

## NWB Annual Report

Year being reported: 2009



License No: 2BB-BOS0712

Issued Date: July 6, 2007

Expiry Date: July 31, 2012

Project Name: Boston Advanced Exploration Project

Licensee: Hope Bay Mining Ltd.

Mailing Address: 300-889 Harbourside Dr.  
North Vancouver, BC  
V7P 3S1

Name of Company filing Annual Report (if different from Name of Licensee please clarify relationship between the two entities, if applicable):

The licence was reassigned in 2008 from Miramar Hope Bay Limited to Hope Bay Mining Ltd.

## General Background Information on the Project (\*optional):

The Boston site supports advanced mineral exploration in the south end of the Hope Bay Greenstone Belt.

Licence Requirements: the licensee must provide the following information in accordance with

Part B



Select



**A. A summary report of water use and waste disposal activities, including, but not limited to: methods of obtaining water; sewage and greywater management; drill waste management; solid and hazardous waste management.**

Water Source(s): Aimaokatuk (Spyder) Lake for domestic use and drilling purposes. The total quantity of water allowable by the license is 36,500 m<sup>3</sup>/yr or 100m<sup>3</sup>/day. There is no differentiation between quantities to be used domestically or for drilling.

Water Quantity:	not specified	Quantity Allowable Domestic (cu.m)
	1.85 cu.m/day	Actual Quantity Used Domestic (cu.m)
	not specified	Quantity Allowable Drilling (cu.m)
	9.93 cu.m/day	Total Quantity Used Drilling (cu.m)

## Waste Management and/or Disposal

- ☒ Solid Waste Disposal  
☒ Sewage  
☒ Drill Waste  
☒ Greywater  
☒ Hazardous  
☒ Other:

Fuel Farm Berm, Land Treatment Area and Mine Portal discharges

Additional Details:

Water for domestic use at Boston Camp is obtained from Aimaoktatuk Lake via a 2 inch diameter submerged pipe with a DFO compliant fish screen. This intake pipe is linked to a pump house located approximately 30 metres from shore. Water used for drilling is taken from the closest lake, Aimaoktatuk Lake, using a similar system to the domestic system. Boston camp was only open until May 2009, when all operations and personnel were transferred to the Doris North location.

Waste produced on site is treated according to Part D of the license.

-Food waste, paper waste and untreated wood waste is burned in the incinerator as per Part D Item 3.

-Solid waste that cannot be burned is taken offsite for disposal. In 2009, a total of 1,700,000 lbs of solid waste was removed from the belt; 324,083 lbs from Boston was removed via winter Cat Train to the Doris North Roberts Bay jetty for removal by summer sea-lift.

-Drill cuttings produced under this license are placed in a depression adjacent to the Boston Camp airstrip to displace pooling water.

-Sewage and greywater produced on site is processed in the sewage treatment plant as per Part D Item 11. Sludge is burned in the incinerator.

-Hazardous materials such as waste oil, glycol, and contaminated soil are being shipped offsite for disposal in an approved facility as per Part D Item 5.

- Fuel berm effluent is sampled for water quality against the discharge criteria of the licence. Effluent that meets the standards for discharge is released in accordance with the licence following a notification to the Inspector; effluent that does not meet the licence criteria is treated onsite until it is remediated to acceptable levels for discharge, or it is removed offsite for treatment/disposal.

-Effluent from the Land treatment Facility is sampled in accordance with the licence criteria for discharge - no discharges occurred from the facility in 2009.

- Effluent from the mine portal/decline is sampled in accordance with the criteria specified for Monitoring Station BOS-2 (Containment Pond). No discharges occurred from the portal or from containment pond BOS-2 in 2009.

**B. A list of unauthorized discharges and a summary of follow-up actions taken [as per Part B Item 7(ix)].**

Spill No.:  (as reported to the Spill Hot-line)

Date of Spill:

Date of Notification to an Inspector:

Additional Details: (impacts to water, mitigation measures, short/long term monitoring, etc)

Approx. 6 L of transmission fluid leaked on to the ice at Spyder Lake when the skid steer hose broke during loading operations. The contaminated ice was scraped up and removed for disposal to the Boston Land Treatment Area. The machine was removed from service for repairs.

Spill No.:  (as reported to the Spill Hot-line)

Date of Spill:

Date of Notification to an Inspector:

Additional Details: (impacts to water, mitigation measures, short/long term monitoring, etc)

The Boston STP effluent was sampled and found to be non-compliant for BOS, TSS, Oil and Grease and Fecal Coliforms. A new membrane plant is to be constructed at this location.

Spill No.:  (as reported to the Spill Hot-line)

Date of Spill:

Date of Notification to an Inspector:

Additional Details: (impacts to water, mitigation measures, short/long term monitoring, etc)

The Boston STP effluent was sampled and found to be non-compliant for BOS, TSS, Oil and Grease and Fecal Coliforms. A new membrane plant is to be constructed at this location. The camp was closed in May 2009.

Spill No.:  (as reported to the Spill Hot-line)

Date of Spill:

Date of Notification to an Inspector:

Additional Details: (impacts to water, mitigation measures, short/long term monitoring, etc)

A near-miss incident occurred during generator change-out, when the electrical supply was temporarily interrupted to the STP. Floats to trigger tank transfer and prevent overflow were not triggered and an overflow was narrowly prevented when site management noted the visual alarm out the window after midnight and corrected the issue. Generator maintenance procedures were reviewed to ensure a re-set of the STP is included.

Spill No.:  (as reported to the Spill Hot-line)

Date of Spill:

Date of Notification to an Inspector:

Additional Details: (impacts to water, mitigation measures, short/long term monitoring, etc)

A punctured and improperly resealed barrel of fuel was noticed in a temporary fuel berm at Boston Camp. The barrel was observed to be dripping from the puncture. The puncture hole was stuffed with absorbent pads to stop the leak and the contents were decanted to a secure container

### C. Revisions to the Spill Contingency Plan [as per Part B Item (x)]

Other: (see additional details)

Additional Details:

A revised Spill Contingency Plan, with corrections made based on NWB correspondence of March 4, 2008, and Jan. 6, 2010, is included with this annual report submission as suggested in the Feb. 19, 2010 letter.

Below are the key corrections made, based on the Jan. 6, 2010 letter, and their location in the revised plan:

1. MSDS sheets are kept up-to-date on site.
2. See Fig. 14.
3. See Fig. 14.
4. See Fig. 14 and 15.
5. See Fig. 15.
6. See footnote on p. 52.
7. See Appendix C.

Below are the key corrections made, based on the March 4, 2008 plan, that were not superseded by the Jan. 6, 2010 letter:

-See p. 19 for geographic coordinates of Boston Camp.  
 -See p. 49 for reference to GN-DOE's comment about the movement of hazardous waste.  
 -See p. 10 for reference to skimmer on site.  
 -See p. 21 for information about toxic chemicals.  
 -Spill kits are located at each STP on site.

#### **D. Revisions to the Abandonment and Restoration Plan [as per Part B Item 7(x)]**

Other: (see additional details) ▼

Additional Details:

The Abandonment and Restoration Plan submitted in October 2007 has not been modified or revised.

#### **E. Summary of Drilling Activities and Progressive Reclamation Work Undertaken of Drill Sites [see Part**

Additional Details (i.e., work completed and future works proposed)

See the attached supplement at item 9 for details.

