water and drill additives. Bio-degradable drilling fluids will be used at all times where ever possible. Drilling fluids will be will be directed of in a properly constructed sump or an appropriate natural depression, at least 31 m from the ordinary high water mark of any adjacent water body, where direct flow into a water body is not possible and no additional impacts are created. If any artesian water flow is detected, the hole will be plugged immediately and cemented in bedrock to prevent continued flow.
12. Describe how drill equipment will be mobilized.
    The drill, drilling equipment and accessories (pumps, hose, tanks, etc.) will be mobilized to the camp via small fixed wing aircraft. The equipment will then be transported to and from the drill sites via helicopter based at the camp.
13. Describe how drill holes will be abandoned.
    If later relocation of the hole is not required, casing will be removed whenever possible. Any remaining/fused casing will be cut off to ground level or below and capped. Any holes with flowing water will be permanently sealed unless written instruction from the relevant authority is received to indicate otherwise.

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 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: Pits and Quarries 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 N/A

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.

6. Describe whether part of the facility or project will be located outside of the Nunavut Settlement Area and whether any other regulatory requirements must be met (e.g. CEAA).

D-2. Facility Construction N/A

7. 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.
8. Describe dredging activities.
9. Indicate source of granular or rock material used in construction.
10. List quantities of the various types of material used in construction.
11. Describe construction method(s).
12. Indicate whether a site engineer will be on-site to inspect construction.
13. If proposed construction method involves dumping of fill into water, discuss measures for mitigating the release of suspended solids.

D-3. Facility Operation N/A

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

D-4. Vessel Use in Offshore Infrastructure N/A

19. Please complete Section H

SECTION E: Seismic Survey N/A

E-1. Offshore Seismic Survey N/A

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 by each line, the distance to nearby community/communities and sensitive areas (e.g., National Parks, National Wildlife Areas, Migratory Bird Sanctuaries, recognized breeding grounds or migratory routes).
4. Indicate the discharge volume of the airguns, the depth of airgun discharge, the noise levels of acoustic signal at various distances from the source (e.g.,500 metres,1000 metres), 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.
9. Describe whether any part of the project will be located outside of the Nunavut Settlement Area and whether any other regulatory requirements must be met (e.g. CEAA).

E-2. Nearshore/Onshore Seismic Survey N/A

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

E-3. Vessel Use in Seismic Survey N/A

16. Please complete Section H.

SECTION F: Site Cleanup/Remediation

2014 Aston Camp (old abandoned Cominco exploration camp)

1. Describe the location, content, and condition of any existing landfills and dumps (indicate locations on a map).
   A small temporary camp was constructed in the summer of 2014, at the site of an abandoned Cominco exploration camp, located at approximately 73°42'30" N latitude and 94°43'15" W longitude. The abandoned camp site included a small air strip and is the storage site for the historic Cominco drill core. Upon completion of the 2014 program, the camp was removed, with the exception of the Cominco drill core, 10 drums of aviation fuel, 17 drums of diesel fuel, 2 propane tanks, one wooden emergency structure and an outhouse, all of which are intended to be used in future programs. In addition, 90 empty drums are stored at the camp site and a fuel cache near Aston Bay. The empty drums will be removed during the 2015 field program. All wastes were separated into combustible, recyclable or hazardous (ie. petroleum products, batteries, etc.) and subsequently removed from site to be properly disposed in an authorized facility in Resolute Bay.
2. Identify salvageable equipment, infrastructure and/or supplies.
   While the new camp is being constructed, the old camp will be used as an emergency backup and then subsequently removed in its entirety and the site remediated.
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.
   There are currently no known spills or contamination required to be cleaned up. See answer to Question F1 for a list of contents at the camp.

