



P.O. Box 119  
GJOA HAVEN, NU X0B 1J0  
TEL: (867) 360-6338  
FAX: (867) 360-6369

kNK5 wmoEp5 vtmpq  
NUNAVUT IMALIRIYIN KATIMAYINGI  
NUNAVUT WATER BOARD  
OFFICE DES EAUX DU NUNAVUT

## WATER LICENCE APPLICATION FORM

Application for: (check one)

☐ New      ☐ Renewal      ☒ Amendment      ☐ Assignment      ☐ Cancellation

**LICENCE NO:**  
(for NWB use only)

**1. NAME AND MAILING ADDRESS OF APPLICANT/LICENSEE**

SABINA GOLD & SILVER CORP.

601 Squier St.  
Thunder Bay, Ontario  
P7B 4A7  
Tel: (807) 345-8278  
Fax: (807) 343-0232

Phone: (604) 998-4175  
Fax: (604) 998-1051  
e-mail: [sburgess@sabinagoldsilver.com](mailto:sburgess@sabinagoldsilver.com)

**2. ADDRESS OF CORPORATE OFFICE IN CANADA (if applicable)**

SABINA GOLD & SILVER CORP.

930 West 1st Street, Suite 202  
North Vancouver, BC  
V7P 3N4

Phone: (604) 998-4175  
Fax: (604) 998-1051  
e-mail: [pmanojlovic@sabinagoldsilver.com](mailto:pmanojlovic@sabinagoldsilver.com)

**3. LOCATION OF UNDERTAKING (describe and attach a topographical map, indicating the main components of the Undertaking)**

The Hackett River and Back River Projects are located approximately 110km S of the community of Bathurst Inlet, Kitikmeot Region, Nunavut.

Sabina holds water license 2BE-HAK0915 for the Hackett River/Wishbone Projects that includes water use and waste disposal associated with exploration activities such as drilling, geophysical surveys and field programs and operation of camp. The purpose of this amendment is to permit water use and waste disposal in temporary camps to support exploration and resupply activities located at distance from the main Hackett River camp. Possible locations for these temporary camps are in , but not limited to, the D'Arcy Lake, Kuuk Lake, Pterydactyl Lake, and Aorta Lake area.

The general area of exploration lies within the following map coordinates:

MAX Lat 66 Deg 10' MIN Lat 65 Deg 10'  
MAX Long 108 Deg 45' MIN Long 106 Deg 45'  
NTS map sheet #76G/03, 04, 05, 06, 07, 08, 12, 13, #76F/08, 09, 15, 16,

The existing Hackett camp is located on the following map and has the coordinates:

Latitude: (65°55' " N) Longitude: (108°22' " W)  
NTS Map Sheet No. 76F/16 Scale: **1:50000**

The exact location of the temporary camps to support Sabina's exploration and resupply activities is unknown except for D'Arcy Lake. The general UTM coordinates of the lake are:

Approximate coordinates in NAS83UTM Zone 13N

D'Arcy Lake                      360890 7307040  
Aorta Lake                      365585 7314425

