

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 app

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

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 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.

See Location of the Malley – Wishbone Project included with application package

Project General Information

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

This project will allow Sabina Gold & Silver Corp. to conduct further mineral exploration on its properties in the Malley and Wishbone areas of the Kitikmeot.

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).

As the proposed project represents ongoing mineral exploration, the only alternative is the no-go option. Geophysical surveys have already been completed and continue to be carried out, as have prospecting, mapping and diamond drilling programs. The most prospective areas from these investigations require followup in the form of diamond drilling to properly evaluate their mineral resource potential, as well as to develop studies on the economic viability of development. As the only way to develop a viable mineral project the area is with a large or a number of moderately-sized deposits, the no-go alternative would preclude the economic development of any potential mineral resource. This project is required in order to help determine the economic value of the mineral occurrences in the area.

7. Provide a schedule for all project activities.

The Goose camp located on Goose Lake would be the primary base of operations for the project and will typically open between early February to early March each year. An additional base camp will also be established centrally located in the Wishbone claim group. There are historic camp locations in the area and Sabina is assessing the possibility of using a previous site. This will minimize impacts to the local environment using an established camp site, any remaining (and usable) infrastructure will be incorporated into a new camp site, and with a presence in the area can easily facilitate any cleanup and reclamation activities of the old camp site.

Activities related to camp opening, resupply, and preparations for drilling will take place over the first several weeks, with drilling and other operational activities expected to begin around mid-March and to continue throughout the summer. Additional prospecting, mapping and geophysical activities will also be considered for each field season. It is anticipated that all activities on the project site will be completed by the end of September each year, with the possibility of extending the season into October depending on operational requirements.

This schedule is similar to other Sabina operations in the area, with opening and closing dates varying by up to 3-4 weeks each year depending on operating requirements, weather conditions, and the amount and type of work to be done.

Smaller temporary camps and ice strips may be established for up to 10 weeks each season proximal to areas of exploration interest. These camps would enable the establishment of alternate storage areas for fuel and drilling supplies proximal to field operations, as well as reducing the environmental risk and cost of transporting fuel via helicopter from the main camps.

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

- ARTICLE 13 – NCLA -Nunavut Land Claims Agreement
- NWNSRTA – The Nunavut Waters and Nunavut Surface Rights Tribunal Act, 2002
- Northwest Territories Waters Regulations, 1993
- NWB - Water Licensing in Nunavut - Interim Procedures and Information Guide for Applicants
- NWB - Interim Rules of Practice and Procedure for Public Hearings
- RWED – Environmental Protection Act, R-068-93- Spill Contingency Planning and Reporting Regulations, 1993
- RWED A Guide to the Spill Contingency Planning and Reporting Regulations, 2002
- NWTWB - Guidelines for Contingency Planning

- *Canadian Environmental Protection Act, 1999 (CEPA)*
- *Fisheries Act, RS 1985 - s.34, 35, 36 and 37*
- *DFO - Freshwater Intake End of Pipe Fish Screen Guideline*
- *NWTWB - Guidelines for the Discharge of Treated Municipal Wastewater in the NWT*
- *Canadian Council for Ministers of the Environment (CCME); Canadian Drinking Water Quality Guidelines, 1987*
- *Public Health Act - Camp Sanitation Regulations*
- *Public Health Act - Water Supply Regulations*
- *Territorial Lands Act and Territorial Land Use Regulations; Updated 2000*

9. List the approvals, permits and licenses required to conduct the project.

List of Licences and Permits issued for Wishbone-Malley

Permit No.	Permit Name
Application	AANDC LU application
Application	KIA LU application
Application	NWB water license application

<i>Claim #</i>	<i>Claim Name</i>	<i>Claim #</i>	<i>Claim Name</i>
F98444	MALLEY 1	F79382	Wishbone 1
F98445	MALLEY 2	F79383	Wishbone 2
F98446	MALLEY 3	F79384	Wishbone 3
K10831	MALLEY 5	F79385	Wishbone 4
K10832	MALLEY 4	K09392	Wishbone 20
K10833	MALLEY 6	K09395	Wishbone 23
K10834	MALLEY 7	K09396	Wishbone 24
K10835	MALLEY 8	K09397	Wishbone 25
K10836	MALLEY 9	K09398	Wishbone 26
K10837	MALLEY 10	K09399	Wishbone 27
K10838	MALLEY 11	K09401	Wishbone 30
K10839	MALLEY 12	K09402	Wishbone 31
K10840	MALLEY 13	K09406	Wishbone 34
K10842	MALLEY 14	K09409	Wishbone 35
K10841	MALLEY 15	K09410	Wishbone 37
K10843	MALLEY 16	K09416	Wishbone 46
K10844	MALLEY 17	K09418	Wishbone 38
K10845	MALLEY 18	K09419	Wishbone 36
K10846	MALLEY 19	K12032	Wishbone 200
K10847	MALLEY 20	K12031	Wishbone 201
K10848	MALLEY 21	application	Wishbone 202 to 274
K10849	MALLEY 22	Lease 3701	Needle lease
K10850	MALLEY 23		
K10851	MALLEY 24		
K10852	MALLEY 25		
K10858	MALLEY 26		
K10859	MALLEY 27		
K10860	MALLEY 28		
K10861	MALLEY 29		
K12008	MALLEY 30		