4. Describe the degree of pollution/contamination, and list the contaminants and toxicity.
   N/A
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.
   N/A
6. Identify and describe all materials to be disposed of off site, including the proposed off site facilities, method of transport and containment measures.
   See answer to Question F1 for a list of contents at the camp.
7. Discuss the viability of landfarming, given site specific climate and geographic conditions.
   N/A
8. Describe the explosive types, hazard classes, volumes, uses, location of storage (indicate on a map), and method of storage (if applicable).
   N/A
   If blasting, describe the methods employed. **N/A**
9. Describe all methods of erosion control, dust suppression, and contouring and re-vegetation of lands.
10. 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

While the new camp is being constructed, and possible for the duration of the program, the 2014 Aston Camp will be used as an emergency backup and then subsequently removed and the site remediated.

SECTION G: Oil and Natural Gas Exploration/Activities

G-1. Well Authorization N/A

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 N/A

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 N/A

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 N/A

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

SECTION H: Marine Based Activities N/A

H-1. Vessel Use N/A

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 or any other *Qualified Marine Observer* 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).
16. Describe whether any part of the project will be located outside of the Nunavut Settlement Area and whether any other regulatory requirements must be met (e.g. CEAA).

H-2. Disposal at Sea **N/A**

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

SECTION I: Municipal and Industrial Development 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 appropriate, identify local study areas (LSA) and regional study areas (RSA).

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 is 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. that are in existence at present time.

For additional Information see "Technical report on the Exploration History and Current Status of the Storm Project. Somerset Island, Nunavut."

- Proximity to protected areas, including:
  i. designated environmental areas, including parks;
     The nearest National Parks are Polar Bear Pass National Wildlife Area located on Bathurst Island north of Somerset Island and Sirmilik National Park on northern Baffin Island, east of Somerset Island. The nearest Marine Protected Area surrounds the Prince Leopold Island Migratory Bird Sanctuary located to the northeast of Somerset Island.
  ii. heritage sites;
     There are no known Heritage Sites located on Somerset Island. The nearest sites are the Beechey Island Sites, to the northeast of Somerset Island, which includes the Wreck of HMS Breadalbane National Historic Site of Canada
  iii. sensitive areas, including all sensitive marine habitat areas;
     Aston Bay is not aware of any known sensitive areas near the Property.
  iv. recreational areas;
     50 km to the northeast of the Property at Cumberland Sound, is Arctic Watch Lodge, a wilderness adventure resort.
  v. sport and commercial fishing areas;
     There are no known commercial or sport fishing areas within the Project Area.
  vi. breeding, spawning and nursery areas;
     There are no breeding, spawning and nursery area within the project boundary of which the company is aware.
  vii. known migration routes of terrestrial and marine species;
     There are no defined migration routes within the project boundary of which the company is aware. Caribou may be present in the area and work will cease when caribou are present. All measures will be taken to avoid, protect wildlife and wildlife habitats
  viii. marine resources;
     Marine resources should not be affected by the project scope.
  ix. areas of natural beauty, cultural or historical history;
     All efforts will be made to respect and preserve all natural, cultural or historical resources.
  x. protected wildlife areas
     There are no protected wildlife areas within the project boundary of which the company is aware.
  xi. other protected areas.
     There are no other protected areas within the project boundary of which the company is aware.
- Eskers and other unique landscapes (e.g. sand hills, marshes, wetlands, floodplains).
- Evidence of ground, slope or rock instability, seismicity.
  There is no evidence of ground, slope, rock instability or seismicity within the boundary of the Property of which the company is aware.
- Evidence of thermokarsts.
  There is no evidence of the presence of thermokarsts within the boundary of the Property of which the company is aware.
- Evidence of ice lenses.
  There is no evidence of the presence of ice lenses within the boundary of the Property of which the company is aware.
- Surface and bedrock geology.
  See "Technical report on the Exploration History and Current Status of the Storm Project. Somerset Island, Nunavut" for detailed description of the regional and Property geology.