#### **F. Results of the Monitoring Program including [as per Part B Item 7(vii)]:**

**The GPS Co-ordinates (in degrees, minutes and seconds of latitude and longitude) of each location where sources of water are utilized;**

Details described below ▼

Additional Details:

The coordinates for the freshwater intake (BOS-1) are in the attached co-ordinates file.

Drilling water source coordinates are maintained on file in the HBML Geology Department for all water sources utilized proximal to the drill targets. Pertaining to 2BB-BOS0712, only Aimaokatuk (Spyder) Lake was utilized as a drill water source in 2009.

**The GPS Co-ordinates (in degrees, minutes and seconds of latitude and longitude) of each location where wastes associated with the licence are deposited;**

Details described below ▼

Additional Details:

**Results of any additional sampling and/or analysis that was requested by an Inspector or the Board (as per Part B Item 7(xvii))**

No additional sampling requested by an Inspector or the Board ▼

Additional Details: (date of request, analysis of results, data attached, etc)

N/A

**G. Any other details on water use or waste disposal requested by the Board by November 1 of the year being reported [as per Part B Item 7(xviii)].**

No additional sampling requested by an Inspector or the Board ▼

Additional Details: (Attached or provided below)

N/A

**H. Any responses or follow-up actions on inspection/compliance reports [as per Part B Item 7(xi)]**

Inspection Report received by the Licensee (Date): ▼

Additional Details: (Dates of Report, Follow-up by the Licensee)

In July 2008, INAC performed a water license compliance inspection for the Hope Bay belt. One issue was raised with regards to the location of the Boston Sewage Treatment Plant (STP). HBML planned to perform the following corrective actions documented in a letter dated August 11, 2008 (see Appendix B):

- The existing Boston STP will be moved as part of a plan to upgrade the plant in 2009. A plan is currently being developed by consultants to move and upgrade the plant. We expect their plan will be available for this task by October 31, 2009. It will contain an execution schedule.

In 2009, construction was started on the site of the new biomembrane wastewater treatment plant shipped in to Boston Camp. Construction of this facility was temporarily halted when operations moved to Doris Camp in May 2009.

**I. Any additional comments or information for the Board to consider**

There were no updates or revisions to the Landfill Plan or Landfarm Manual in 2009 [as per Part B Item 7 (x)]. The QA/QC Plan was updated in 2009 and submitted to the board for approval.

Please see attached supplement for additional information requirements set out in Licence No. 2BB-BOS0712.

**Date Submitted:**

March 31, 2010

**Submitted/Prepared by:**

Chris Hanks

**Contact Information:**

**Tel:** (720) 917-4489

**Fax:** (604) 980-0731

**email:** [chris.hanks@newmont.com](mailto:chris.hanks@newmont.com)

## GPS Coordinates for water sources utilized

[illegible]

### GPS Locations of areas of waste disposal

[illegible]



**2009 2BB-BOS0712 Type B Water License  
Annual Report  
Supplemental Document**

**Boston Camp**

**Nunavut Water Board**

Prepared by  
Hope Bay Mining Ltd.  
North Vancouver, BC

Prepared for  
Nunavut Water Board  
Gjoa Haven, NU

March 2010





## **Executive Summary**

### **2BB-BOS0712 Annual Report**

Hope Bay Mining Ltd. (“HBML”) has filed its Annual Report on its activities during 2009 under Water Licence No. 2BB-BOS0712 issued by the Nunavut Water Board on July 20, 2007. Note in 2008 this licence was transferred from the previous owner, Miramar Hope Bay Mining Ltd., to HBML. As set out in Part B, Item 7 of the Licence, the report includes information with respect to the following topics:

- a summary of water use and waste disposal activities
- a summary of data generated under the Monitoring Program
- a list of unauthorized discharges and a summary of follow-up actions taken
- a brief description of follow-up actions taken to address concerns detailed in inspection and compliance reports prepared by the Inspector
- up to date contact information with respect to the Spill Contingency Plan
- A description of all progressive and/or final reclamation work undertaken
- A summary of modification and/or major maintenance work carried out on the water supply and waste disposal facilities
- A summary of consultation with local organizations and residents of nearby communities
- A brief description of future studies currently planned or proposed

**Aolapkaeyin Naetomik Okaohen  
2BB-BOS0712 Ukeogoagaagan Unipkaak**

Hope Bay Mining Ltd. (“HBML”) tonihihimaliktun Ukeotoagaagan Unipkamiknik havaamigun 2009-mi ukeommi ilagani Imaknik Atogeagani Laeseoyum Napaa 2BB-BOS0712 toniyaohimayok Nunavumi Imalikiyin katimayenin July 20-mi 2007-mi. Kaoyimalogo 2008-mi una laeseoyok nuhimayok hivoagun nanminikaktugaloamin, Miramar-konin Kapihiliktumi Oyagaktakvik-kunin ukunuga HBML-kunin. Okakhimayumi Naonaepkun B-mi, Ilikuktok 7 Laeseoyumi, unipkak ilakaktok hivunikhiyotikhanik ukununa:

- naetomik okaoheoyonik imaknik atoknigagun ikagolikiyotilo
- naetomik okaoheoyonik hivunikhiyotikhan ilagani Amigiyotinun Havaam
- titigakhimayonik agiktaohimagitun kuvigaeyun naetomilo okaoheoyunik upiyotini kigoagun
- naetomik okaoheoyonik upiyotini ihoakhiyaagani ihomalutaoyun titigakhimayun ilitokhaeyutinin maligoateakmagaalunen makpigaagini ihoakhakhimayaeni Iilitokhaeyim
- nutaanik okakatikhanik hivunikhiyumanikan Kuveyokakan Havaagiyakhaenun Upalogaeyaonmik
- okateaklogin tamaeta hivumuginaktun kigolelo nunan utiktitpaleayagani ilitkuhenun havaagiyaovaleayun
- naetomik okaoheoyonik notaguktitiyutini ihoakhaotiniklunen imiktakvikon havaoheoyun ikagukvelo pikotaoyunik
- naetomik okaoheoyonik okakatigegutinun nunalikni timeoyuni inoelo haneanetun nunalikni
- naetomik okaoheoyonik hivunikhami ilitokhaotikhanik taya ihoakhaktaoliktun atoktaoyumayolunen

**ዴሞክራሲያዊ ጋህሲካራጅኅሊቲ  
2BB-BOS0712 ድዋጋ ላገር ጋህሲካራጅኅሊቲ**

Hope Bay Mining Ltd. ድክሮታታን ድዋጋ ላገር ግራም ድጅራጅ ጋህሲካራጅኅሊቲ ለራሱ ለግራም ድዋጋ 2009 ልሳጋ ርዕሰ ልሳጋ 2BB-BOS0712 ላገር ግራም ድዋጋ ለራሱ ለግራም ድዋጋ 20, 2007. ጋህሊቲ 2008-ጋ ርዕሰ ልሳጋ ግራም ድዋጋ ለራሱ ለግራም ድዋጋ (ልሳጋ ለራሱ ለግራም ድዋጋ, Miramar Hope Bay Mining\_ግራም, HBML\_ግራም. ላገር ግራም ለራሱ ለግራም Part B, ለራሱ ለግራም 7 ርዕሰ ልሳጋ, ጋህሲካራጅኅሊቲ ድጅራጅ ጋህሲካራጅኅሊቲ ርዕሰ ልሳጋ ለራሱ ለግራም:

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Appendix A: Annual Monitoring Report – 2BB-BOS0712

**1. The monthly and annual quantities in cubic metres of all freshwater obtained from Aimaoktatuk (Spyder) Lake at Monitoring Station BOS-1 [as per Part B Item 7(i)]**

Table 1 summarizes the 2009 monthly and annual quantities of freshwater obtained for domestic use under license 2BB-BOS0712 at monitoring station BOS-1, and drilling water use during 2009, all from Aimaoktatuk Lake. Drilling only occurred during March of 2009. Boston Camp was closed during January 2009, and staff began camp set-up February 25, 2009. Formal occupancy began on March 5, 2009. The camp was then closed on May 25, 2009 for the remainder of the year.

