

# **Back River Project**

Abandonment and Restoration Plan

Goose Camp and Exploration Project

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### 1.0 INTRODUCTION

#### 1.1 General

Sabina Gold & Silver Corp. (Sabina) is actively exploring the Back River property mineral rights (encompassing the primary exploration camp at Goose Lake, as well as a satellite camp at George Lake and unoccupied claim groups at Boot Lake, Boulder Pond, Wishbone and Del Lake). Advanced exploration programs have been carried out in previous years with similar activities anticipated as Sabina continues to advance the project.

Sabina is also responsible for maintaining all permits and claims required for the project in good standing. The Back River Project is covered by the following land use licenses:

Table 1. List of licenses and permits applicable to the Back River Project.

Permit No.	Permit Name	Туре	Expiry	Agency
N2011F0029	winter road Beechy Area	Class A	2013-12-13	AANDC
N2010F0017	Winter road Bathurst Inlet to Back River	Class A	2012-09-16	AANDC
N2009F0015	winter road Hackett to George	Class A	2013-03-01	AANDC
KTL304F049 – Amended	Winter road Bathurst Inlet to Goose and George camps	Level 3	2013-03-31	KIA
KTL304F012	winter road Hackett to George	Level 3	2012-03-31 renewal pending	KIA
N2010C0016	Back River Mineral Exploration	Class A	2012-10-31	AANDC
KTL304C017 -Amended	Goose Camp	Level 3	2012-12-13	KIA
KTL204C012 - Amended	Boulder	Level 2	2012-12-13	KIA
KTL304C018 - Amended	George Camp	Level 3	2012-12-13	KIA
KTL204C020 - Amended	Boot	Level 2	2013-12-13	KIA
2BE-GEO1015	George Water	Туре В	2015-06-15	NWB
2BE-GOO1015	Goose Water	Туре В	2015-03-31	NWB

Operating and managing an exploration project on tundra requires a lot of effort from all parties involved. The area is environmentally sensitive and all aspects of exploration because of our activities, products and services will be risk assessed with management protocols developed, implemented and communicated to our employees, interested parties and suppliers to eliminate or minimize any negative impacts to the receiving environment.

The exploration program is planned to start in February and end of October each year. Crew, equipment and supplies will be flown into Goose camp from Yellowknife via Twin Otter or similar aircraft. Equipment, personnel and supplies will be moved between Goose and George camps by helicopter. At the end of the season the crew will be demobilized back to Yellowknife using float-equipped aircraft. Drill equipment and supplies may remain at the project area for use during subsequent exploration seasons.

The Back River project will employ up to 130 to 160 people, including contractors. In addition to Sabina's contingent of northern hires (estimated at up to 1/3 of the staff) the contractors working on site will also be encouraged to hire Inuit employees. Due to staff turnover and schedule rotations, there will typically be up to 100 Sabina personnel at Goose camp and up to 60 Sabina personnel at George camp at any given time.

Sabina will implement this Abandonment and Restoration Plan (ARP) and will continue to look for ways to minimise or eliminate negative impacts to the environment as a result of its activities, products and services at Sabina's Back River properties.

# 1.2 Sabina Social and Environmental Policy

Sabina Gold & Silver Corp. takes its responsibility to act as a steward of the environment seriously.

To fulfill this responsibility, Sabina strives to:

- Ensure that we design our activities and operate in compliance with all environmental regulations to minimize our impact on the environment.
- Promote responsibility and accountability of managers, employees and contractors to protect
  the environment and make environmental performance an essential part of the
  management/contractor review process.
- Provide resources, personnel and training to enable management, employees and contractors to implement programs and policies to protect the environment.
- Communicate openly with employees, contractors, local stakeholders and government on our environmental protection and sustainability programs and performance. We will also address any concerns pertaining to potential hazards and impacts.
- Promote the development and implementation of systems and technologies to reduce environmental risks.
- Establish and maintain appropriate emergency response plans for all activities and facilities.
- Maintain a self-monitoring program at each facility to ensure compliance and to proactively address plans to correct potential deficiencies.
- Work cooperatively with government agencies, local communities and contractors to develop and enhance systems and technologies to improve environmental and sustainability practices.

 Encourage all employees, contractors or stakeholders to report to management any known or suspected departures from this policy or its related procedures.

# 1.3 Legal Requirement

Under the terms of the KIA Land Use Licenses and the NWB Water Use Licenses, Sabina is obligated to rehabilitate the areas used to its previous standard of human utilization and natural productivity.