- Topography.
  The region is characterized by rolling terrain with low relief. The topography initially rises abruptly from sea level to about 100 m, and then levels out eastward, to an average of roughly 200 to 300 m above sea level.
- Permafrost (e.g. stability, depth, thickness, continuity, taliks).
  The entire region is subject to continuous permafrost, extending to depths of 400 to 500 metres.
- Sediment and soil quality.
  Flat areas are dominated by felsenmeer and cryoturbated soils. Cryoturbation produces features such as frost boils, ice-wedge polygons, stone nets and stone stripes.
- Hydrology/ limnology (e.g. watershed boundaries, lakes, streams, sediment geochemistry, surface water flow, groundwater flow, flood zones).
  The Aston River is the main watercourse in the area; it runs east-west through the Property, draining into Aston Bay. The Aston River and other major drainages are characterized by steep incised canyons, typically exposing good outcrop along the canyon walls.
- Tidal processes and bathymetry in the project area (if applicable).
- Water quality and quantity.
  Water quality on the Aston Bay Property appears to be abundant and pristine. All efforts will be made to keep water quality as close to pristine as possible.
- Air quality.
  All pollutants will be kept to an absolute minimum.
- Climate conditions and predicted future climate trends.
  January and February are the coldest months, with average temperatures below -30°C. Summers are typically brief, cool, and damp with a mean temperature through July and August of under 3°C. Snow cover during winter months may be as little as 30 cm, however due to constant northwest winds, drift accumulations can be significant.
- Noise levels.
  Will be kept to an absolute minimum.
- Other physical Valued Ecosystem Components (VEC) as determined through community consultation and/or literature review.
  None known at this time

Biological Environment

- Vegetation (terrestrial as well as freshwater and marine where applicable).
  Vegetation at the Storm Property consists mainly of moss, lichens, stunted plants and Arctic grasses. The grasses are typically observed growing at lower elevations in areas associated with river drainage basins.
- Wildlife, including habitat and migration patterns.
  Muskox are commonly observed grazing in these areas. Arctic fox, hare, and lemmings have also been noted at the Property. Polar bears and caribou are rarely observed. Seals can also be observed lying on the ice along the coast of Aston Bay.
- Birds, including habitat and migration patterns.
  Two important bird areas are identified on Somerset Island by Environment Canada: Batty Bay and Creswell Ba, but neither of them is in the vicinity of the Aston Bay Project as they are along the East Coast.
- 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.
  A number of Species considered to be "at risk" from the Public Registry, including the Peary Caribou, may be habit the area of Somerset Island. Measures will be taken to avoid these species to reduce the chance of adverse effects. All wildlife, and their dwelling sites, will be respected and efforts will be made to avoid them. All personnel will be required to record any wildlife sightings and will be instructed on the appropriate action to take when encountering wildlife in the field.

- Aquatic (freshwater and marine) species, including habitat and migration/spawning patterns.
  The proposed activities should not interfere with marine species. Screens will be placed over water intakes for the camp and drills to ensure no entrapment of freshwater species.
- Other biological Valued Ecosystem Components (VEC) as determined through community consultation and/or literature review.
  None known at this time

Socioeconomic Environment

- Proximity to communities.
  The closest community to the Aston Bay Property is Resolute Bay, approximately 112 km to the north
- Archaeological and culturally significant sites (e.g. pingos, soap stone quarries) in the project (Local Study Area) and adjacent area (Regional Study Area).
  Tent rings and remains of camps from Thule culture (AD 1000 - 1400) can be found near the Arctic Watch Lodge, along the northern coast of Somerset Island. No known archeological or paleontological sites or artifacts have been discovered on the Aston Bay Property.
- Palaeontological component of surface and bedrock geology.
  Somerset Island canyons, in the north of Somerset Island, are said to contain millions of fossils of prehistoric plants and animals litter. To date, no fossils have been observed in the surface bedrock within the Property.
- Land and resource use in the area, including subsistence harvesting, tourism, trapping and guiding operations.
  None known at this time
- Local and regional traffic patterns.
  None known at this time
- Human Health, broadly defined as a complete state of wellbeing (including physical, social, psychological, and spiritual aspects).
  Not known at this time
- Other Valued Socioeconomic Components (VSEC) as determined through community consultation and/or literature review.
  None known at this time