**Table 1 - Monthly and annual quantities of all freshwater obtained from Aimaoktatuk Lake at BOS-1 and locations proximal to drilling in 2009, in cubic meters. Note: Water License limits use to 100 cubic meters per day.**

Month	Volume Camp (m <sup>3</sup> )	Volume Drilling (m <sup>3</sup> )	Total (m <sup>3</sup> )
January	Camp Closed	No Drilling	N/A
February	Camp Closed	No Drilling	N/A
March	97.1	208.7	305.8
April	58.8	No Drilling	58.8
May	34.3	No Drilling	34.3
June	Camp Closed	No Drilling	N/A
July	Camp Closed	No Drilling	N/A
August	Camp Closed	No Drilling	N/A
September	Camp Closed	No Drilling	N/A
October	Camp Closed	No Drilling	N/A
November	Camp Closed	No Drilling	N/A
December	Camp Closed	No Drilling	N/A
<b>Total</b>	<b>190.2</b>	<b>208.7</b>	<b>398.9</b>

**2. The monthly and annual quantities in cubic metres of Minewater pumped from the underground [as per Part B Item 7(ii)]**

No dewatering of the Boston decline took place in 2009 and as such, no minewater was pumped from underground in 2009.

**3. The monthly and annual quantities in cubic metres of treated Minewater and surface drainage discharged at Monitoring Station Number BOS-2 [as per Part B Item 7(iii)]**

No dewatering of the Boston decline took place in 2009 and as such there was no minewater to treat in 2009. Samples taken during the year indicate that the water accumulated at the Boston portal meets the criteria for discharge from BOS-2, but no discharges occurred from BOS-2 or directly from the Boston portal.

**4. The monthly and annual quantities in cubic metres of treated Sewage effluent discharged at Monitoring Station Number BOS-3 [as per Part B Item 7(iv)]**

Boston Camp was only open from March to May of 2009. The following results in Table 2 reflect the discharge volume data collected for this period.

**Table 2 – Monthly and annual quantities of treated sewage effluent discharged from BOS-3 in 2009, in cubic meters.**

Month	Volume (m <sup>3</sup> )
March	97.1*
April	58.8*
May	27.6
<b>Total annual volume recorded</b>	<b>183.5</b>

*\*Discharge volume calculated from intake usage numbers due to discharge pipe meter malfunction during March and April*

**5. The monthly and annual quantities in cubic metres of Sludge removed from the Sewage Disposal Facility [as per Part B Item 7(v)]**

Table 3 shows the monthly and annual quantities in cubic metres of sludge removed from the sewage disposal facility at Boston Camp in 2009. Sludge was only removed once during the year, in May. Quantities are recorded by the number of barrels filled. Each barrel is filled with approximately 153.75L of sludge.

**Table 3 - Volume of sludge removed from the sewage disposal facility at Boston in 2009, in cubic meters.**

Month	Number of Barrels	Volume (m <sup>3</sup> )
May	6	0.93
<b>Annual</b>	<b>6</b>	<b>0.93</b>

**6. The annual quantities in cubic metres of all soil and types of contaminants from all locations that are placed within the Landfarm facility [as per Part B Item 7(vi)]**

In 2009, no new material was deposited in the Landfarm facility at Boston Camp. The area is being used as temporary storage of drums that are planned for removal to Doris Camp in the future and then backhauled from the belt via aircraft, or summer sealift, to an approved waste handler for disposal/treatment.



**7. Tabular summary of all data generated under the Monitoring Program [as per Part B Item 7(vii) and Part J Item 24]**

Tables setting out data generated under the Monitoring Program appear at Appendix A of this document.

**8. A summary of modifications and/or major maintenance work carried out on the Water Supply and the Waste Disposal Facilities, including all associated structures, and an outline of any work anticipated for the next year [as per Part B Item 7(viii)]**

On April 8, 2009, HBML sent a letter to the NWB notifying the NWB that HBML was upgrading the sewage treatment facility at Boston. Construction of the new membrane wastewater treatment plant pad was started, but was halted due to camp closure and transfer of operations to Doris Camp.

**9. A summary of drilling activities and progressive reclamation of drill sites [as per Part B Item 7(xii)]**

Drilling activities at the Boston Deposit took place between March 9, 2009 and March 29, 2009. Drilling was located on Aimaokatuk Lake. One drill was used to drill 3 diamond drill holes totaling 720 meters. Drill hole information is tabulated in Table 4.

**Table 4 – KTL306C003 2009 drilling summary indicating holes drilled on ice**

Hole ID	Northing	Easting	Length (m)	Lease	Program Phase
09SBD407	7505254.76	441113.53	141	Boston 1	Winter
09SBD408	7505275.6	441029.79	273	Boston 1	Winter
09SBD409	7505275.80	441028.98	306	Boston 1	Winter

Diamond drilling activities were supported using tracked vehicles, such as the Caterpillar Challenger, bulldozers, Nodwell, pickup trucks with tundra tracks, and snowmobiles.

The Polydrill de-silting system was used to facilitate re-circulation of all drill fluids and minimize silt runoff from all ice-based drill holes. Cuttings from on ice drilling were stored in an approved area on site. All drill sites were inspected upon completion of drilling, as part of the standard operating procedures, to ensure that each drill site is properly cleaned up.

**a) Progressive reclamation of drill sites**

All new drill sites were cleaned up after use. Several drill sites from the previous year and drill contractor still require clean-up. This is expected to be accomplished in the near future.

**10. An updated estimate of the current Boston restoration liability based upon the results of the restoration research, project development monitoring, and any modifications to the site plan [as per Part B Item 7(xiii)]**

No adjustments to reclamation liability were required as no modification of the Boston facilities were completed.

**11. An estimate of both the current and anticipated volume of waste rock and ore stockpiled on site [as per Part B Item 7(xiv)]**

It is estimated that there are approximately 47,400m<sup>3</sup> of ore stockpiled on site at Boston Camp based on digital models of the ore removed historically from the underground workings at Boston. There is no estimate for the anticipated waste rock and ore to be stockpiled, because there is no mining activity occurring or currently planned for Boston.

**12. A public consultation/participation with local organizations and residents of the nearby communities, if any were conducted [as per Part B Item 7(xv)]**

Community consultations including consultation with Inuit in the Kitikmeot are governed by the Community Relations Plan. This plan is primarily implemented by Alex Buchan, Manager of Community and External Relations located in Cambridge Bay, with support from Chris Hanks, Director of Environment and Social Responsibility. Community Relations activities continue to revolve around Inuit employment and training opportunities in HBML programs and projects, consistent with feedback from a wide range of stakeholder groups.