# 1.4 Site Location and Description

The Back River exploration project is located in the Kitikmeot, south of Bathurst Inlet within the Slave Structural Province. It is approximately 525 kilometres northeast of Yellowknife and 400 kilometres south of Cambridge Bay, NU. The project area is within the zone of continuous permafrost, and is represented on National Topographic System 1:250,000 scale map sheets 76F, 76G, 76J, and 76K.

The primary base of operations is at Goose Lake (Figures 1 & 2) and a smaller satellite camp at George Lake. Coordinates for the camps are as follows:

- Goose Camp 65º32' north 106º25' west
- George Camp 65°55' north 107°27' west

The Goose camp is located on the slope of the western bank of Goose Lake and consists of a camp capable of supporting up to 120 people constructed for support services directed towards exploration activities. The lakeshore is approximately 50 metres(m) toward the north and the regional topographical gradient surrounding the camp ranges from 2% to 6% towards the north. The camp is approximately 300m in length from east to west and 100 m wide from north to south, covering an area of 30,000 square metres (m2). A small creek runs east northeast, east of the camp. The camp facilities are located on natural tundra underlain by a 10 centimetre organic layer overlying silt-sand parent material.

# 1.5 Scope of Reporting

This Abandonment and Restoration Plan (A&RP) has been written to meet the requirements of the Nunavut Water Board (NWB) licences listed in Table 1 and applies to the Goose camp and all unoccupied claim groups referenced in Section 1.1. Subject to annual review and revision, it will remain applicable throughout the duration of the NWB licenses or until a material change in the scope of the project occurs.

The current revision of the A&RP has been prepared for the 2012 exploration program. The Plan also takes into consideration the likelihood of premature camp closure due to:

- Sudden drop in gold prices which could make the project uneconomical;
- Drop in resource grade to a value lower than anticipated;
- Non compliance to legislative requirements;
- Natural disasters;
- Force majeur;
- Change of ownership/operator.

In situations as such mentioned above, this plan provides the base strategy for anticipated tasks of restoring the Goose camp in an event where exploration activity has ceased, either on a short term or a long term basis.

The plan will be reviewed annually and updated with current information.

Section 1 of the plan gives a brief account of the ownership of the property, the environmental policy, legal requirements and a brief description of the camp. Section 2 outlines responsibilities for execution of the plan. Section 3 outlines a brief time schedule for restoration activities after completion of each exploration program. A list of infrastructure at Back River is compiled and a short brief on Progressive Restoration program is provided. Sections 4 and 5 of the plan provide details of how each exploration aspect will be addressed, while the final section (Section 6) outlines when the next review of the plan would be conducted.

### 2.0 RESPONSIBILITIES FOR THE PLAN

Senior personnel at the Back River Project site (at the main camp at Goose Lake) are responsible for the implementation of this Plan. However, every employee, contractor or visitor arriving on the Back River project site has a responsibility to ensure that they adhere to the Sabina environmental policy. The policy will be communicated to all employees, contractors and visitors during their stay at Back River in a formal site orientation program given by the Site Superintendent.

Contact information for key personnel is as follows, and will be updated on an as-needed basis.

Name	Position	Email	Phone (camp)
Patrick Chance	Project Manager	pchance@sabinagoldsilver.com	
Fred Penner	Site Superintendant	fpenner@sabinagoldsilver.com	778-372-2740
Merle Keefe	Environmental Coord.	mkeefe@sabinagoldsilver.com	

### 3.0 SCHEDULE FOR ABANDONMENT AND RESTORATION

For each exploration season, the closure of the Back River Project campsite should take approximately 14-21 days to complete, allowing for variable weather conditions. As exploration activities vary from year to year and the end of the field season is difficult to predict months in advance, the restoration program will commence as late as September 15 each year, and end no later than October 31. Since Goose Lake is the main camp servicing outlying exploration areas, it would take the longest to shut down. Outlying drill sites will take minimal time as their shut down requirements are much less. Other sites in the Back River Project area include the George Lake camp and diamond drill sites. These would take place simultaneously with exploration as there is the proper support infrastructure at this time (personnel, aircraft).