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
- § 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>

Not applicable.

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.

Not applicable.

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).

Supplies and personnel will access the site via charter air carrier; there is no road access to the site at any point through the year. In the winter, an ice strip on a local lake will be used; float-equipped aircraft will be used in the summer time. During the breakup period wheel-equipped aircraft will use the prepared esker strip in the Musk camp area. All travel throughout the project area will be accomplished using helicopters, as will drill moves and drilling support. In the winter when there is sufficient snow cover to avoid damage to the tundra, local transport is done with snowmobiles and drill rigs will be moved short distances overland.

Access to the temporary camps will be principally via helicopter to and from the main camp. If operational needs and environmental conditions allow, icestrips will be established on nearby lakes to allow resupply of these temporary camp and exploration areas during the winter months. Float planes may be used in the summer months.

Communication at all camps would include satellite phones and hand-held radios to ensure connection across the project area and to link with Yellowknife and Sabina offices. Dishes, and repeater stations will be established as needed.

Map not applicable.

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 airstrip at Musk Camp is a prepared esker used for a 2-3 week period during break-up in the spring. The strip is located in the area of the camp and is accessed using a helicopter. Due to the very low frequency of its use, no dust management measures have been implemented for this airstrip.

14. If an airstrip is being constructed, provide the following information:
- 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.

Not applicable

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

Charter flights to/from Yellowknife are flown at the pilot's discretion depending on weather conditions, but may be expected to be at an altitude of 5,000-10,000' ASL. These flights occur twice weekly with supplemental flights added as required. Resupply flights occur early in the season and may be any day of the week, and, if lighting is available for the ice strips, 24 hours a day in the case of the Hercules. All of the flights pass over the Ekati/Diavik area enroute.

Helicopter flights in the area may occur anywhere from 1 every 2-3 days to several per day, depending on the operational requirements at the time. The most heavily travelled flight routes are within the exploration area. As per several of our operating licenses, the pilots are instructed to maintain a minimum altitude of 1000' (300 m) AGL unless weather or operating requirements indicate otherwise.

Camp Site

16. Describe all existing and proposed camp structures and infrastructure

Structures at the camp consist of a combination of wood-frame construction for many of the common buildings (kitchen/dry, drillers' dry, pack shed, offices, coreshacks, etc.) and wood-framed canvas tents for sleeping accommodations.

Two helicopter pads would be located within camp area.

Water is provided to a main holding tank via an on-demand system which continuously circulates water from the local lake. Water can be drawn through a flow meter to the holding tank as required, or otherwise returned to the local lake.

The core cutting and logging facilities will be constructed as well as a new drillers' dry. Office facilities will also be constructed for management and communication basis for Sabina and their contractors.

Sleeping quarters will be constructed to support a camp population of up to 60 people, to support drilling of up to 4 drill rigs.

All of the planned construction/expansion activities here and will remain within the smallest footprint possible and 31m above the high water mark of local waterways.

The temporary satellite camps will consist of approximately 4-6 weatherhaven-type structures which are set up for the duration of the exploration program and/or resupply period.

17. Describe the type of camp:

- a. Mobile
- b. Temporary
- c. Seasonal
- d. Permanent
- e. Other

The main camp would be used seasonally. At the end of each season, all buildings and infrastructure are prepared for winter based on the Abandonment and Restoration Plan and left in place.

The satellite camps are temporary.

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

Currently the proposed main camp would have a capacity of up to people including Sabina personnel, drilling contractors, pilots and any other contractors and/or guests.

The population of the temporary camps is expected to be approximately up to 20 personnel.

Equipment

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

Equipment	Purpose
Up to 4 diamond drills	Diamond drilling
Other equipment may include: - bulldozer - loader - skidsteer	Moving equipment and snow
Up to 15 light vehicles (ie ATV's snowmobile, boats)	Local transport of personnel and equipment around camp and to/from drill rigs.