In 2009, Hope Bay Mining Ltd. (HBML) maintained an office in Cambridge Bay – leased through Kitnuna - that provided for walk through public traffic and interactions in this community. The office is located at the Cambridge Bay airport however HBML acknowledges that this location is not optimum for public interaction. A downtown Cambridge Bay office location is currently being scoped for occupation in 2010.

Regular communications are maintained between the Manager and KIA Community Liaison Staff by email and telephone, in particular with the Cambridge Bay CLO, Anne Klengenberg, primarily regarding employment and training opportunities for Inuit at our project site.

During 2009, HBML had only one Kitikmeot based staff member, Alex Buchan.

## **a. Cambridge Bay Logistics Hub**

The Hamlet of Cambridge Bay continues to act as the transportation hub for HBML Kitikmeot activities. Although relatively little freight was handled through Cambridge Bay in 2009, all northern hires travel through this community in order to be transported to site via Twin Otter chartered aircraft. Care is continually taken to not flow northern employees through Yellowknife in keeping with our Socio-Economic commitments.

During the first part of 2009, HBML continued to utilize a Kitikmeot Corporation staff house in order to provide overnight accommodation for northern workers who may have arrived in Cambridge Bay on a day without Air Charter service to site. However, through effective employee travel planning, later on in 2009, HBML found little if no use for this Unit. In fall of 2009, HBML discontinued use of this building. Surplus furniture from the Crewhouse was donated to the Cambridge Bay Elders Palace.

During the operating season, HBML made use of Cambridge Bay accommodation (Arctic Island Lodge, Green Row Apartments) for up to 5 staff at a time.

HBML moved to conduct staff orientations at site in 2009.

The volume of HBML traffic through the regional center for the Kitikmeot facilitated in several ways a greater understanding of our project and activities by Kitikmeot residents.

## **b. Email Distribution List**

In 2009, HBML continued the practice of regular email notifications of company updates amongst Key Stakeholders in the region including:

- KIA Community Liaison Officers and other staff,
- Community Economic Development Officers,
- Hamlet Senior Administrative Officers
- Kitikmeot Economic Development Commission,
- Department of Education Field Operations,
- Department of Economic Development and Transportation,
- Indian and Northern Affairs Canada (Nunavut) staff,
- Kitikmeot Corporation, and
- Nunavut Arctic College.

At least once a month, an email is distributed amongst this group highlighting current corporate events, contact information, the status of hiring and training, which exploration camps are active, current photographs of exploration work, and copies and explanations of relevant company News Releases.

## **c. Alcohol and Drugs**

No alcohol and drug issues were noted in 2009 at HBML sites.

## **d. Community Relations Monthly Summary**

### **January**

Alex Buchan delivered a project update to the Kitikmeot Mayors Meeting held in Cambridge Bay January 20-22, 2009. Included in the audience besides Municipal leaders were a number of Government of Nunavut staff members and senior managers.

During this month, HBML began work to develop a new Permitting Strategy for the Hope Bay Project, of which community relations aspects were included.

Alex Buchan began participation in the Geological Survey of Canada Advisory Group of Northerners formed to maximize benefits to northerners and Inuit from the Government of Canada GEM initiative.

Finally, a new 2009 Site Orientation program was developed to present to inducted workers on site. Particular attention was made to ensure inclusion and accuracy on Cross Cultural Awareness Components.

### **February**

HBML sponsored and participated in the 2009 Kitikmeot Trade Show in February. In attendance were Alex Buchan, Jerry Clyne (Supply Chain) and Chris Hanks. HBML operated a booth during the trade show and was able to explain our operation to members of the public present. Additionally, Jerry Clyne was able to make a presentation to Kitikmeot Based Business, providing information to interested companies wishing to secure contracts from us. Included in the presentation was information on supplier forms and key contracts to be let in 2009.

In February, HBML began a process to more clearly understand public health matters in the Kitikmeot. HBML secured the services of Andrew Langford of Yellowknife to conduct a Stage 2 Health Study. As part of this study, a number of Nunavut and Kitikmeot Health and Social Services and Community Wellness Staff were contacted for their views.

In February, HBML began a process to develop a site Language Policy that would be compliant with provisions of the new Nunavut Inuit Language Protection Act. This completed policy was later adopted in 2009, compliant with IIBA requirements and providing more certainty in acting in matters related to the language of choice for our employees, and the public seeking information from us.

Also in February, Alex Buchan was in contact with News North of Yellowknife that subsequently wrote a newspaper article regarding our project that was published throughout the North.

### **March**

Alex Buchan consulted with Kitikmeot Health centers in March on the new HBML requirement for a pre-employment medical examination. This procedure was put in place to allow site medical personnel access to important medical information and assessments of our employees in order to better serve them at site.

Alex Buchan acting as HBML representative to the NWT-Nunavut Chamber of Mines in March provided Board assistance to the submission of a proposal to the Government of Nunavut to assist in establishing an Iqaluit Office for the Chamber of Mines. This office would be a resource to all Chamber members but also provide more mining industry awareness programming throughout the territory including the Kitikmeot. During 2009, the Government of Nunavut did not formally respond to this proposal.

HBML also in March attended and sponsored the Nunavut Mining Symposium in Iqaluit. Attending on behalf of HBML were Alex Buchan and Chris Hanks. Alex Buchan made a presentation on the Community Engagement portion of the Symposium explaining our partnership efforts to deliver Pre-Trades training to Kitikmeot Youth through our Summer Camps. Chris Hanks delivered a presentation providing a Project and Company update. These presentations were well attended by members of the public, media, government and Inuit organizations present at the Symposium. A short meeting of the Nunavut Mine Training Roundtable also took place.

Also as part of the Symposium and for subsequent events, HBML developed a new project Factsheet that was made available as a translated handout.

In March, all HBML site signs were catalogued and translated in order to conform with the draft language policy.

HBML interacted with the KIA on the matter of contracting for Environmental Baseline Studies for the Hope Bay Project. As part of the decision to contract this work, HBML made significant efforts in March to hire Inuit fieldworkers to assist in conducting these studies.

HBML Health and Safety staff volunteered to assist the Hamlet of Cambridge Bay in the delivery of a 1 day WHIMIS training course in April.

## **April**

In April, HBML staff including Alex Buchan and Chris Hanks attended a KIA Board meeting in Taloyoak to provide the Board with a project update, and answer any questions the Board had on our activities.

Also in April, Alex Buchan presented to the Cambridge Bay Nunavut Arctic College Introduction to Mining students. Alex provided information on HBML, the Hope Bay Project, and generally about mining employment.

In April, HBML posted public safety notices in the Hamlet of Cambridge Bay as well as on local radio to warn the public regarding blasting activities at Site. Additionally, another safety notice was posted regarding the use of the Cambridge Bay to Hope Bay winter road.

HBML provided staff, accommodation, aircraft, food, fuel, equipment and logistical support to RCMP and Cambridge Bay Search and Rescue Committee in their efforts to locate the body of Julien Tologanak who died close to HBML Boston Camp. This work continued on into the month of May.