Pterodactyl Lake

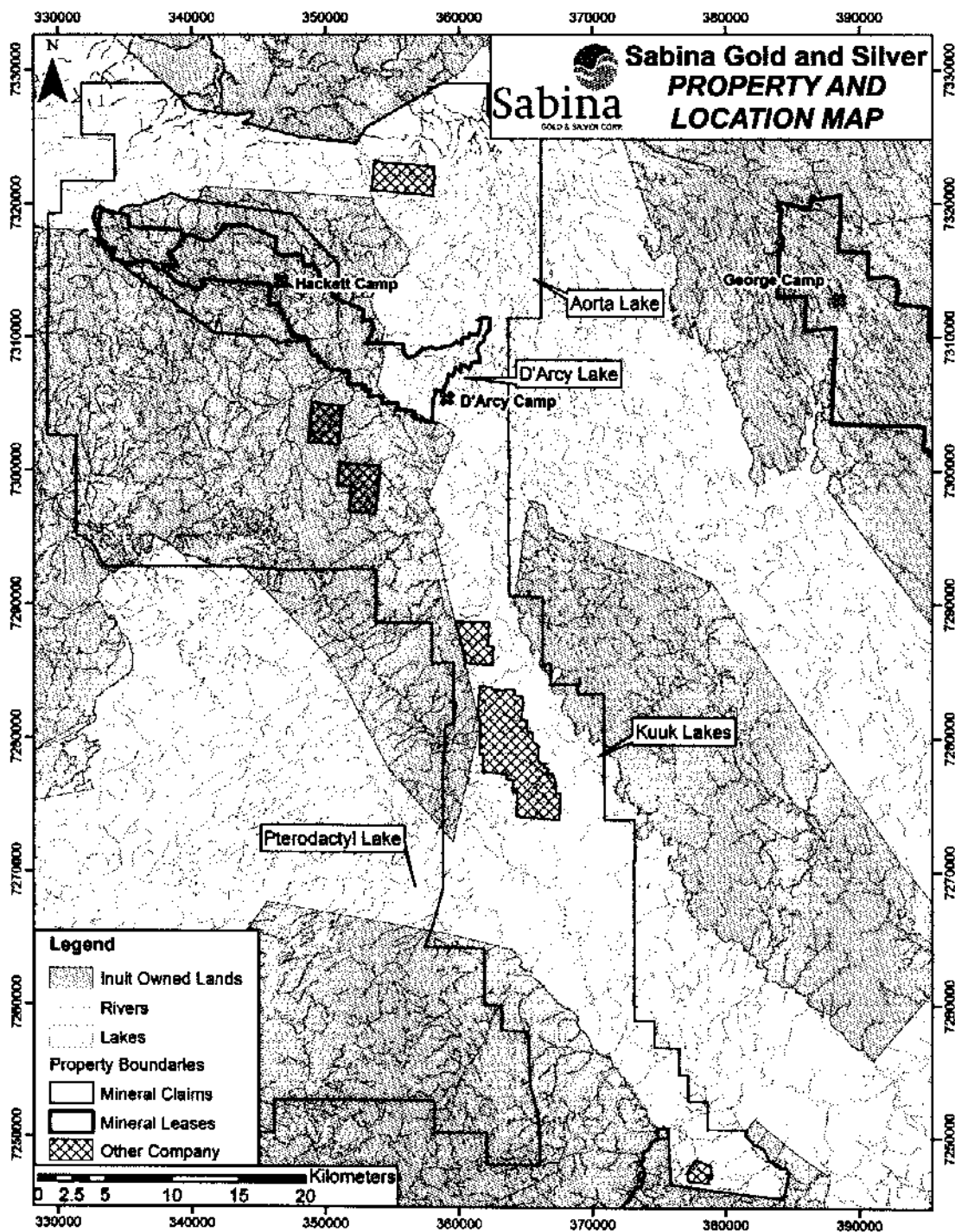
356820 7269190

Kuuk Lake

372145 7273675

Sabina will advise the NWB of exact locations for the temporary camps 45 days prior to their establishment.

Map: Area Location of Sabina's Possible Temporary camps to support exploration and resupply activities



**4. DESCRIPTION OF UNDERTAKING** (attach plans and drawings)

Sabina sees an opportunity to continue exploration activities in the Hackett River and Back River areas and currently holds water and land tenure for three camps in the Kitikmeot Region – Hackett River, Goose Lake and George Lake. The water licenses include the exploration activities such as drilling, geophysical surveys and field programs and the operation of camps to support these activities. The purpose of this application is to amend the existing water license to allow water use and waste disposal in small, temporary camps for up to 15 people. These camps would be needed for target areas located 20km or more from the main Hackett River campsite and would be established for safety, environmental and economic reasons. The intent is not to establish a network of camps across the exploration area, but to have the opportunity and flexibility to establish these temporary camps as needed.

Sabina is requesting an amendment to:

- allow domestic water use from local lakes to supply temporary camps. Assuming 2-3 temporary camps may be operating at the same time this would be approximately 10m<sup>3</sup>/day; and
- As needed when environmental conditions do not result in safe operating ice conditions, use water to maintain ice airstrip on local lakes. Sabina has assumed that this is up to 65 m<sup>3</sup>/day.

This request does not include an amendment to the current daily maximum of up to 250m<sup>3</sup>/day; the above amounts would be included in the currently licensed daily volume.

Water would be provided by local sources to supply water to the camp facilities (showers, kitchen, laundry) and ice airstrip construction and maintenance as needed.

The exploration work over the next five years may include:

1. Seasonal operation of the Hackett and Goose existing camps located at 65° 55'N, 108° 22'W and 65° 32'N, 106° 25'W. In general, camps would open in March of each year and close by end of October.
2. Seasonal operation of temporary camps as needed to support exploration work located at a distance of approximately 20km or more away from the main camps.
3. Transport of fuel and drilling supplies to and from the temporary camps, and associated storage and handling.
4. Transport of personnel to and from the exiting camp and drill sites with a helicopter.
5. Fixed wing planes will provide transport to and from the camp. This is typically using Twin Otter, however, on an as-needed basis larger planes such as DHC-5 Buffalo and CC-130 Hercules may be used.
6. Inspection and reclamation of drill sites upon drill hole completion.
7. Camp clean-up and progressive reclamation.