Sabina will, from time to time, re-position some of the listed assets between the Goose, George, Wishbone-Malley camp or temporary camps as operational or maintenance requirements dictate. This repositioning will occur along properly permitted winter roads (separate permits) with sufficient snow cover to inhibit damage to the tundra. The ability to move the equipment between the project sites is important to allow for economical resupply of all the exploration camps in the area, as well as to position equipment in preparation for the start of subsequent seasons.

Exploration activities will also be supported by heli transport to move personnel and drillrigs, however, the number and type is dependant on operational needs.

Sabina will include, as part of the annual regulatory ports, an inventory of equipment remaining at each site at the end of each season.

20. If possible, provide digital photos of equipment.

Photos not available.

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 for the Wishbone - Malley camp would be supplied from a local lake of sufficient volume that drawdown meets DFO withdrawal criteria. The intake hose would be equipped with a screen suitable to prevent the entrapment of fish. Water for drills would be supplied from a variety of small lakes and ponds located on the mineral leases and claims. Water for each drill site would most likely be from the closest body of water to the drill site so as to minimize pumping distance. These locations will ve intake hoses equipped with screens to prevent the entrapment of fish. Local lakes would also supply water to the temporary camps with intakes also screened to prevent the extrapment of fish.

Water pumped from the lake would be stored in six 250 gallon (1137 litre) plastic tanks located inside a water room adjacent to the kitchen and possibly the driller's dry to keep the water from freezing.

When the lake is frozen, a portable water pump would be placed on the ice approximately 15m from shore and the screened intake hose put down a hole in the ice to provide water. When there is no ice on the lake, the portable Honda 5 hp water pump is replaced by an electric, system, and the screened intake hose is placed in deeper water to provide clear water. The metered water intake system continually circulates water, and when water is required in the tanks, the flow is diverted through the d into the tanks. Readings are recorded daily. This electric, on demand system, removes the threat of fuel spills into the lake. The circulating water returns down a second hose to the lake, if not needed to allow for continuous circulation, and prevent freezing of the lines. This system will be maintained with the licence renewal and amendment.

22. Describe the estimated rate of water consumption (m³/day).

Water use will include:

- *up to 120 m³/day for drilling (assuming 4 drill rigs using 30m³/day)*
- *up to 15 m³/day for a seasonal camp (assuming 60 people using 250L/day)*
- *up to 5 m³/day for temporary camp (assuming 20 people using 250L/day)*
- *Other water use, storage, discharge, diversion/collection associated with exploration activities, infrastructure and/or reclamation 10m³/day*
- *Ice airstrip at camps (-30 to 50 m³/day and only used if necessary)*

TOTAL 200m³/day

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

Water used during drilling will be recycled and reused as much as possible to minimize the quantity used and allowed to freeze in the hole upon completion; the timeframe for freezing ranges from hours to days. Clarified water from the sump (used to capture the drill cuttings/sludge) would be allowed to drain on the tundra (away from any surface water body) and/or percolate into the ground to return to the local d.

Where drilling occurs near, or on lakes, the drill return water containing drill cuttings will be pumped well back from the shore of the lake to a natural depression, or sump, the location of which is surveyed and recorded. Because drill cuttings are mechanically pulverized rock, they are geologically similar to the locally present glacial till. It is expected that drill cuttings will, in time, be colonized by plants and lichen. The quantity of drill cuttings at each drill site depends on the length of the hole and is estimated to be up to 1 m³ for the deepest holes. At each drill site (except those drilled from ice) plans to backfill the drill hole with any accumulated drill cuttings taking care not to disrupt the surrounding topsoil/organic layer.

Greywater from the camp kitchen and the dries would be collected by drainage pipes and gathered in a 500-gallon (1893 litre) open tub and then pumped by a trash pump to a greywater disposal pit located further back (about 110m) from the local lake with an automatic, float-controlled pump. It is estimated that with the camp expansion this system would be maintained and up to approximately 15 to 20 m³ per day of grey-water would be generated by the camp. Greywater generated at the temporary camp locations would be disposed in a sump located 30m away from the nearby waterways.

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

Not applicable.