## **May**

HBML met with KIA in an executive session in Edmonton AB in order to discuss IIBA and permitting issues. In attendance for HBML were Brian Anderson, Jerry Clyne, Chris Hanks and Alex Buchan. HBML also met with KIA in Kugluktuk later in the month in order to discuss the possibility of using roadless vehicles in the Hope Bay Belt.

In May, HBML initiated a photography contract in order to obtain Kitikmeot graphic images for use in corporate documents. Consideration was given to Kitikmeot residents participating in this work.

HBML responded to Bear People conflicts at site during the month of May. HBML consulted with the KIA and Department of Environment, Government of Nunavut in deterring Grizzly Bears.

HBML began to respond to the H1N1 Flu Epidemic with specific actions and procedures to protect our northern workforce and productivity at Site. This involved informing our contractors, aircraft charter companies and workers of these specific procedures.

In May, HBML donated 6 surplus washing machines in Cambridge Bay. Distribution of the washing machines was facilitated by the Cambridge Bay Wellness Center. HBML also donated a surplus pool table to the Cambridge Bay Youth Center.

## **June**

HBML consulted with the KIA and the local CBC in order to obtain permission to conduct regional scale geological studies using a helicopter in the Hope Bay Belt.

A number of surplus personal computers and servers were shipped to Cambridge Bay in June. Over 30 computers were donated to local residents and groups.

Alex Buchan began preparations for the Kimberlite Summer Camp to be held in July.

Starting in June, HBML began a consultative process with the Government of Canada providing input into the new Nunavut Land Use and Impact Assessment Act.

Over 40 tubs of surplus laundry detergent was made available to residents of Cambridge Bay in June. A quantity was provided to the Cambridge Bay Group Home and the remainder was distributed by the Cambridge Bay Wellness Center.

## **July**

HBML conducted the Kimberlite Summer Camp during the first week in July. High School students from Cambridge Bay participated in this program. Anne Daniels, Christine Aknavigak and Jacque Gagnon, all educators at Kilinik High School were on hand to Chaperone, as was Alex Buchan. A total of 12 students participated in 2009. 4 tool boxes that were surplus from the Kimberlite Center were air freighted by HBML into Cambridge Bay after the end of the Summer Camp and are currently being used at the Kilinik High School trades shop.

In July, HBML staff participated in the Cambridge Bay town cleanup to support environmental stewardship.

## **August**

In August, HBML caused an accidental caribou mortality. This was communicated to the KIA and Government of Nunavut, Department of the Environment. A wildlife compensation claim from the KIA is still pending.

HBML hosted the entire KIA Board of Directors at Doris Camp in August, including several staff members. The KIA Board had an opportunity to inspect the site and see how HBML operates on Inuit Owned Land.

Alex Buchan had the opportunity to provide an in depth project update to the Hon. Keith Peterson, MLA for Cambridge Bay and the Minister of Finance.

At the end of the month, HBML was represented by Chris Hanks at the Canadian Mine Minister's conference held in St. Johns NL. During this conference, Mr. Hanks had opportunity to fully brief Minister Taptuna of Nunavut regarding the Hope Bay Project.

Alex Buchan audited the 2009 Nunavut Association of Municipalities Meetings held in Cambridge Bay. HBML noted a number of emerging issues for Hamlets across the territory, however no presentations were made.

In August, HBML responded to comments from Inuit workers on the lack of country food availability at site. Arctic Char was purchased as the only commercially available country food and placed on the menu.

## **September**

HBML sponsored and participated in the Cambridge Bay version of the Great Canadian Shoreline Cleanup in September in support of Environmental Stewardship. Attached to

this event was local Nunavut Mining Week acknowledgement. HBML presented to Kilinik High School students on mining matters. This presentation was delivered by Mark Ullikatak, Andy Orr and Philo Schoeman, all involved in HBML Exploration. The marking of Nunavut Mining Week ended with a public BBQ at the Cambridge Bay community hall sponsored in partnership with NTI Lands Division and the Department of Economic Development and Transportation.

At the end of the month, at the request of the KIA Lands Division, a Elders Tour of Doris Camp was facilitated. A total of 8 Cambridge Bay Elders consisting of several KIA CBC members and Elders specifically knowledgeable of the Hope Bay area were toured HBML facilities along with Interpretation Support.

## **October**

In October, HBML publicly announced that staged development of the Hope Bay Project starting with a modified Doris North Project. This was communicated by means of our Q3 Earnings Call followed up by direct communication with key stakeholders. In relation to this decision, HBML began efforts to strictly comply with Doris North IIBA and Water Compensation provisions.

HBML formally began providing notice in Kitikmeot Communities of all HBML Nunavut employment opportunities.

Alex Buchan attended another GEM Advisory Group of Northerners meeting in Whitehorse. The focus of this meeting was to develop employment and training options for this initiative in support of Inuit involvement in this initiative.

Alex Buchan also attended in Toronto the 2009 Canadian Aboriginal Minerals Association annual gathering. During this event, it was possible to obtain information on best practices in aboriginal engagement from across the country.

Alex Buchan in October also audited the KIA Annual General Meeting held in Cambridge Bay. Although no presentation was provided, this event offered the opportunity to meet with KIA delegates from across the region and hear what key concerns and issues exist with community members and KIA associated groups such as Kitikmeot Corporation.

HBML also facilitated a site inspection this month from KIA Lands Division staff. Alex Buchan accompanied Stanley Anablak to site for this purpose.

## **November**

HBML developed a new Corporate Donations Policy in November. This policy provides the basis for HBML to decide which funding requests to support from the number of proposals that are received in a year.



A Bid Preparation presentation was made by Jerry Clyne, Business Manager for HBML, during the Yellowknife Geoscience Forum to provide Kitikmeot Based Business with contract forecasts for 2010. The event was well attended by over 40 company representatives.

HBML posted an opening for an IIBA Coordinator Position in November to be based in Cambridge Bay. The purpose of this position is to provide a resource for HBML to ensure compliance on Human Resource and Contracting provisions of the Doris North IIBA, while providing support to the IIBA Implementation Committee. A number of persons applied for this position and background checks are being conducted to determine the successful candidate.

HBML in November opened a dialogue with the Department of Environment, Government of Nunavut regarding the Hope Bay Wildlife Mitigation and Monitoring Program. HBML was able to integrate a number of recommendations from this agency into changes in how HBML will monitor Grizzly Bear, Caribou and Wolverine into the future.

Also in November, HBML participated in a Kitikmeot Socio-Economic Monitoring Committee workshop and meeting held in Cambridge Bay, hosted by the Department of Economic Development and Transportation. Representing HBML were Chris Hanks, Alex Buchan and Lea-Marie Bowes-Lyon. During an evening session a Doris North SEMC meeting was also held. Continued efforts are in place in order to clarify how the Kitikmeot SEMC and Doris North SEMC and work together to progress monitoring in this region.

## **December**

In December, HBML conducted a comprehensive Kitikmeot Community Consultation Tour, stopping in every Kitikmeot Community. Chris Hanks, Sriram Sampathkumar (HBML HR) and Alex Buchan attended on behalf of HBML. Also in attendance were Johanne Johnson and Dave Sherlock of Nuna Logistics. As Nuna Logistics had been selected as the General Contractor for Phase I Hope Bay Development, these representatives were on hand to outline some of the contractor employment opportunities and procedures that would exist in 2010. Over 300 Kitikmeot residents participated in 6 public meetings held during this tour.