## 3.1 List of Infrastructures at Goose Camp

Table 3. Goose Camp Infrastructure and Equipment (as of Aug 1, 2012)

	Qty	Item
Buildings	8	Sleeping tents
	29	sleeping tents (wood sides
	2	sleeping cabin (emergency shack)
	1	sleeping complex/medic
	2	TV tents (wood sides)
	1	Core processing facility (coreshack, saw room, sample dispatch)
	1	Kitchen/dining hall/cold storage
	1	Dry (men's/women's/water storage & treatment)
	1	Dry (drillers)
	1	Office complex
	2	Generator shacks (main and auxiliary power)
	1	Drillers' office (old)
	2	Shop building (1 Sabina, 1 Helicopter contractor)
	1	tool storage
	1	shop building (Major/old)
	1	shop building (Major/new)
	1	Oil storage shed
	2	Quonset garages
	1	exercise bldg
	1	Sauna
	1	Enviro Bldg
	1	Incinerator Bldg

Other Infrastructure	1	bermed storage area for fuel envirotanks and bladders
	2	Laydown areas for drummed fuel supplies, salt, steel, solid waste etc (everything except ddh core)
	1	Gravel airstrip
	1	all-weather airstrip
	1	airstrip connecting road to camp
	4	Helipads
	1	camp infrastructure (bldgs & corridors)
	1	Jetty + floating dock
Equipment	1	D7 Caterpillar bulldozer
	1	D6 Caterpillar bulldozer
	2	IT28G Loader
	2	277 Caterpillar skidsteers
	1	Primary generator (65kW)
	1	Auxiliary generator (50kW?)
	13	Snowmobiles (6 Major, 7 Sabina)
	2	ATVs
	8	Aluminum boats + motors
	6	Portable double-walled fuel tanks ("Tidy Tanks")
	1	Waste incinerator

The final inventory of fuel and drilling supplies remaining in the camp at closure (Sept 2011) includes:

- Diesel 0 full drums in secondary containment and 59,849 litres of bulk diesel contained in the Envirotanks.
- Jet B 804 drums in secondary containment
- Gasoline 65 drums in secondary containment
- Av Gas 8 drums in secondary containment
- Propane 10 x 100lb cylinders and 8 x 250 lb cylinders.
- CaCl drilling salt 675 bags
- Core trays 4680 NQ trays at camp and 3115 NQ trays at Llama
- Core boxes 726 HQ boxes and 86 NQ boxes

# 3.2 Progressive Reclamation

Sabina will continue a program of progressive reclamation at Back River. Progressive restoration will be ongoing during the height of its exploration program thereby reducing the need for a full-scale restoration program at the closure of each exploration phase. Ongoing significant restoration activities are described below.

### 3.2.1 Contaminated Area Reclamation

### 3.2.1.1 Recycle of Water Contaminated Fuel

Contaminated fuels are recycled primarily as fuel for the garbage incinerator or as fuel for the water heaters used in the drilling program. If present in sufficient quantities, contaminated fuel may be recycled for camp heating purposes. As a last resort, it may be transported off the property for disposal at an appropriate facility. For water with minor amounts of hydrocarbons, depending on quantities, consideration is also being given to activated charcoal filters which remove the hydrocarbons.

### 3.2.1.2 Contaminated Top Soil

Spills are handled as per the Comprehensive Spill Contingency Plan. Environat is immediately applied to absorb spills of hydrocarbons, minimizing the amount of soil required to be removed. Remaining contaminated soils are removed and stored in barrels for transportation to permitted disposal sites.

#### 3.2.2 Non Combustible Solid Waste Placement

Solid waste including metal scraps, drill rods, household items, etc. are stored in an appropriate marshalling area for backhaul. The material is arranged in such a way that it can be easily removed from the property during winter months, and disposal will be appropriate to the material being removed, either an approved disposal facility, a metal recycler, or an approved designated landfill.

Ash from the incinerator is stored in empty 205 L drums for backhaul and disposal.

#### 3.2.3 Reclamation of Exploration Trenches

Towards the end of the 2009 season, work commenced on infilling the exploration trenches located immediately south of the camp at Goose Lake. This work continued in 2010-2011, with the trenches filled in using the same fill material which was removed during their creation. The ground was contoured to match the surrounding area, and natural vegetation will be allowed to reclaim the site. One trench is currently used as a sump for drill cuttings; this one will be maintained for this purpose.

### 4.0 WINTER RESTORATION PLAN

The winter restoration plan is intended to cover short-term (seasonal) closure of the Back River Project. The tasks involved are important to the success of future exploration programs but requires less effort.

# 4.1 Buildings and Content

All tents and building complexes will be secured for the winter. All the office equipment; household furniture; kitchen equipment; recreational equipment and other mobile heavy equipment will be winterised and left secured on site. Any equipment not capable of withstanding the harsh winter conditions will be removed and stored in either Yellowknife or Vancouver.

# 4.2 Water Supply System

Water pumps, filtering systems, water lines and any other equipment associated with the water supply system will be drained and winterised. The water pump shed will be secured.

### 4.3 Sewage System

The sewage system will be drained with no greywater remaining in the discharge pipe. Solid waste will be incinerated onsite.