Waste Water (Grey water, Sewage, Other)

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

- § Sewage
- § Camp grey water
- § Combustible solid waste
- § Non-combustible solid waste, including bulky items/scrap metal
- § Hazardous waste or oil
- § Contaminated soils/snow
- § Empty barrels/ fuel drums
- § Any other waste produced

Type	Est. Quantity	Storage	Transport	Disposal	Additional treatment
Sewage	100 kg	Pacto bags	ATV/Snowmobile	Incineration at camp	Backhaul ash
Greywater	15-20 m3	500 gallon open tub	Drainage pipe	Sump	
Combustibles	300-500 m3	Empty drums, bins, bag	ATV/Snowmobile/Loader	Incineration at camp	Backhaul ash
Non-Combustibles	150-200 m3	Varies according to material	ATV/Snowmobile/Loader/ Aircraft	Backhaul	Landfill
Hazardous waste	30 m3	Empty drum, sealed top	ATV/Snowmobile/Loader/ Aircraft	Backhaul	Disposal at accredited facility
Contaminated snow/soil	1 m3	Empty drum, sealed top	ATV/Snowmobile/Loader/ Aircraft	Backhaul	Disposal at accredited facility
Empty drums	1000-5000	Stacked in secondary containment	ATV/Snowmobile/Loader/ Aircraft	Backhaul	Disposal at accredited facility

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

Not applicable.

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 and Capacity of Containers	Total Amount of Fuel (in Litres)	Proposed Storage Methods
Diesel	(2000) 205L drums	410,000 L	Artificial berms
Gasoline	(30) 205L drums	6,150L	Artificial berms
Aviation fuel	(650) 205L drums	133,250 L	Artificial berms
Propane	(30) 100 lb tanks		
Acetylene	(1) 50 lb tank		

Drummed fuel is transported to the project site strapped together on pallets, and using the most economical air transport available.

Where necessary, supplies of fuel may be strategically located throughout the project area to fulfill drilling or helicopter requirements.

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.

Drums of diesel, Jet B and gasoline fuels will be stored outside in separate fuel caches enclosed within impermeable berms to prevent any leaks from entering the soil. Each of the containment berms is equipped with a RainDrain™ filtration system that continuously filters out the rainwater while containing any hydrocarbons. These are monitored on a regular basis to ensure proper operation. The fuel would be stored well back from any lake or stream. As the fuel is used the empty fuel drums will be stored near camp until they can be flown out to Yellowknife on backhaul flights. All the fuel caches would be monitored on a regular basis to check for leaks.

Propane tanks would be secured in an upright position. The acetylene tank for welding would also be secured in an upright position.

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

Vehicles and small storage tanks are refuelled at a station adjacent to the fuel storage areas in camp by personnel trained to conduct these transfer using appropriate equipment. Drip trays and enviromat are used to catch any minor drips.

At each drill location, fuel and supplies will be delivered daily and waste material returned to camp. Two to three, double-walled, fuel tanks will be at the drill rig during its operation. One tank would have a pump and be used to supply the drill rig and a second tank will be available as a back-up supply. Each morning a third full tank will be delivered to the location to replace the tank (now empty) that has been used to supply the rig. Spill response kits are also located at each of the drills in use.

30. Describe spill control measures in place.

Spill Contingency Plan is included with this submission.

Please refer to Environment Canada's fuel storage tank 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.

Drill Additives

Product	Constituent	Maximum Quantity	Storage
Matex DD2000	Liquid polymer	(15) 5 gal tubs	Containers in storage shed
Polydrill 1300	Liquid anionic polymer	(15) 5 gal tubs	
PureVis	Liquid Polymer	(25) 5 gal tubs	
Westcoast Drilling Supplies	Linseed Soap	(5) 5 gal tubs	
Peladow	CaCl ₂	45 tonnes	50 lb bags on pallets

Lubricants

Product	Maximum Quantity	Storage
Drill Rod Heavy Grease	(3) 5 gal tubs	Containers in storage shed
Duron Multigrade Engine Oil (10W-30, 15W-40)	(36) 1 L bottles	

Welding Gases

Product	Maximum Quantity	Storage
Oxygen	(1) 7 kg cylinder	Outside Major Drilling repair shed, stored according to WCB specifications in an open, roofed storage area
Propane	(1) 45 kg cylinder	

Medical Gases

Product	Maximum Quantity	Storage
Oxygen	(7) 0.65 kg cylinder	Stored in the first aid tent. Cylinders are stored upright and chained to the walls.
Oxygen	(1) 7 kg cylinder	

Quantities of each of these materials is highly variable and the quantities listed are the maximum amounts that would be stored in camp. These materials are brought into camp as needed on a regular basis on the regular scheduled supply flights.