### **13. Summary of any abandonment and restoration work completed during the year and an outline of any work anticipated for the next year [as per Part B Item 7(xvi)]**

No abandonment and restoration work was completed in 2009 at Boston.

**14. Summary of any specific studies or reports requested by the Board, and a brief description of any future studies planned or proposed [see Part B Item 7(xvii)]**

No specific studies or reports were requested by the Board in 2009 and no studies are planned or proposed for 2010.

**15. Reporting of all artesian flow occurrences, including the location (GPS coordinates) and dates [as per Part F Item 3]**

No artesian flow occurrences were encountered in 2009.

## **Appendix A**

**Annual Monitoring Report – 2BB-BOS0712**

### a) Tabular Summary of Monitoring Information

The following tables summarize the results of sampling undertaken as part of the monitoring program detailed in Part J of 2BB-BOS0712 for the months the camp was open.

Table 1 summarizes the results of sampling undertaken as part of the monitoring program detailed in Part J of 2BB-BOS0172 at monitoring station BOS-3. Station BOS-4 was frozen in 2009 during the period the camp was open, and no effluent was available for sampling at a point prior to entry to Aimaoktatuk Lake during summer as the camp STP was not operational; therefore no sampling was undertaken at this monitoring station. Effluent at BOS-3 was non-compliant for several of the required parameters during the period the camp was open between March and May 2009. The results were due to on-going difficulties with the performance of the sewage treatment facility, despite measures to improve its operations such as reduced camp loading, regular preventative maintenance and frequent sludge removal. Ultimately, in April 2009, HBML applied for a modification to the license to replace the existing waste water treatment facility at Boston with a new one.

**Table 1- Summary of monitoring information gathered from BOS-3 in 2009, in mg/L.**

Months	Parameters	Sampling Date	BOS-3
March	Biochemical Oxygen Demand (BOD <sub>5</sub> )	March 30/09	75.3
	Total Suspended Solids (mg/L)	March 30/09	103
	Fecal Coliform	March 30/09	>200 TNTC*
	Oil and Grease (Visibility)	March 30/09	nvs**
	Oil and Grease	March 30/09	15.5
	pH (pH unit)	March 30/09	7.69
April	Biochemical Oxygen Demand (BOD <sub>5</sub> )	April 26/09	145
	Total Suspended Solids (mg/L)	April 26/09	164
	Fecal Coliform	April 26/09	194,000 CFU/100mL
	Oil and Grease (Visibility)	April 26/09	nvs
	Oil and Grease	April 26/09	8.6
	pH (pH unit)	April 26/09	7.79
May	Biochemical Oxygen Demand (BOD <sub>5</sub> )	May 6/09	109
	Total Suspended Solids (mg/L)	May 6/09	91
	Fecal Coliform	May 6/09	230,000 CFU/100mL
	Oil and Grease (Visibility)	May 6/09	nvs
	Oil and Grease	May 6/09	1.4
	pH (pH unit)	May 6/09	7.7

\*TNTC = Too numerous to count

\*\* nvs = no visible sheen

Table 2 provides information on sampling results for water quality in relation to drilling on Aimaoktatuk Lake. Drilling took place on Aimaoktatuk Lake for 20 days from March 9 to March 29, 2009. Water quality samples from Aimaoktatuk Lake were not taken pre-

drilling due to an error, but samples were taken during and after the period of drilling in 2009.

**Table 2 – Summary of 2009 Monitoring for Water Quality for On-ice Drilling on Aimaokatuk Lake 2009, in mg/L**

Parameters				2BB-BOS0712
Date	Mar 25/09	Mar 25/09	Mar 30/09	
Water Source	Spyder Lake	Spyder Lake	Spyder Lake	Compliance Values
Field Sample Details	Spyder Lake #1	Spyder Lake #2	Spyder Lake (via BOS-1 Intake)	Part F: Item 6 and 7 Part J: Item 8
Geographical Coordinates	67° 39.451' N 106° 23.492' W	67° 39.569' N 106° 23.604' W	67° 39.455' N 106° 23.425' W	
ALS Lab Reference #	L747348-4	L747348-5	L747348-1/2	
TSS	<3.0	<3.0	<3.0	*
pH	6.99	7.01	7.05	No Guidelines
Electrical Conductivity	84.7	102	103	No Guidelines
Mercury	<0.00010	<0.00010	<0.00010	No Guidelines
Iron	0.104	0.430	0.315	No Guidelines
Manganese	0.0033	0.0138	0.0140	No Guidelines
Aluminium	0.055	0.082	0.06	No Guidelines
Arsenic	<0.00040	0.00058	<0.00040	No Guidelines
Barium	0.0040	0.0056	0.0068	No Guidelines
Beryllium	<0.0010	<0.0010	<0.0010	No Guidelines
Cadmium	<0.00020	<0.00020	<0.00020	No Guidelines
Cobalt	<0.002	<0.0020	<0.0020	No Guidelines
Chromium	<0.0050	<0.0050	<0.0050	No Guidelines
Copper	0.0043	0.0069	0.108	No Guidelines
Lithium	<0.010	<0.010	<0.010	No Guidelines
Molybdenum	<0.0050	<0.0050	<0.0050	No Guidelines
Nickel	<0.0020	<0.0020	<0.0020	No Guidelines
Lead	0.00048	0.00137	0.00233	No Guidelines
Antimony	<0.00040	0.00049	<0.00040	No Guidelines
Selenium	<0.00040	0.00106	0.00117	No Guidelines
Tin	<0.050	<0.050	<0.050	No Guidelines
Titanium	0.0012	0.0012	0.0024	No Guidelines
Thallium	<0.00010	<0.00010	<0.00010	No Guidelines
Uranium	<0.00010	<0.00010	<0.00010	No Guidelines
Vanadium	<0.0010	<0.0010	<0.0010	No Guidelines
Zinc	0.0068	0.0318	0.0159	No Guidelines

In 2009, water quality samples were collected from the containment pond monitoring station BOS-2, as well as accumulated water at the Boston mine portal to determine compliance with licence criteria for discharge. Water quality from both locations was found to be in compliance, but no discharges occurred from either facility. Results of sampling are in Table 3.

**Table 3 - Results of 2009 Water Quality Sampling from Containment Pond Monitoring Station BOS-2 and the Boston Mine Portal, in mg/L.**

Parameter/SNP Sites	BOS-2	BOS Portal
ALS Lab Reference #	L781612-17	L781612-17
Field Sample Details	BOS-2	BOS Portal
Sample Date/Time	June 21/09 9:40am	June 21/09 9:40am
Total Arsenic	0.176	0.0442
Total Copper	0.0109	0.0026
Total Lead	0.00416	0.00085
Total Nickel	0.0927	0.0138
Total Zinc	0.0052	0.0108
Total Suspended Solids	24	5
Oil and Grease	nvs	<1.0
pH	7.86	7.05

Table 4 shows the results of sampling taken from accumulated water and runoffs from the Boston storage facilities in June 2009, at monitoring stations BOS-5, BOS-6, and BOS-7. Although sampling was conducted, no discharges to the environment took place from any of these facilities in 2009.