5. IDENTIFICATION OF IMPACTS AND PROPOSED MITIGATION MEASURES

1. Please complete the attached Table 1 – Identification of Environmental Impacts, taking into consideration the components/activities and project phase(s) identified in Section 4 of this document. Identify impacts in Table 1 as either positive (P), negative and mitigable (M), negative and non- mitigable (N), or unknown (U).
   See Table 1 attached
2. Discuss the impacts identified in the above table.

Potential Impacts and Mitigation:

The attached Identification of Environmental Impacts (Table 1) outlines activities associated with the Aston Bay Property including work related to the camp, exploratory drilling and general regional exploration, which may impact environmental, social, economic and health components. It is noted where the potential for interaction exists, which subsequently, can be used to determine potential impacts.

PHYSICAL AND BIOLOGICAL

Designated Environmental Areas:

There are no known protected areas in the vicinity of the Property (see point i. the Physical Environment portion of Section 4, "Description of the Existing Environment" for more information.

Ground Stability:
The proposed drilling program and the size and duration of use for the proposed camp, is not likely to cause any impact on the permafrost or stability of the ground.
Permafrost:
Permafrost can be impacted by camp activities. Mitigation measures to reduce the impact include limiting the amount of vegetation disruption to ensure proper shade coverage and reduction in the potential for ground thaw and subsidence. Footpaths can be marked using stakes and flagging tape to ensure that impacts to vegetation are confined to a small area or boardwalks can be built between camp buildings to reduce damage to vegetation on high-traffic footpaths. Areas that have patterned ground, clay-rich soil and or wetlands will be avoided. Heat radiating from camp buildings may thaw permafrost, so all heated camp structures will be slightly elevated above the ground to allow air circulation.
Surface Water Hydrology:
Surface water hydrology can be disrupted from removal of water for camp use and drilling. Water use at the camp will be drawn from Aston River. Extraction volumes to sustain 10 to 15 people will be approximately 1 to 2 m^3 per day, which will not impact hydrology or aquatic habitat. Drilling could use up to 40 m^3 per day and will be drawn from and returned to adjacent creeks/ponds/lakes/rivers. The water intakes for camp and drilling will be screened as per DFO requirements to prevent fish entrapment at the pumps. Disturbance to the waterbodies, beds or banks will be minimized by placing temporary pump placement platforms. The water level of any source body of water will never be drawn down.
Water Quality
Surface water quality may be affected by fuel and toxic material spills (including drill slurry) and grey water disposal. The measures noted in the Spill Prevention and Response Plan will mitigate for surface water quality impacts from spills. Sediment and drill fluids are also issues for surface water. Biodegradable drill additives will be used whenever possible. Any residual drill water, including cuttings and additives, will be contained in sumps. Sumps will be positioned down slope from the drill collar in such a manner that runoff flows into the sump. Sumps will be positioned a minimum of 31 metres from the normal high water mark of any water body. Activities that may result in sedimentation will be avoided.
Climate Conditions:
The proposed drilling program and the size and duration of use for the proposed camp, is not likely to cause any impact on climate conditions.
Eskers and Other Unique or Fragile Landscapes:
There are no known eskers in the area of the Aston Bay Property, which is why the location on the large braid bar of the Aston River was selected. Aston Bay considers all landscapes to be critical to the natural environment of the area and will treat with care and respect. Any seemingly unique and fragile landscapes will be avoided.
Surface and Bedrock Geology:
The proposed drilling program and the size and duration of use for the proposed camp, will not cause any impact on surface or bedrock geology. The regional exploration and Diamond drilling programs will add new information about the geology of the area.
Sediment and Soil Quality:
Soil quality can be impacted from spills of fuel and other materials, waste discharge and drilling. Preventative measures include appropriate and approved storage locations and containers with secondary containment. All camp, fuel, hazardous materials and drilling will be a minimum 31 metres away from any watercourses. Refueling will be done with precision and appropriate due-diligence will be taken. Drums and hoses will be inspected regularly for leaks and pans or absorbent pads will be placed below fuel transfer areas and stationary machinery. See the Spill and Response Plan attached for more information.
Tidal Processes and Bathymetry: N/A
Air Quality:
Impacts on air quality can result from discharge of exhaust from airplanes, helicopters, drilling operations and diesel generators, as well as emissions from incineration. Given the remote location with lack of air quality issues which currently exists within the project location, the short duration and small scope of activities are not expected to result in any measurable air quality impacts. An Environment Canada approved batch waste, controlled air, dual chamber incinerator will be selected to burn combustible waste, therefore reducing harmful emissions.