Other chemicals that would be used in small quantities during the drill program would include kitchen soaps and cleaning agents, bleach, soaps and shampoo, waterless hand cleaners, hand sanitizer, mosquito repellent and other similar household items. Kitchen cleaners would be kept in the kitchen tent; bleach, soaps and shampoo would be stored in the shower / laundry tent and driller's dry. Mosquito repellent would be stored with office field supplies in the office tent.

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

See question above.

33. Describe the method of chemical transfer.

Fluids and oils on vehicles are changed in designated areas within the camp. Drip trays or enviromat will be used to minimize any risks associated with spills arising from fluid transfers.

34. Describe spill control measures in place.

Spill Contingency Plan is included with this submission.

Workforce and Human Resources/Socio-Economic Impacts

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

Local Inuit hires have the opportunity to learn skills associated with the operation of an exploration camp as well as the associated exploration activities. Several Inuit employees have been hired in previous programs to help with exploration activities including prospecting, drilling, sampling, core splitting, sample shipping, maintenance, equipment operation, environmental monitoring and reclamation.

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

Initial exploration programs would be based out of the Goose camp while the Wishbone - Malley main camp is under construction. It is anticipated that construction would start during the 2012 season with a target completion prior to the start of the 2012 late summer program. The initial setup crew is expected to arrive in camp sometime between early February and early March, with remaining personnel (geologists, geotechnicians, logistics, drillers) to follow around starting around mid- to late-March. Personnel will be working a 4-week in/2-week out rotation, with transport to/from Yellowknife via charter aircraft. Commercial flights from the Yellowknife airport will be used to transport people to and from their point of hire. The project is expected to run until the end of October at the latest.

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

Where possible, Sabina aims to rehire Inuit employees from previous years. In addition to reducing recruitment costs and uncertainty for the company, this practice has the added

benefit of allowing for greater skill development for those employees who show dedication to the job and wish to return. It typically also results in a higher per-capita salary with the resultant benefits to individuals and families rather than having the payments spread out over a larger number of shorter-term employees

Public Involvement/ Traditional Knowledge

38. Indicate which communities, groups, or organizations would be affected by this project proposal.

The communities of Gjoa Haven, Kugluktuk and Cambridge Bay are used as points of hire for Inuit beneficiaries. Bathurst Inlet and Umingmaktok are the closest communities to the area, however, there is very limited workforce and cost-effective access to use these as points of hire.

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

There have not been any direct consultations with the nearby communities with respect to this application. Sabina representatives annually attend the Yellowknife Mining Symposium in November, as well as attending meetings in Cambridge Bay and the Nunavut Mining Symposium, all of which will provide opportunities for informal discussions about the projects. Sabina is planning to bring local community representatives and Elders to the site during the 2012 exploration seasons.

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

Components of this project have been previously screened by NIRB (04EN012 and 08EA084) and all applications and amendments distributed for public comment. Comments included recommendations such as secondary containment of fuel supplies, avoidance of groups of wildlife in both aerial and ground operations and to continue hiring NLCA beneficiaries. Many of the comments become integrated into the current operating permits through the annexed terms and conditions. Where practical, Sabina will take all comments under consideration and develop operating procedures to address them.

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

No traditional knowledge studies have been undertaken to date. Sabina is currently in discussion with the Kitikmeot Inuit Association to identify potential elders with regional/local knowledge and opportunities for engaging them with the project.

42. Discuss future consultation plans.

Community consultation will be conducted as part of the advanced development project at the Back River – Goose Project. Sabina has focussed on revisiting the mineral potential of the area and minimized community consultation until the re-evaluation is complete. It is anticipated that community consultation will be started again in 2012 once internal decisions have been made regarding the next steps of the 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 B: Mineral Exploration /Advanced Exploration /Development**B-1. Project Information**

- Describe the type of mineral resource under exploration.
In the Malley-Wishbone area, exploration is focussed on banded iron formation style gold (Au) mineralization.

B-2. Exploration Activity

- Indicate the type of exploration activity:
 - Bulk Sampling (underground or other)
 - Stripping (mining shallow bedded mineral deposits in which the overlying material is stripped off, the mineral removed and the overburden replaced)
 - ü Trenching
 - Pitting
 - Delineation drilling
 - Preliminary Delineation drilling
 - ü Exploration drilling
 - ü Geophysical work (airborne)
 - ü Other (prospecting, sampling)
- Describe the exploration activities associated with this project:
 - ü Satellite remote sensing
 - ü Aircraft remote sensing
 - ü Soil sampling
 - ü Sediment sampling
 - ü On land drilling (diamond drill)
 - ü On ice drilling (diamond drill)
 - Water based drilling (indicate drill type)