**Table 4 - Results of 2009 Water Quality Sampling from Boston Bulk Fuel Storage Facility (BOS-5), Landfarm Treatment Facility (BOS-6) and Boston “Landfill Leachate” (BOS-7), in mg/L. Note: A water sample was taken at BOS-7 which is titled “landfill leachate” in the water license. There is no landfill present at the Boston facility. This water sample was taken to ensure that general site run-off water quality was meeting license requirements.**

Parameters	BOS-5	BOS-6	BOS-7
ALS Lab Reference #	L781613-1	L781613-2	L781615-1
Field Sample Details	BOS-5	BOS-6	BOS-7
Sample Date/Time	June 21/09 8:50am	June 21/09 9:00am	June 21/09 12:00pm
pH	8.1	7.61	7.71
Oil & Grease	<1.0	<1.0	<1.0
Oil & Grease (Visibility)	No visible sheen	Visible sheen	No visible sheen
Benzene	<0.00050	<0.00050	<0.00050
Toluene	<0.00050	0.0013	<0.00050
Ethylbenzene	<0.00050	<0.00050	<0.00050
Xylene	<0.00050	0.00225	<0.00050
F1 (C6-C10)	<0.10	0.11	<0.10
F2 (>C10-C16)	<0.25	11.37	<0.25
F3 (C16-C34)	0.36	1.73	<0.25
F4 (C34-C50)	<0.25	<0.25	<0.25
Total Phenols (4AAP)	0.0146	0.0274	0.0057
Conductivity (EC)	1110	368	1290
Total Hardness (as CaCO <sub>3</sub> )	506	122	478
Nitrate-Nitrite as N	7.5	0.089	7.97
Nitrate (as N)	7.05	0.089	7.91
Nitrite (as N)	0.449	<0.050	0.062
Calcium	102	40.6	145
Potassium	15.4	5.36	11.9
Magnesium	49	8.21	25.6
Sodium	30	10.4	32

Parameters	BOS-5	BOS-6	BOS-7
Sulphate	354	12.5	178
Total Alkalinity (as CaCO <sub>3</sub> )	111	64.3	61
Total Arsenic	0.233	0.0178	0.254
Total Cadmium	<0.00020	<0.00020	<0.00020
Total Chromium	<0.0050	<0.0050	<0.0050
Total Copper	0.0101	0.0411	0.0027
Total Nickel	0.287	0.0073	0.241
Total Lead	0.016	0.00115	<0.00010
Total Iron	0.362	0.507	0.018
Total Mercury	<0.00010	<0.00010	<0.00010

**Table 5 provides the results for additional sampling that occurred in August for BOS-7 during a period when flow was observed at this location.**

Parameters	BOS-7	Remarks
ALS Lab Reference #	L801272-1	License # 2BB-BOS0712
Field Sample Details	BOS-7	Part J: Item 5
Sample Date/Time	August 4, 2009 10:00am	Part J: Item 5
pH	7.75	-
Oil & Grease	<1.0	-
Oil & Grease (Visibility)	No visible sheen	-
Benzene	<0.00050	-
Toluene	<0.00050	-
Ethylbenzene	<0.00050	-
Xylene	<0.00050	-
F1 (C6-C10)	<0.10	-
F1 (BTEX)	<0.10	-
F2 (C10-C16)	<0.25	-
Acenaphthene	<0.000010 *	-
Acridine	<0.000010	-
Anthracene	<0.000010	-
Benzo(a)anthracene	<0.000010	-
Benzo(a)pyrene	<0.000010	-
Benzo(b&j)fluoranthene	<0.000010	-
Benzo(k)fluoranthene	<0.000010	-
Chrysene	<0.000010	-
Dibenzo(a,h)anthracene	<0.000010	-
Fluoranthene	0.000018	-
Fluorene	0.000029	-
Indeno(1,2,3-cd)pyrene	<0.000010	-
Naphthalene	0.000016 *	-
Phenanthrene	0.000069 *	-
Pyrene	0.000016	-
Quinoline	<0.000010	-
Total Phenols (4AAP)	<0.0010	-
Conductivity (EC)	4240	-
Total Hardness (as CaCO <sub>3</sub> )	Not reported	-
Nitrate-Nitrite as N	26.9	-
Nitrate (as N)	26.8	-
Nitrite (as N)	0.063	-

Parameters	BOS-7	Remarks
Calcium	497	-
Potassium	27.7	-
Magnesium	65.1	-
Sodium	99.5	-
Sulphate	494	-
Total Alkalinity (as CaCO <sub>3</sub> )	79.4	-
Total Arsenic	0.602	-
Total Cadmium	0.00021	-
Total Chromium	0.0131	-
Total Copper	0.0088	-
Total Nickel	0.002	-
Total Lead	1.03	-
Total Iron	0.018	-
Total Mercury	<0.00010	-

**Table 6 presents results of opportunistic sampling at the Boston Waste Rock and Ore Storage Pad monitoring station BOS-8, plus additional locations where flow was observed in June and August 2009. The results from this sampling were included in the development of the Boston Ore/Waste Rock Management Plan, updated in 2009.**

Parameters	BOS-8	BOS-8B	BOS-8C	BOS-8	BOS-8B
ALS Lab Reference #	L781615-2	L781615-3	L781615-4	L801272-2	L801272-3
Field Sample Details	BOS-8	BOS-8B	BOS-8C	BOS-8	BOS-8B
Sample Date/Time	6/21/2009 12:00:00 AM	6/21/2009 12:00:00 AM	6/21/2009 12:00:00 AM	8/4/2009 10:45:00 AM	8/4/2009 11:00:00 AM
Total Suspended Solids	19	4	656	34	<3.0
Alkalinity, Total (as CaCO <sub>3</sub> )	111	63.8	37.2	188	38.6
Ammonia-N	1.41	2.12	1.4	0.138	<0.050
Bicarbonate (HCO <sub>3</sub> )	136	77.9	45.3	229	47.1
Carbonate (CO <sub>3</sub> )	<5.0	<5.0	<5.0	<5.0	<5.0
Chloride (Cl)	30.9	96.8	65.5	231	548
Conductivity (EC)	483	724	520	1820	2800
Fluoride (F)	0.073	0.054	<0.050	0.061	<0.050
Hardness (as CaCO <sub>3</sub> )	161	209	176	660	956
Hydroxide (OH)	<5.0	<5.0	<5.0	<5.0	<5.0
Ion Balance	94.2	96.3	92.5	101	99
Nitrate and Nitrite as N	2.07	6.33	3.39	1.91	41
Nitrate (as N)	2.07	6.26	3.33	1.91	41
Nitrite (as N)	<0.050	0.071	0.055	<0.050	<0.050
Total Kjeldahl Nitrogen	2.62	3.84	2.38	4.24	1.6
Nitrogen, Total	4.68	10.2	5.77	6.16	42.6
pH	8.04	7.71	7.55	8.2	7.73
Phosphorus, Total	0.186	0.102	0.282	0.161	<0.020
TDS (Calculated)	260	387	275	1110	1640
Sulfate (SO <sub>4</sub> )	69	103	89.5	402	384
Aluminum (Al) Total	0.268	0.155	6.91	0.426	0.042
Antimony (Sb) Total	0.00874	0.00833	0.00672	0.00532	0.00318
Arsenic (As) Total	0.247	0.0749	0.495	0.248	0.00801