Noise Levels:

Noise can result from the use of planes, helicopters and drills and to a lesser degree from activities within the camp, which can disturb wildlife. Mitigation measure include, but not be limited to: helicopter avoidance of any raptor nests, bear dens and wolf dens, waterfowl and shorebird staging areas during critical seasons and near large mammals. In addition drill activities and associated work will cease if caribou cows and/or calves appear nearby.

Vegetation and Wildlife Habitat:

Vegetation can be disturbed by clearing/grading at camp, high traffic footpaths and drilling activities. During drilling, if any soil is required to be removed, it will be set aside and replaced at the completion of the drill hole. Any topsoil (if present) will also be stored and covered at the camp site for reuse later during reclamation at abandonment. The location of the new camp is on a large braid bar within the Aston River. The location is very sandy and not much vegetation will be disturbed. See the permafrost section above for more vegetation disturbance mitigation measures.

Wildlife, Birds and Aquatic Species (including habitat and migration patterns)

Wildlife can be displaced through loss of habitat, disturbed by noise (helicopter, plane, generators, drilling) or human interaction. Habitat loss can result in displacement of animals. Disturbance can cause stress-induced health problems and mortality. Physical fish habitat (stream beds) could be impacted from drill activity. Water extraction at the camp and drill site, as well as water quality impacts (resulting from fuel or other toxic materials) can ultimately affect fish populations. Mitigation procedures for reducing the impact of activities on wildlife will include, but not be limited to the following:

- All personnel will be trained on wildlife-human interaction/encounters procedures.

- Pre-drilling reconnaissance site visits prior to drilling activities will assist in identifying sensitive wildlife habitat.

- Wildlife sightings will be recorded and this information will be passed on to other members of the crew;

- Proper storage of hazardous materials, garbage, food and any other potential attractants will be ensured to avoid exposure to wildlife;

- All personnel will be aware of, and will follow, wildlife deterrence techniques (including proper storage and disposal of food) to reduce the possibility of attracting wildlife to the camp and drill areas;

- All personnel will have bear safety training and will be aware of the penalties for shooting polar bears, even in self defense.

- Operations will be modified or suspended if there is a potential to affect seasonal migration or nesting activities.

- Appropriate screens will be placed over all water intakes at camp and at the drill in order to reduce the potential for fish entrapment.

- The amount of water used for the camp or drill from any source body of water will never cause a drawn down.

See above comments in Noise Levels and Vegetation and Wildlife Habitat for additional information about wildlife disturbance mitigation measures.

SOCIO-ECONOMIC

Archaeological and cultural historic sites

Work in remote areas may help identify new archeological and/or paleontological sites. These important historic sites can be disturbed or destroyed if proper precautions are not taken. All staff and contactors will be properly trained in identification of potential sites and what do to when a site is located. If an archaeological or paleontological artifact or site is discovered at any stage of the program, work in the area will be immediately stopped and the AANDC resource management officer, territorial government and Department of Culture, Language, Elders and Youth will be notified. Nothing will be removed, disturbed, or displaced at any archaeological or paleontological site.