### **4.4 Waste Incinerator**

The fuel supply for the incinerator is shut off using a series of valves. The fuel remains in an artificial berm in the double-walled tank adjacent to the incinerator throughout the winter. The area will be inspected for petroleum spills or contamination. If such is the case, the area will be dealt with as outlined in Section 3.2.1.2.

# 4.5 Electrical System

The generator shed and the surrounding area will be inspected for signs of spills and remaining wastes such as oil and grease. As the generator shed is lined with enviromat, the likelihood of unnoticed external spills is slim. If topsoil is contaminated, an attempt will be made to remove as much as possible with enviromat; remaining contaminated soil will be stored in empty drums for disposal at a hazardous waste facility. The generator will be drained of its fuel. Remaining waste fuel, oil and grease will be stored in approved storage containers which are labelled for that usage and reused during summer operations. The generator will be winterised and the shed will be secured for winter. Electrical wires, plugs and sockets will remain in their installed locations. All electrical cords temporarily connected to a building or machinery during summer work program will be unplugged, rolled and stored in the workshop.

# **4.6 Camp Heating Systems**

Each 205 L fuel barrel attached to respective tent or building will be secured within the secondary containment container. The remaining fuel in the line will be allowed to burn out. The lid will be secured to prevent snow from filling up the container. Empty propane cylinders will be transported to Yellowknife for refilling or recycling. Many of the sleeping quarters have been converted to electric heat; no special treatment is required for these buildings.

# 4.7 Petroleum Products and Storage Facilities

An on-site fuel cache is of great importance during camp start-up in the late winter. Diesel fuel will be stored in the 6 double-walled envirotanks and 2 bladders within the lined, bermed tank farm. Minimal quantities of diesel in barrels, and any unused barrels of jet fuel will be stored within self-supporting artificial berms, and clearly marked as to the location to facilitate snow clearing activities during camp opening the following spring. The Site Superintendent will be responsible for determining the possible access to these fuel resources prior to the start of the next exploration program.

Empty drums at remote drill sites will be transported to the Goose camp, crushed, counted and transported to Yellowknife for recycling. This work is typically done progressively as fuel caches are no longer required or as drill setups are dismantled.

Fuel farm secondary containment area will be cleared of any debris. In the springtime, meltwater within the containment area will be tested for F1 (C6-C10) and F2 (C10-C16) hydrocarbons and benzene, toluene, ethyl benzene, and xylene (BTEX). If the analytical data confirms that the water meets regulatory criteria (Table 4), it is then released onto the tundra in such a manner as to avoid direct entry to a surface water body. Residual water after pumping and collected rainwater are allowed to evaporate over the summer and are unlikely to present a problem during camp shutdown in the fall.

Table 4. Regulatory guidelines for hydrocarbons in	soils.
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Parameter	CCME (2004)		CWS		
	Coarse soil (ppm)	Fine soil (ppm)	Coarse soil (ppm)	Fine soil (ppm)	
Benzene	0.03	0.0068	-	-	
Toluene	0.37	0.08	-	-	
Ethylbenzene	0.082	0.018	-	-	
Xylene	11	2.4	-	-	
F1	-	-	310	660	
F2	-	-	760	1500	
F3	-	-	1700	2500	
F4	-	-	3300	6600	

The spill response team and camp management must be notified immediately of any spill. The Environmental Coordinator/Site Superintendent or designate will ensure spills are reported as required and that the relevant form is filled out as completely as possible. It is the intention of Sabina to report all

spills over 25 litres and to maintain an inventory of all spills less than 25 litres, which can be viewed by any inspector or agency representative.

The number for the NWT/NU 24-Hour Spill Line is (867) 920-8130. For direction on how to proceed in the event of a spill, Andrew Keim and Eva Paul of Aboriginal and Northern Development Canada can be reached at (867) 975-4295, or the 24-hour Emergency Pager at (867) 222-1984.

### 4.8 Chemicals

Chemicals stored on site will consist of drill additives, oil, grease, drill salt and household biodegradable cleaners. Chlorine is necessary and is used to treat our drinking water system. All drill additives are stored in poly-lined "sea cans" and the remaining salt will be counted and stored in designated areas of the property. Drill salt is in impermeable bags and stored on pallets. Empty bags will be disposed with combustible garbage. Sabina will inspect the storage area for possible spills and contamination.

# 4.9 Spill Response Kits

Sabina will carry out an inventory of the Spill kits located on the property. All kits will be relocated into a secured building, except for kits designated for the remaining petroleum areas over the winter months.

# 4.10 Transportation

All transport areas will be inspected for contamination. Areas will be remediated using environmat and removal of contaminated soil should any contamination be found.