Activities planned for the temporary camps over the next five years would include:

1. Construction of kitchen, camp dry, sleepers and office tents/weatherhavens to accommodate approximately 10-12 on average and a maximum of 15 people.
2. Construction of fuel, material and supplies storage as needed to support nearby exploration activities

5. **TYPE OF PRIMARY UNDERTAKING** (A supplementary questionnaire must be submitted with the application for undertakings listed in "bold")

- |   |   |
|---|---|
| <input type="checkbox"/> Industrial   | <input type="checkbox"/> Agricultural                           |
| <input checked="" type="checkbox"/> <b>Mining and Milling</b> (includes exploration/drilling) | <input type="checkbox"/> <b>Conservation</b>                    |
| <input checked="" type="checkbox"/> <b>Municipal</b> (includes camps/lodges)                  | <input type="checkbox"/> Recreational                           |
| <input type="checkbox"/> Power  | <input type="checkbox"/> <b>Miscellaneous</b> (describe below): |

Current license 2BEHAK0915 includes exploration/drilling activities and this amendment requested includes the temporary camps

See Schedule II of *Northwest Territories Waters Regulations* for Description of Undertakings

6. **WATER USE**

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> To obtain water                 | <input type="checkbox"/> Flood control                                     |
| <input type="checkbox"/> To cross a watercourse                     | <input type="checkbox"/> To divert a watercourse                           |
| <input type="checkbox"/> To modify the bed or bank of a watercourse | <input checked="" type="checkbox"/> To alter the flow of , or store, water |
| <input type="checkbox"/> Other (describe):                          |  |

7. **QUANTITY OF WATER INVOLVED** (cubic metres per day including both quantity to be used and quality to be returned to source)

- Water use** ☐ 100m<sup>3</sup>/day or less  
☒ Greater than 100m<sup>3</sup>/day; if greater, indicate quantities to be used for each purpose (camp, drilling, etc.)

The current license is for a daily maximum of up 250m<sup>3</sup>/day with approximately 20m<sup>3</sup>/day for domestic use and the remaining 230m<sup>3</sup>/day for drilling.

Sabina is not intending to change the drilling/exploration program, personnel needs or equipment to support exploration and resupply activities. For this reason, we are assuming that the same volume of water would be used and only the source and use be amended to include local sources for temporary camp operations.

**Water returned to source**  
 \_\_\_\_\_ m<sup>3</sup>/day

8. **WASTE** (for each type of waste describe: composition, quantity (cubic metres per day), methods of treatment and disposal, etc.)

- |   |   |
|---|---|
| <input type="checkbox"/> Sewage                             | <input checked="" type="checkbox"/> Waste oil |
| <input checked="" type="checkbox"/> Solid Waste             | <input checked="" type="checkbox"/> Greywater |
| <input type="checkbox"/> Hazardous                          | <input checked="" type="checkbox"/> Sludges   |
| <input checked="" type="checkbox"/> Bulky Items/Scrap Metal | <input type="checkbox"/> Other describe):     |

No sewage system will be installed in the camp as no water is needed for the Pacto toilets.

All solid waste will be carried to the existing camps (Hackett and/or Goose) and disposed as outlined in the approved waste management plan.

Grey-water generated from the kitchen, showers and laundry facilities is collected in a 500 litre, plastic holding tank. All cleaning agents would be biodegradable and phosphate free. On an as-needed basis the grey-water would be pumped to a suitable disposal sump location well back from the local waterways and would be allowed to percolate through the moss and soil to rejoin groundwater.

**9. OTHER PERSONS OR PROPERTIES AFFECTED BY THIS UNDERTAKING** (give name, mailing address and location; attach if necessary)

See attached list of current permits and licenses

**Land Use Permit**

DIAND ☒ Yes ☐ No If no, date expected \_\_\_\_\_

Regional Inuit Association ☒ Yes ☐ No If no, date expected \_\_\_\_\_

Commissioner ☐ Yes ☐ No If no, date expected \_\_\_\_\_

**10. PREDICTED ENVIRONMENTAL IMPACTS OF UNDERTAKING AND PROPOSED MITIGATION MEASURES** (direct, indirect, cumulative impacts, etc.)