- Overburden removal
- Explosives transportation and storage
- Work within navigable waters
- Ü On site sample processing (logging, cutting, sampling at main camp)
- Ü Off site sample processing (sample preparation, analytical work)
- Waste rock storage
- Ore storage
- Tailings disposal
- Portal and underground ramp construction
- Landfilling
- Landfarming
- Other

B-3. Geosciences

4. Indicate the geophysical operation type:

- Seismic (please complete Section E)
- Ü Magnetic
- Gravimetric
- Ü Electromagnetic
- Other (specify)

5. Indicate the geological operation type:

- Ü Geological Mapping (including grab sampling)
- Ü Aerial Photography
- Ü Geotechnical Survey
- Ground Penetrating Survey
- Other (specify)

6. Indicate on a map the boundary subject to air and/or ground geophysical work.

Geophysical studies may be considered for any of the claim areas indicated on the annexed map, and are subject to budgetary and logistical considerations, as well as internal research into regional exploration potential. Sabina will provide authorities with the appropriate notification of geophysical surveys when/if plans are finalized, and as part of the notification process for seasonal opening of the camps.

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

Owing to technical requirements of the airborne EM survey method, all areas which are chosen to be surveyed by this method will have flight altitudes below 610 m. The aircraft altitude would be approximately 75 m, and the EM instrument would be approximately 30 m above ground. Other methods may have different operating requirements, which Sabina will include with the notification indicated in the previous question.

B-4. Drilling

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

The total number of holes for each season's program will vary depending on whether the program is focused on exploration or resource definition, or both, and on the available budget for that year. Drilling is also evaluated on a continuous basis, so holes may be added or removed in some areas depending on the results obtained.

Currently, Sabina conducts drilling programs with 2-4 drill rigs with 8,000 to 25,000m programs. A typical maximum downhole depth would be about 300 m with an inclination of 50-60°.

9. Discuss any drill additives to be used.

See Item 31 for details.

10. Describe method for dealing with drill cuttings.

Sludge from the drills is captured and deposited in a sump, or a natural depression, in the vicinity of the drill location. Where drilling occurs near, or on lakes, the drill return water containing drill cuttings will be pumped well back from the shore of the lake to a natural depression, or sump, the location of which is surveyed and recorded. Because drill cuttings are mechanically pulverized rock, they are geologically similar to the locally present glacial till and outcrop. It is expected that drill cuttings will, in time, be colonized by plants and lichen. The quantity of drill cuttings at each drill site depends on the length of the hole and is estimated to be up to 1 m³ for the deepest holes..

11. Describe method for dealing with drill water.

Water used during drilling will be recycled and reused as much as possible to minimize the quantity used and allowed to freeze in the hole upon completion; the timeframe for freezing ranges from hours to days. Clarified water from the sump (used to capture the drill cuttings/sludge) would be allowed to drain on the tundra (away from any surface water body) and/or percolate into the ground to return to the local water table.

12. Describe how drill equipment will be mobilized.

Drill moves will be accomplished by helicopter. In areas near camp, if there is sufficient snow cover to protect the tundra, ground-based equipment may be used to move the rig from one setup to the next.

13. Describe how drill holes will be abandoned.

Each drill site is occupied by the drill rig approximately 2 to 10 days and a typical area affected is approximately 35 by 35 feet. The area includes the rig on a platform, sumps/collection tank, water supply and any geotextile fences constructed down slope from each new drill setup to contain any spills of drill-generated sludge. Once the drilling on a set up is completed, the diamond drill rig is dismantled to the main components using the drilling contractor procedure and secured with associated equipment and rods. The drill rig is moved by helicopter either to the next location or to designated storage areas on the property until the next drilling season. Diamond drill site restoration commences as soon as practical after completion of the hole, however, site clean-up of litter, debris and drill fluids commences immediately. Any waste is taken back to camp and disposed in a manner appropriate to the waste; any unused material, fuel and supplies are removed from the location and taken for use at the next drill site, or taken back to camp for reuse.

All depressions around the drill collars are backfilled covering the cuttings and re-contoured with a rake to blend with local surroundings and to provide seeds with additional traction in order to assist the process of natural regeneration. Any geotextile fencing is removed and in most cases is re-used, as it is usually clean. Any damaged or sludge impregnated fabric is sent back to camp for disposal.

Drill casing is pulled from all holes. Drill casing that were left at holes where significant mineralization was encountered were cut to ground level and capped. The pulled and cut portions are disposed of in an approved facility in Yellowknife or recycled as scrap metal. The collar locations of all drill holes are surveyed and recorded in exploration reports.