#### 4.11 Drill Sites

The diamond drills will be dismantled into the main components as per the drilling contractor procedure and secured along with ancillary equipment and rods. The drills will be moved by helicopter over the tundra and left on designated storage areas on the property until the next drilling season. All drill sites will be inspected for contamination. Any remaining waste will be taken back to the camp and disposed of accordingly. Diamond drill site restoration will commence as soon as practical after completion of the hole. Site clean-up of litter, debris and drill fluids will commence immediately. Drill core and core boxes will be properly secured and stored at the designated core storage area. Photographs will be taken before and after the drilling has been completed.

# 4.12 General Camp area

A general inspection of the camp area will be carried out. Waste items will be picked up, and areas contaminated by petroleum products and unnoticed from the previous year will be reclaimed.

#### 4.13 Final Documentation

A year-end inventory of all equipment and buildings left on site will be carried out prior to leaving site. Photos of the camp and drill lay down storage area will be taken. Site inspections and monitoring will be done during occupancy and photos taken. Once the site is secured for winter, it will be documented with photos.

#### 5.0 FINAL ABANDONMENT AND RESTORATION PLAN

### **5.1 Administration**

### **5.1.1 Buildings Structures**

All the reusable tents, frames, tarpaulins, and wooden structures will be dismantled and where possible be recycled for use at another exploration site.

Other combustible, non-recyclable building structures will be incinerated onsite. Non-combustible structures or materials such as nails, screws, bent metal frames will be recovered, packed and transported out to an approved landfill, likely in Yellowknife or Alberta.

#### 5.1.2 Office and Household Furniture

All reusable office, household, kitchen and recreational equipment will be packed and transported for use at other exploration camps. Some equipment, depending on what level of liability is accepted by Sabina may be donated to the local community or schools. That equipment which is not reusable will be recycled or disposed of at an approved disposal facility, appropriate to the type of material.

#### 5.1.3 Water Supply System

Water pumps, filtering systems, water lines and any other equipment associated with the water supply system will be disassembled, lines drained, packed and transported out of Back River for use at other exploration camps.

Water lines that are not usable will be disposed off at an approved facility.

#### 5.1.4 Sewage System

The Pactos will be dismantled and relocated to another exploration camp or transported to Yellowknife for disposal. All lines from showers, washing machines and sinks will be drained, disconnected, securely packed and transported off property to an approved landfill site.

#### **5.1.5 Waste Incinerator**

Once the camp is entirely dismantled to the satisfaction of the supervisor in-charge, all remaining combustible waste will be burned. The incinerator will be dismantled and shipped to another exploration camp or to Yellowknife for sale or disposal in an approved facility.

### **5.1.6 Electrical System**

All electrical wires will be removed from the buildings and any other installation on property. Extensions cords and other fittings will be reused at other camps in the District. Used electrical wires will be packed and transported to Yellowknife for recycling. Unused bulbs and fluorescent tubes will be packed and relocated to other camps.

The generator shed and the surrounding area will be inspected for signs of spills and remaining wastes such as oil and grease. The area will be cleaned as necessary.

The generator will be drained of its fuel. Remaining waste fuel, oil and grease will be stored in approved storage containers, labelled and transported offsite. The generator will be dismantled and transported offsite to another exploration camp or to Yellowknife for sale.

### **5.1.7 Camp Heating Systems**

Each 205 L fuel barrel attached to tents or buildings will be disconnected with the remaining fuel in the line allowed to burn out. The drums will be appropriately labelled and stored with other petroleum products. The secondary containment container will be closed, secured and stored ready for transportation offsite. The fuel burner will be dismantled and remaining fuel will be allowed to drain off into waste oil collecting system. All fuel lines will be drained, disconnected and packed for use in other camps or transported to an approved disposal facility. The area around each installation will be inspected for contamination and reclaimed as per the Spill Contingency Plan. All empty propane cylinders will be transported to Yellowknife for recycling.

### **5.1.8 Petroleum Products and Storage Facilities**

#### 5.1.8.1 205 Litre drums

The fuel storage area will consist of segregated groups of drums with empties stored separately from the full drums. An inventory of remaining fuel will be made and full drums inspected. WHMIS labels will be attached to the drums before transportation offsite. Remaining waste fuel will be labelled with WHMIS labels and transported to other camps for heating purposes or transported to Yellowknife for disposal in an approved facility.

In 2006 a drum crusher was purchased and installed at the Goose camp. Empty drums will be crushed and palletted for backhaul and disposal. Some drums will be retained for waste containment and subsequent backhaul.

All unused jet fuel will be relocated to other exploration camps for use in further exploration programs, or returned to Yellowknife. The areas around the drums will be inspected for contamination.