The proposed temporary support camps for Sabina's exploration program are expected to have minimal impact on the land, water flora and fauna and socio-economic areas.

The total area estimated to be affected by each of the proposed camp sites is 1-2 hectares. It will result in some compressed vegetation where tents, fuel or supplies are placed on the ground.

Water impacts for camp use are expected to be minimal. The water will be sourced from a local lake with water intakes screened to prevent juvenile fish from entering the pump. The location of these temporary camps will be near lakes that are large enough to accommodate a winter ice airstrip and that water withdrawal will not result in significant drawdown of free water. Grey water from the camp is expected to be pumped away from the camp to a location 30m above high water where it can percolate through the moss and soil before rejoining groundwater in the area.

Possibly the largest impact on fauna will be due to noise caused by the use of a diesel generator at the camp as well as the periodic use of aircraft. The noise may cause large mammals to avoid the camp area; however, experience to date in camp operations indicates that the steady noise of the generator seemed to have no impact on large mammal behavior. Arctic ground squirrels most likely will be attracted to the camp area due to the presence of sheltered hiding places. All garbage will be flown out of camp to the existing exploration camps at Hackett or Goose for inclusion in their waste management streams. Hunting is prohibited. Firearms and domestic animals are not permitted, unless special permission has been granted by the project manager.

At the close of the field season, the tents and equipment would be removed and taken to either Hackett or Goose for inclusion in their seasonal closure for use the following year.

Socio-economic impacts of Sabina's proposed exploration program are expected to be similar to that as previous programs with seasonal employment earnings of \$70,000 to \$150,000 and up to 450 days of employment. Every effort is in place to maximize Inuit employment particularly residents from the closest communities of Bathurst Inlet, Umingmaktok, Kugluktuk and Cambridge Bay. These individuals are hired to help with exploration activities which may include core splitting, sample shipping, maintenance, equipment operation, environmental monitoring and reclamation).

NIRB has screened exploration activities for the Hackett River and Wishbone Projects; NIRB reference 04EN012 and 08EA84

NIRB Screening ☒ Yes ☐ No If no, date expected \_\_\_\_\_

**11. INUIT WATER RIGHTS**

Will the project or activity substantially affect the quality, quantity, or flow of water flowing through Inuit Owned Lands and the rights of Inuit under Article 20 of the Nunavut Land Claims Agreement?

No, except for the unlikely event of a major fuel spill. Major fuel spills are unlikely as all fuel at Hackett is in 45 gallon drums which are stored within secondary containment berms and the Spill Contingency Plan is updated on a regular basis.

If yes, has the applicant entered into an agreement with the Designated Inuit organization to pay compensation for any loss or damage that may be caused by the alteration. If no compensation agreement has been made, how will compensation be determined? In the unlikely event of a major fuel spill any compensation would be determined by mutual negotiations

**12. CONTRACTORS AND SUB-CONTRACTORS (name, address and functions)**

Major Drilling Group International Inc. (provides diamond drilling services)

P.O. Box 1377

337 Old Airport Road

Yellowknife, NT

X1A 2P1

Phone: (867) 873 - 3358

Fax : (867) 873 - 6803

Northern Air Support Ltd.

(provides helicopter support services)

6285 Airport Way

Kelowna, BC

V1V 1S1

Phone: (250) 765 - 0100

Fax: (250) 765 - 0077

1984 Enterprises Inc.

(provides first aid, camp staffing and WCB compliance support)

1000 - 355 Burrard Street

Vancouver, B.C.

V6C 2G8

Phone: (604) 736 - 8142

Fax: (604) 736 - 8119

Nunavut Expediting Services Ltd.

(provides expediting services and logistical support)

Discovery Mining Services

P.O. Box 97

Cambridge Bay, NU

X0E 0C0

Phone: (867) 983 - 2544

Fax: (867) 983 - 2203

**13. STUDIES UNDERTAKEN TO DATE (list and attach copies of studies, reports, research, etc.)**

**The following baseline studies have been collected for the Hackett River Project:**

**Department of Indian and Northern Affairs, Water Management Section, Bathurst Norsemynes (Hackett River), Potential Mine Water Quality Survey Network, Report Series, 1974 By: D. Sutherland, J. McLaren**

**Northwest Territories Water Board, Department of Indian and Northern Development, Bathurst Norsemynes Hackett River, Potential Mine Water Quality Survey Network, Report Series, 1975 By D.J. Sutherland**