Parameters	BOS-8	BOS-8B	BOS-8C	BOS-8	BOS-8B
Barium (Ba) Total	0.0127	0.0289	0.0496	0.0598	0.113
Beryllium (Be) Total	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron (B) Total	0.096	0.078	0.095	0.214	0.201
Cadmium (Cd) Total	<0.00020	<0.00020	<0.00020	<0.000050	0.00008
Calcium (Ca) Total	42.8	43.5	57.5	133	210
Chromium (Cr) Total	<0.0050	<0.0050	0.141	0.0062 *	<0.0050
Cobalt (Co) Total	0.0603	0.0093	0.129	0.0312	0.0057
Copper (Cu) Total	0.0083	0.0027	0.0452	0.0147	0.0034
Iron (Fe) Total	0.665	0.246	16	2.46	0.103
Lead (Pb) Total	0.00085	0.00036	0.0223	0.00294	0.00014
Lithium (Li) Total	<0.010	<0.010	0.016	0.013	0.011
Magnesium (Mg) Total	16.3	22	16.4	60.8	110
Manganese (Mn) Total	0.146	0.198	0.398	0.311	0.04
Mercury (Hg)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Molybdenum (Mo) Total	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Nickel (Ni) Total	0.123	0.0135	0.254	0.097	0.0233
Potassium (K) Total	6.64	9.53	4.94	17.3	23.2
Selenium (Se) Total	0.0023	0.0038	0.0022	0.0034	0.0072
Silver (Ag) Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na) Total	18.5	36.5	11.1	102	180
Thallium (Tl) Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn) Total	<0.050	<0.050	<0.050	<0.050	<0.050
Titanium (Ti) Total	0.0018	<0.0010	0.108	0.0052	<0.0010
Uranium (U) Total	0.00028	<0.00010	0.00011	0.00015	<0.00010
Vanadium (V) Total	0.0017	<0.0010	0.0373	0.0045	0.0011
Zinc (Zn) Total	0.0071	0.0063	0.0717	0.0318 *	0.0091
Calcium (Ca)-Dissolved	41.6	47.7	54.2	149	203
Magnesium (Mg)-Dissolved	13.8	21.9	9.92	69.9	109
Potassium (K)-Dissolved	7.63	10.4	5.55	19.9	25.4
Sodium (Na)-Dissolved	20.9	40.5	13.3	120	164

**b) Quantities of water utilized for camp, drilling and other purposes**

Table 7 summarizes the daily quantities of water utilized for camp, drilling and other purposes from all sources. Boston Camp was open from March 5, 2009 to May 25, 2009 and domestic water consumption started Mar 12, 2009. Drilling occurred on Aimaoktatuk Lake from March 9 to March 29, 2009.

**Table 7 - 2BB-BOS0712 2009 Daily water consumption for camp domestic water use and drilling in cubic meters.**

Date	Domestic Use	Drill Rig Orbit # 21
March 1, 2009	-	ND
March 2, 2009	-	ND
March 3, 2009	-	ND
March 4, 2009	-	ND
March 5, 2009	-	ND
March 6, 2009	-	ND

Date	Domestic Use	Drill Rig Orbit # 21
March 7, 2009	-	ND
March 8, 2009	-	ND
March 9, 2009	-	4.5
March 10, 2009	-	11.5
March 11, 2009	-	10.6
March 12, 2009	55.30	13.0
March 13, 2009	1.78	11.0
March 14, 2009	2.28	16.3
March 15, 2009	1.83	8.8
March 16, 2009	1.63	9.4
March 17, 2009	1.54	0.0
March 18, 2009	2.12	9.2
March 19, 2009	1.75	9.3
March 20, 2009	1.88	14.2
March 21, 2009	1.52	10.5
March 22, 2009	2.12	11.46
March 23, 2009	2.36	10.3
March 24, 2009	2.27	8.95
March 25, 2009	2.27	9.9
March 26, 2009	4.08	9.9
March 27, 2009	1.37	9.9
March 28, 2009	3.96	9.9
March 29, 2009	1.18	9.9
March 30, 2009	2.99	ND
March 31, 2009	2.85	ND
April 1, 2008	2.26	ND
April 2, 2008	1.38	ND
April 3, 2008	1.22	ND
April 4, 2008	1.61	ND
April 5, 2008	1.46	ND
April 6, 2008	1.43	ND
April 7, 2008	4.79	ND
April 8, 2008	1.43	ND
April 9, 2008	1.31	ND
April 10, 2008	1.89	ND
April 11, 2008	2.06	ND
April 12, 2008	0.00	ND
April 13, 2008	0.00	ND
April 14, 2008	7.37	ND
April 15, 2008	2.33	ND
April 16, 2008	1.78	ND
April 17, 2008	1.20	ND
April 18, 2008	1.50	ND
April 19, 2008	2.06	ND
April 20, 2008	2.54	ND
April 21, 2008	1.55	ND
April 22, 2008	2.16	ND

Date	Domestic Use	Drill Rig Orbit # 21
April 23, 2008	2.22	ND
April 24, 2008	2.06	ND
April 25, 2008	2.72	ND
April 26, 2008	1.75	ND
April 27, 2008	1.57	ND
April 28, 2008	2.02	ND
April 29, 2008	2.37	ND
April 30, 2008	0.85	ND
May 1, 2008	1.34	ND
May 2, 2008	1.43	ND
May 3, 2008	2.06	ND
May 4, 2008	1.63	ND
May 5, 2008	1.19	ND
May 6, 2008	1.87	ND
May 7, 2008	1.34	ND
May 8, 2008	1.27	ND
May 9, 2008	1.31	ND
May 10, 2008	0.08	ND
May 11, 2008	0.11	ND
May 12, 2008	6.13	ND
May 13, 2008	1.52	ND
May 14, 2008	1.28	ND
May 15, 2008	1.50	ND
May 16, 2008	0.96	ND
May 17, 2008	1.05	ND
May 18, 2008	1.41	ND
May 19, 2008	0.95	ND
May 20, 2008	1.95	ND
May 21, 2008	1.23	ND
May 22, 2009	1.12	ND
May 23, 2009	1.15	ND
May 24, 2009	0.40	ND
May 25, 2009	-	ND
May 26, 2009	-	ND
May 27, 2009	-	ND
May 28, 2009	-	ND
May 29, 2009	-	ND
May 30, 2009	-	ND
May 31, 2009	-	ND

*\* Meter broken, water use average applied for 5 days*

### c) Results of Toxicity Testing

HBML did not carry out the following toxicity testing in 2009 to demonstrate Non-Acute Toxicity of the effluent discharged from the Sewage Disposal Facility at BOS-3, conducted in accordance with the following test procedures:

- i. Acute lethality to Rainbow Trout, *Oncorhynchus mykiss* (as per Environment Canada's Environmental Protection Series Biological Test Method EPS/1/RM/13); and
- ii. Acute lethality to the crustacean, *Daphnia magna* (as per Environment Canada's Environmental Protection Series Biological Test Method EPS/1/RM/14).

No effluent was available for sampling at this location due to frozen conditions while the camp was open from March to May, and effluent was not available for sampling during summer months as the camp was closed and the Sewage Disposal Facility was not operational.