### **5.1.8.2** *Tidy Tanks*

All Tidy tanks will be disconnected from any tents or buildings. All installations will be disconnected and drained. An inventory of the remaining fuel in each tank will be recorded. The tanks will be secured and transported to other camps or to Yellowknife for sale or disposal. The area around the tanks will be inspected for contamination.

#### 5.1.8.3 AST Tanks and Bladders

All installations on respective tanks and bladders will be disconnected and various hatches inspected and locked.

An inventory of the remaining fuel in each tank will be recorded. The AST tanks will only be moved during winter months to either another camp or using winter road to a designated area on the coast and loaded onto a barge for transportation to Hay River or to Yellowknife during summer months. The bladders would be emptied, collapsed and transported (via air) to either another camp or off-site.

#### 5.1.8.4 Lined Fuel Farm

Once AST tanks have been removed, the area will be inspected for contamination. If contamination is evident, then procedures outlined in the Spill Contingency Plan will be applied to reclaim the area.

Otherwise, the high-density polyethylene (HDPE) liner will be removed, rolled and packed for transportation offsite to either another exploration camp or an approved landfill. The berms will be pushed in with a front loader and levelled to cover exposed area.

#### 5.1.9 Household Chemicals

Household cleaners will mainly be stored in the kitchen and dry. Upon camp closure, any unused products will either be transported to other camps or disposed of at an appropriate facility. Half-empty containers will be taken off site to be properly disposed in an approved discharge facility. Empty containers will either be recycled or disposed of with regular garbage.

### **5.1.10 Transportation**

### 5.1.10.1 Airstrips and connecting corridors

A very short emergency airstrip occurs on naturally denuded material to the north of the Goose camp. The area will be cleared of any debris and inspected for potential top soil contamination due to refuelling of aircraft. If contamination is evident, then procedures outlined in the Spill Contingency Plan will be applied to reclaim the impacted area.

A 915m all-weather airstrip to be installed during the 2012-2013 exploration season will be cleared of any debris and inspected for potential contamination due to refuelling of aircraft. If contamination is evident, then procedures outline in the Spill Contingency Plan will be applied to reclaim the impacted area. The airstrip alignment would be scarified, applied with fertilizer and peat, to support natural revegetation. The associated connecting all-weather road (approx 700m) would have culverts removed, be scarified, and fertilizer/peat application to support natural revegetation.

### 5.1.10.3 Rock Quarries

The rock quarries, accessed to provide construction and maintenance material for the airstrip and connecting road, will be cleared of any debris and inspected for contamination. If contamination is evident, then procedures outlined in the Spill Contingency Plan will be applied to reclaim the impacted area. The application of peat/fertilizer to encourage revegetation may also be implemented in limited areas of the rock quarries.

### **5.1.10.2** *Jetty/Dock*

The jetty, consisting of black plastic poly cells will be removed and dismantled. The cells will be used elsewhere. Any timber, nails, screws and metals frames will be packed and disposed with scrap metals in approved landfills.

### 5.1.10.3 Helipad

The 4 timber helipads at Goose camp will be dismantled and material salvaged and recycled. The area will be cleared of any debris and inspected for contamination. If contamination is evident, then procedures outlined in the Spill Contingency Plan will be applied to reclaim the impacted area.

### 5.2 Exploration

#### **5.2.1 Drill Site Management**

The diamond drills will be dismantled into its main components as per the drilling contractor procedure, packaged and secured along with its ancillary equipment and rods. The drills will be moved by helicopter over the tundra and left at designated storage areas on the property before transporting offsite.

All drill sites will be inspected for contamination. All wastes will be taken back to the camp by the drillers and disposed of as appropriate. As part of Sabina's progressive reclamation activities, diamond drill sites will be restored as soon as practical after the drill has been moved to the next site and sumps (if present

– Sabina currently uses a megabag system for capturing drill cuttings) have drained enough to be levelled. Photos are taken prior to and after the drill work is completed and an inspection sheet is in place for the geologist to verify the site was left in good condition.

### 5.2.2 Drill holes Management

#### **5.2.2.1 Drill sump**

All drill sumps (if constructed) will be recontoured and allowed to naturally revegetate. Natural sumps (if used) will simply be allowed to revegetate.

### 5.2.2.2 Iron Casing Management

Casing protruding above ground will be flush cut off to a level that will not pose a hazard. The cut portion will be disposed of in an approved landfill in Yellowknife or recycled as scrap metal. Drill holes which encounter artesian water flow will be plugged with cement and capped. The collar locations of all holes will be surveyed in and will be recorded in the exploration reports.