**Geochemical Dispersion over Massive Sulphides within the Zone of Continuous Permafrost, Bathurst Norsemynes, District of Mackenzie, N.W.T. by J. K. Millar, The University of British Columbia, December, 1978.**

**Prepared by Gartner Lee:**

- o Baseline Water Quality Monitoring Program at Hackett River Project, December 6, 2004
- o 2005 Baseline Water Quality Monitoring Program – Hackett River Project, October, 2005
- o 2006 Baseline Preliminary Options of the Road Route Options from Hackett River Camp to the BIPAR Road, November, 2006.
- o 2006 Baseline Water Quality Monitoring Program at Hackett River Project, November, 2006.
- o 2008. Field Report – Back River Project: Back River Freshwater Aquatic Resources 2007. Prepared for Dundee Precious Metals Inc. Toronto. 46p.
- o 2008. Field Report – Back River Project: Wildlife and Wildlife Habitat 2007. Prepared for Dundee Precious Metals Inc. Toronto. 52p.

**Prepared by Rescan Environmental Services Inc.:**

- o 2007 Hydrology Baseline Report, Hackett River Project, January 2008
- o 2007 Aquatic Baseline Report, Hackett River Project, April 2008
- o 2007 Fish Habitat and Fish Community Baseline Report, Hackett River Project, June 2008
- o 2007 Wildlife Baseline Report, Hackett River Project, March 2008
- o 2007 Meteorology and Permafrost Baseline Report, Hackett River Project, March 2008
- o Hackett River Project - Predicted Minesite-Drainage, Chemistry and Acid Rock Drainage - Phase 1, March 2008
- o 2007 Archaeology Baseline Report, Hackett River Project, April 2008
- o 2007 Soil Baseline Report, Hackett River Project, June 2008
- o 2007 Ecosystem Mapping and Vegetation Baseline Report, Hackett River Project, September 2008
- o 2008 Hydrology Baseline Report, Hackett River Project, October 2008
- o 2008 Freshwater Water Quality Baseline Report, Hackett River Project, January 2009
- o 2008 Wildlife Baseline Report, Hackett River Project, November 2008
- o 2008 Meteorology and Permafrost Baseline Report, Hackett River Project, December 2008
- o Preliminary Wind Resource Analysis for the Hackett River Project, August 2008
- o Historical and Traditional Knowledge in the Hackett River Study Area, January 2009

**Prepared by Golder Associates Ltd.:**

- o 2007. Back River Project: Environmental Baseline Studies September 2006. Prepared for Dundee Precious Metals Inc. Toronto. Report 06-1373-45. 84p.
- o 2006. Environmental Baseline Studies for the Back River Project 2005. Prepared for Dundee Precious Metals Inc. Toronto. Report 05-1373-010. 68p.

**14. THE FOLLOWING DOCUMENTS MUST BE INCLUDED WITH THE APPLICATION FOR THE REGULATORY PROCESS TO BEGIN**

Supplementary Questionnaire (where applicable: see section 5) ☒ Yes ☐ No If no, date expected \_\_\_\_\_

Inuktitut and/or Inuinnaqtun/English Summary of Project ☒ Yes ☐ No If no, date expected \_\_\_\_\_

Application fee of \$30.00 (Payee Receiver General for Canada) ☒ Yes ☐ No If no, date expected \_\_\_\_\_

Water Use fee of \$30.00 (unless otherwise indicated in Section 9 of the *NWT Waters Regulations*; Payee Receiver General for Canada)

☒ Yes ☐ No If no, date expected \_\_\_\_\_

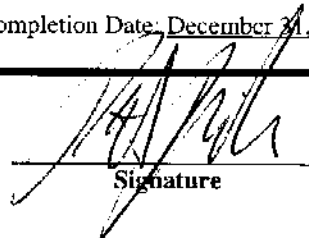
**15. PROPOSED TIME SCHEDULE** (unless otherwise indicated, the NWB will consider the application for a five (5) year term)

☐ one year or less (or) ☒ Multi Year

Start Date: April 1, 2010 Completion Date: December 31, 2015

Peter Manojlovic  
Name (Print)

Chief Geologist  
Title (Print)

  
Signature

March 25, 2010  
Date

**For Nunavut Water Board office use only**

**APPLICATION FEE**      **Amount: \$** \_\_\_\_\_      **Pay ID No.:** \_\_\_\_\_

**WATER USE DEPOSIT**      **Amount: \$** \_\_\_\_\_      **Pay ID No.:** \_\_\_\_\_