Drill core and core boxes are moved to the designated core storage area and properly secured.

All drill sites are inspected for spills and contamination and any noted are managed according to the Spill Contingency Plan. In the event that the site is now covered when drilled, the site is visited the following season to ensure successful reclamation has occurred.

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.

Not applicable.

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.

- Proximity to protected areas, including:
 - i. designated environmental areas, including parks;
 - ii. heritage sites;
 - iii. sensitive areas, including all sensitive marine habitat areas;
 - iv. recreational areas;
 - v. sport and commercial fishing areas;
 - vi. breeding, spawning and nursery areas;
 - vii. known migration routes of terrestrial and marine species;
 - viii. marine resources;
 - ix. areas of natural beauty, cultural or historical history;
 - x. protected wildlife areas; and
 - xi. other protected areas.
- Eskers and other unique landscapes (e.g. sand hills, marshes, wetlands, floodplains).
- Evidence of ground, slope or rock instability, seismicity.
- Evidence of thermokarsts.
- Evidence of ice lenses.
- Surface and bedrock geology.
- Topography.
- Permafrost (e.g. stability, depth, thickness, continuous taliks).
- Sediment and soil quality.
- Hydrology/ limnology (e.g. watershed boundaries, lakes, streams, sediment geochemistry, surface water flow, groundwater flow, flood zones).
- Tidal processes and bathymetry in the project area (if applicable).
- Water quality and quantity.
- Air quality.
- Climate conditions and predicted future climate trends.
- Noise levels.
- Other physical Valued Ecosystem Components (VEC) as determined through community consultation and/or literature review.

Biological Environment

- Vegetation (terrestrial as well as freshwater and marine where applicable).

- Wildlife, including habitat and migration patterns.
- Birds, including habitat and migration patterns.
- 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.
- Aquatic (freshwater and marine) species, including habitat and migration/spawning patterns.
- Other biological Valued Ecosystem Components (VEC) as determined through community consultation and/or literature review.

Socioeconomic Environment

- Proximity to communities.
- Archaeological and culturally significant sites (e.g. ngos, soap stone quarries) in the project (Local Study Area) and adjacent area (Regional Study Area).
- Palaeontological component of surface and bedrock geology.
- Land and resource use in the area, including subsistence harvesting, tourism, trapping and guiding operations.
- Local and regional traffic patterns.
- Human Health, broadly defined as a complete state of wellbeing (including physical, social, psychological, and spiritual aspects).
- Other Valued Socioeconomic Components (VSEC) as determined through community consultation and/or literature review.

Information provided for screening NIRB-04EN012 (for Hackett River exploration activities) and NIRB-08EA084 (for exploration activities on the Wishbone trend claim groups) would be applicable to these components.

The Malley-Wishbone area is underlain by generally NW-SE trending Archean metasediments and metavolcanics of the Yellowknife Group. The metavolcanics and metasediments are bounded by granite and similar felsic intrusives of Archean age. The supracrustal belt is up to 20 km wide and at least 40 km long. Metasediments consist of quartzite, greywacke, quartz-biotite schist, marble, calcareous quartzite and paragneiss derived from the metasediments. Intercalated within the metasediments are mafic to intermediate volcanic rocks as well as felsic volcanic rocks consisting of ash, tuff, rhyolite and chert. Numerous long, sulfide gossans are present throughout the belt. Most are caused by weak sulfide mineralization consisting of pyrite and pyrrhotite. Locally, mineral deposits containing pyrite, pyrrhotite, sphalerite with minor chalcopyrite, galena and tetrahedrite are present.

The climate, soils and vegetation of the camp area are arctic in character. Plant cover is characteristic of the Arctic Tundra community. Shrubs are sparsely distributed on the mesic sites near the rivers and lakes. On the interfluvies are found low-growing perennials; grasses and sedges and some flowering species. The eskers support very little plant cover.

The Malley-Wishbone project area is situated in two watersheds; Hackett River and Mara River. Both rivers are tributaries of the Burnside River. The main camp would be located on the shore of a local lake (see included location map). In general, lakes in the area contain extremely clear, low nutrient, low metal water, indicative of pristine high Arctic lakes. Most lakes have near-neutral waters, with very low hardness and alkalinity. However, naturally high metal concentrations are present in some lakes, indicating their proximity to surface mineralized areas.