#### 5.2.3 Chemicals associated with Drilling operations

#### 5.2.3.1 Drill Additives, Cement and Salt Management

All remaining drill additives and salt will be inventoried, packed and transported to other projects or transported to Yellowknife or Hay River for re-sale or disposal at an appropriate facility. Empty containers and pallets will be incinerated (pallets), recycled if possible or disposed of with regular garbage.

#### 5.2.4 Drill Core

Drill core will be properly secured and stored at a designated core storage area on the property for long-term storage. A site reference plan will be maintained to catalogue the core.

### 5.3 Environmental

### 5.3.1 Long-term Monitoring

Ongoing monitoring will be conducted during the summer months to ensure the area has been cleared of any hazards that may cause a significant adverse impact to the receiving environment. The monitoring will continue after the final abandonment until the land is relinquished and accepted by the owner. Weather collection data (Goose/George Lake weather stations) and environmental baseline data (e.g. water sampling data) will be turned over to whoever takes over the property.

#### 5.3.2 Documentation and Final Inspection

A detailed project site reclamation and remediation report will be created by Sabina which will specifically document and catalogue project reclamation activities. This report will be generated for distribution to specific governing agencies. This report will identify all reclamation efforts undertaken at the project site and will be supported with information pertaining to contractors used, methodology, costs and findings. Digital photographs will be taken which will support the reclamation activities. These will be appended to the report.

### 5.3.3 Land Relinquishment

Once the reclamation plan is accepted and approved by Sabina, the permit holder will invite and organize a final site inspection visit with community representatives, Land Inspectors, Nunavut Water Board and the KIA. Other government organisations such as Environment Canada and Department of Fisheries and Oceans will be invited to visit the area. A written submission will be sent to the regulatory authorities asking to relinquish the land.

#### 5.4 Abandonment & Restoration Cost Estimates

The total cost estimation for A&R plan for Back River is presented in Appendix 2. The approximate costing will be reviewed annually relative to the long-term exploration strategy for the project and may include the following items:

- Infrastructure Demolition Cost
- Transportation (Labour, equipment, recycle, relocation of waste etc.)
- Labour Cost
  - Offsite Administrative Cost
  - Contractor
- Rehabilitation Cost
  - Site Supervision (Sabina)
  - Remedial supplies
  - Native species supplies
  - Contractor
- Environmental Monitoring Cost
  - Labour (Sabina or Contractor)
  - Transportation (Field sampling)
  - Analytical Cost (External Lab)
  - Reporting (Sabina or Contractor)
  - Consultant Costs
- Final Documentation (Labour Cost Sabina or Contractor)
- Land Relinquishment (Travel, Reports, Site Visits, Meetings, etc.)

# 6.0 REVIEW OF THE ABANDONMENT AND RESTORATION PLAN

The Back River Abandonment & Restoration Plan will be reviewed on an annual basis. The next planned internal review is scheduled to take place in 2013.

# APPENDIX A - MAPS, FIGURES AND PHOTOS GOOSE CAMP AND EXPLORATION PROJECT

Figure 1. Location map of the Sabina's exploration properties, western Nunavut.

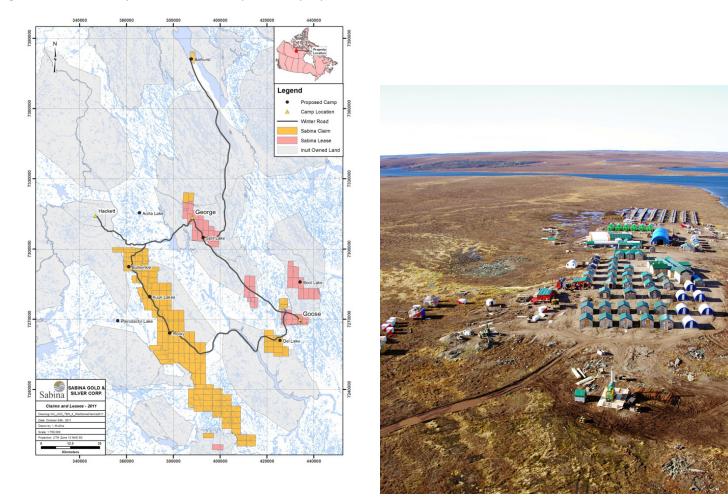


Figure 2. Aerial view of Goose Camp. Photo taken August 2011.