Employment

Aston Bay Holdings believes that it is essential to develop the project in cooperation with local communities. The proposed exploration program will provide seasonal employment and training opportunities for local Inuit in camp and as guides in the field whenever possible. Local employment benefits individuals and families in isolated communities which may have few opportunities. This in turn boosts the local economy.

Community wellness

Whenever possible, goods and services will be sourced from local businesses. Aston Bay is committed to engaging communities in an open and honest manner and would appreciate and consider any and all

knowledge, advice and input received. With proper mitigation, the project should not affect land and water use, traditional use or cultural resources.

Human Health

As the project is located at a remote site removed from immediate interaction with local communities, no impact to local human health is expected.

3. Discuss potential socioeconomic impacts, including human health.

See "Socio-Economic" portion of section 5.2.

4. Discuss potential for transboundary effects related to the project.

   All activities related to the Aston Bay project are located on Somerset Island and are therefore not going to have any transboundary effects.

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.

   See comments in section "5. IDENTIFICATION OF IMPACTS AND PROPOSED MITIGATION MEASURES."

6. Discuss proposed measures to mitigate all identified negative impacts.

   See comments in section "5. IDENTIFICATION OF IMPACTS AND PROPOSED MITIGATION MEASURES."

6. CUMULATIVE EFFECTS

A cumulative impact (or effect) can be defined as the impact on the environment that results from the incremental impact of the action when added to other past, present and reasonably foreseeable future actions. Cumulative impacts can also result from individually minor but collectively significant actions taking place over a period of time.

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

Cumulative effects can occur from of a number of developments concurrently occurring within a geographic area or of a number of developments occurring over time.All potential environmental effects associated with the proposed Aston Bay Property are minor, localized effects that can be mitigated. No significant residual impacts to the environment are expected to occur as a result of the implementation of this program. While individually no significant effects are anticipated, consideration should be made to the combination of all existing or known planned activities within the vicinity of Aston Bay project area. Some cumulative effects can be positive, such as the case with the establishment of the diamond mines in the NWT, more residents are finishing high school and earning higher salaries. Other positive cumulative effects can be increased employment rate, infrastructure and potential for investment in communities by government. Cumulative effects may also be negative and therefore attention should be given to the potential for these to occur in advance of project growth. Cumulative effects on the land might include changes to the number of wildlife, increases in non-native plants, or the melting of permafrost.

A summary of activities, both past and present, within and around the Aston Bay Property are describe below.

Past Activities:

From the late 1960's to 2007 a number of companies carried out small exploration programs in the area of the Aston Bay Property. These companies included Cominco Ltd. ("Cominco"), Noranda Inc. (now Glencore Xstrata plc) and later Teck-Cominco Ltd. (now known as Teck Resources Ltd.). A summary of the work completed in the area is located in the following table.