The Malley-Wishbone Project is in a zone of continuous permafrost. The active layer in the Project area ranges from approximately 1 to 2 m, but may be greater in areas where there is

loose, sandy soil at the edges of lakes or ponds. Tali features are potentially present under larger lakes. The depth of permafrost in the region is approximately 500 metres. Permafrost greatly increases ground stability at depth but at surface it can increase rates of soil erosion through formation of ice wedges, pingos, palsas, ice lenses, and thermokarst. In the Hackett River Project area only ice wedges and ice lenses have been identified.

Several observations of caribou have been noted in the area during previous exploration programs. These are typically single or small groups of transitory animals; calving areas for the Bathurst herd are known to exist several hundred kilometers to the north of the area (west of Bathurst Inlet) and the Ahlak herd are known to calve east of Bathurst Inlet in the Queen Maud Gulf area. Other wildlife noted in the area include muskox, wolves and grizzly bears.

No archaeological sites were noted in the area during the 2011 program.

Photo of Potential Bullwinkle camp location; note indication of previous camp infrastructure (photo taken Sept 2011)



Photo of Potential Rocky camp location (photo taken Sept 2011)



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).
2. Discuss the impacts identified in the above table.

As activities for the project as it is currently defined consist of prospecting, drilling, and potentially airborne geophysics, all impacts are expected to be restricted to the immediate area of undertaking, as discussed in the Cumulative Effects section, below.

Each activity will be of relatively short duration in any one location (1-2 hours for prospecting, several days for drilling, and transitory helicopter flights for geophysics), thus any impacts are likely to be limited.
3. Discuss potential socioeconomic impacts, including human health.

Positive socioeconomic impacts are anticipated from this project in terms of opportunities for employment and training and business directed to Inuit-owned firms. The issuance of the land use permit will contribute to the economic development of the region, and Sabina is encouraged that ongoing exploration will lead to the development of a mine, leading to an increase in employment, training, and economic opportunities for residents and businesses in the Kitikmeot region.

Human health impacts are not expected to be significant. Occupational risk factors include environmental exposure (extremes of cold and heat), heavy machinery (loader, skidsteer, diamond drills, etc.), air transport of personnel, and specific task-oriented risks (incinerator operation, core cutting, fall from height, etc). All of these risk factors are well-understood and easily mitigated through the use of appropriate protective equipment and instruction on safe work practices.
4. Discuss potential for transboundary effects related to the project.

Not applicable.
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.

There are no anticipated adverse effects on the listed species or their habitats. With the location of the main camp at a previously used location for an exploration camp, the impacts to the local area will be minimized. Field activities (drilling and prospecting) have a minimal footprint and are short-lived, resulting in an extremely low to immeasurable likelihood of disruption to wildlife patterns.
6. Discuss proposed measures to mitigate all identified negative impacts.

The current scope of work for the project is by nature relatively low impact, with easily mitigated impacts. Any potentially harmful impacts can be mitigated with best management practices such as the use of drip trays and secondary containment when fuel or hazardous materials are concerned, avoiding groups of animals, maintaining an appropriate distance from water bodies, and general good housekeeping and safety practices.

6. 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.

Cumulative effects of the current project (and for the proposed expanded camp and exploration) are expected to be minimal. The Hackett River camp has been in the area for over 20 years. Any impacts are restricted to the immediate area of the camp due to personnel and vehicle traffic. Anecdotal observations of wildlife and formal surveys caribou movement do not indicate an avoidance of the area as a result of either camp or the associated exploration activities. Noise levels are limited to vehicle and helicopter traffic during the day and the camp generator 24 hours a day. This noise level is mitigated by the topography of the area and is not heard within a few hundred metres of the camp. The same effect is observed in the area of the drill rigs, which are typically in any one area for a short period of time (2-10 days).

At drill sites, minimal amounts of rock flour and drill cuttings may be deposited on the tundra, however, this material will be of similar composition to the local outcrops and overburden material that it would not represent a source of significant impact to the local environment. Compression of vegetation in the vicinity of the drill rig will occur, however, this impact naturally corrects itself once the drill has been moved from the location. Progressive reclamation measures of each drill site are also implemented to support the re-establishment of pre-drilling conditions.

Sampling during prospecting is possibly the only non-mitigable impact since it involves the hammering and removal of rock material. Note that there is no other sampling method to collect this information. The samples are typically small (1-2kg) and once the fresh outcrop surface is exposed to the elements and weathering occurs, the exact location of these samples will be difficult to identify. These samples do not disturb an important habitat nor affect water quality or quantity.

Because the impacts of this project are relatively low, and that there is significant distance between Hackett River-Wishbone and other mineral exploration/development projects in Kitikmeot Region, it is not anticipated that there would be a cumulative impact.

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.