# **APPENDIX B - ABANDONMENT & RECLAMATION COST ESTIMATE**

BACK RIVER RECLAMATION ESTIMA	TE - GOO	OSE Sept 20	12			
ACTIVITY/MATERIAL		QUANTITY	UNIT COST	COST		
Exploration Activities						drill location reclamation would be part of on-going
Drill Hole locations	001 - 1		204	40		exploration costs; it is assumed that some reclamation may not occur each year.
Cement . Other (helicopter support) Personnel to flush casing and cement	30kg bags hours days	0 5 14	\$84 \$2,100 \$320	\$0 \$10,500 \$4,480		assumes 2 people @\$320/day for 7 days
Subtotal Drill Locations	days		ψοΣο	\$14,980	\$14,980	-
					, ,	In approved A&R plan, trench to be backfilled as
Trench						part of final closure; Sabina will backfill as part of progressive reclamation as part of on-going exploration
Trench						one trench remains open for sludge disposal
Backfill trenches/recontour	days	6	\$320		04.000	during exploration;will require closure based on 3 people @\$320/day for 2 days
Subtotal Trenches				\$1,920	\$1,920	
Building and Equipment EQUIPMENT						Advantage of a control of a con
Disassemble and packup	days	280	\$320	\$89,600		assumes 14 people for 20days; includes on-site work assumes 14 people for 10 days; includes on-site
Other (unused drilling steel/material)	days	140	\$320	\$44,800		work
BUILDINGS						assumes 14 people for 45 days; equivalent to
Buildings	days	630	\$320	\$201,600		5000m2 at \$40/m2 based on NWB "high" unit costs (\$30 to dissemble and \$10 to burn; in approved A&R Plan);
-	•	000	<b>4020</b>			included in "dispose equipment-other"; progressiv reclamation during exploration program will also
boneyard waste SPECIALIZED ITEMS	m3			\$0		include
helicopter support	hours	10	\$2,100	\$21,000		<u>-</u>
Subtotal Buildings and Equipment				\$357,000	\$357,000	
Chemicals and Contaminated Soils  FUEL						
						each year fuel on-site is sufficient to cover proposed annual program and every effort will be
						made to minimize the fuel needed for off-site shipment; based on NWB "high" unit costs shipping and handling remaining fuel off-site;
diesel, av gas, propane WASTE OIL	litre	20000	\$1	\$18,600		equivalent is ~98 (205L) drums
Oils/lubricants - ship off-site	litre	0	\$1	\$0		based on NWB "high" unit costs shipping and handling waste oil off-site
Personnel helicopter support	hours	8	\$2,100	\$16,800	005 400	
Subtotal Chemicals and Contaminated So	DIIS			\$35,400	\$35,400	
Mobilization and Camp Operation	IONAL OFNIT	DE				
MOBILIZE HEAVY EQUIPMENT FROM SITE TO REG	IONAL CENT	ne .				assumes 3 round trips to Bathurst inlet for 10 people; each trip is 5 days including loading and
overland transport barge	days lumpsum	150 1	\$320 \$50,000	\$48,000 \$50,000		unloading
air support (helicopter) herc flights	hours flights	8 5	\$2,100 \$29,100	\$16,800 \$145,500		
CAMP OPERATION						
support personnel (cook, first aid, super)	days	525	\$298	\$156,450		assumes 5 people for 3.5 months equivalent to 14 people doing Goose reclamation
PERMITTING Subtotal Mobilization	days	1430	\$298	\$426,140 \$5,000	¢947 900	for approx 3.5 months
Subtotal Mobilization				\$847,890	\$847,890	
Clean up and Reclamation CLEAN UP						
DECONTAMINATE BUILDINGS & TANKS Site clean up	days days	70 70	\$320 \$320	\$22,400 \$22,400		assumes 14 people for 5 days assumes 14 people for 5 days
RECLAIM CAMP, ROADS & AIRSTRIP						
Scarify/install water breaks/remove culverts	days	70	\$320			personnel equivalent is 10 days of 7 people @\$320 ea/day
Revegetation (fertilizer & peat)  Subtotal Reclamation	bulk	2	12,000	\$24,000 \$91,200	604 000	
				\$91,200	\$91,200	
Post Closure Monitoring and Maintenance Monitoring during reclamation						
Water sampling Reporting	each days	12	\$500 \$325	\$325		not completed in camp
Other (helicopter support) Post Closure Inspections	hours	3	\$2,100			
Annual Inspection Other	each	2	\$10,000	\$20,000 \$0		
Subtotal Post Closure Monitoring and Ma	intenance			\$32,625	\$32,625	
		Subtot	al Canital (	Costs to Close	\$1,381,015	i
	PROJECT	MANAGEMENT	•	% of subtotal	1.,50.,510	\$41,430
		ENGINEERING		% of subtotal		\$0
		CONTINGENCY		% of subtotal		\$138,102