Type of Work	Year	Target Area	Summary
Diamond Drilling	1995	Seal Zn Zone	14 holes, 2,465.7 m
	1996	Seal Zn Zone	10 holes, 1,828 m
	1996	Storm Cu Zone	1 hole, 290.3 m
	1997	Storm Cu Zone	17 holes, 2,801.3 m
	1999	Storm Cu Zone	41 holes, 4,593.4 m
	2000	Storm Cu Zone	8 holes, 1,348.5 m
	2001	Seal Zn Zone	6 holes, 822 m
Soil Sampling	1973	Aston Bay	15 samples
	1994	Aston Bay	434 samples North & South Peninsula, & Seal Island
	1995	Aston Bay	225 samples from South Peninsula and Seal Island
	1995	Regional	Regional sampling in areas south of Aston Bay
	1997	Storm Cu Zone	536 samples (grid)
	1998	Storm Cu Zone	851 samples (grid)
	1998	Storm Property	1338 samples (regional)
	1999	Storm Cu Zone	750 samples (grid)
Stream Sediment	1966	Regional	Sample density 1 per 6.2 km2
	1970	Regional	198 samples taken on current Property
	1993	Aston Bay	No data available
	1994	Regional	50 heavy mineral samples
Rock Sampling	1973	Aston Bay	Prospecting Seal showing and North Peninsula; no data available
	1993	Aston Bay	Prospecting in Aston Bay area; no data available
	1994	Aston Bay	65 samples North & South Peninsula, & Seal Island
Geophysics	1994	Aston Bay	168 line-km of IP and 62 line-km of gravity
	1995	Aston Bay	HLEM survey on North Peninsula
	1997	Storm Cu Zone	89 line-km of IP and 71.75 line-km of HLEM
	1997	Storm Property	10,741 line-km high-resolution aeromagnetic survey
	1998	Storm Cu Zone	44.5 line-km of IP
	1999	Storm Cu Zone	57.7 line-km of IP
	1999	Storm Property	Airborne hyperspectral survey
	2000	Storm Property	3,260 line-km GEOTEM airborne survey
	2000	Storm Cu Zone	Ground geophysics: 100.5 km of UTEM, 69.2 km of gravity, 11 km of magnetics, and 6.5 km of HLEM
	2011	Storm Property	3,970 line-km VTEM airborne survey
Geological Mapping	1970	Regional	Photogeological mapping of NW Somerset Island
	1973	Aston Bay	1":1/4 mile mapping of North and South Peninsulas
	1994	Aston Bay	Detailed mapping of Seal Island and North and South Peninsulas
	2000	Storm Cu Zone	Detailed geological mapping

From 2008 to 2011, work completed on behalf of Commander Resources Ltd. included: 3,970 line-km of helicopter-borne Versatile Time-Domain Electromagnetic (VTEM) and aeromagnetic surveys, analysis of

samples from 7 historic Cominco drill core, historical collar identification and examination and detailed geological mapping.

Work on behalf of Aston Bay Holdings since 2012 has included:, analysis of 399 samples from historic Cominco drill core, resurveying of 80 historic drill collars, 4 utem and 6 gravity ground geophysical surveys, collection of 80 rock samples, geological mapping and mineral claim staking.

Current Activities:
There are no permanent residents of Somerset Island.

Arctic Watch Activities – the Arctic Watch Lodge, a wilderness adventure resort, is located 50 km to the northeast of the Property at Cumberland Sound. Activities by staff and visitors include hiking, ATV'ing, kayaking with beluga whales, rafting the Cunningham River, exploring the Northwest Passage, "catch-and-release" fishing and Arctic safaris to watch muskox, polar bears, nesting peregrine falcons and other birds such as loons, snow buntings, sandpipers and rough-legged hawks. Tours of Thule archeological sites are conducted at Cape Anne, along the north coast of the Island.

Icebreaker Cruise Ship Tours – tourists may disembark to explore the ancient Thule Ruins, but these are again located in the northern part of Summerset Island.

There are no known other mineral exploration properties currently in exploration on Somerset Island.

The combination of small grassroots exploration programs and tourist activates, which have occurred in the past and are occurring at the present time in and around the Aston Bay Property are minor or negligible. Any cumulative effects at this stage will also be minor or negligible.

7. SUPPORTING DOCUMENTS

Where relevant, provide the following supporting documents:

- Abandonment and Decommissioning Plan
- Existing site photos with descriptions
- Emergency Response Plan
- Comprehensive Spill Prevention/Plan (must consider hazardous waste and fuel handling, storage, disposal, spill prevention measures, staff training and emergency contacts)
- 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.

TABLE 1 - IDENTIFICATION OF ENVIRONMENTAL IMPACTS

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

Note: Please indicate in the matrix cell whether the interaction causes an impact and whether the impact is

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

If no impact is expected please leave the cell blank