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2003

ANNUAL REPORT TO THE NUNAVUT WATER BOARD

WATER LICENCE NWB1BOS0106

BOSTON GOLD PROJECT

SUBMITTED BY MIRAMAR HOPE BAY LTD.

MARCH 24, 2004

## Introduction

This Annual Report fulfills the reporting requirements of Part B, Item 7 (a-p) of License NWB1BOS0106 for the Boston Gold Project, issued to the Hope Bay Joint Venture (HBJV) (Miramar Hope Bay Ltd.) dated October 5, 2001

The Boston Gold Project is located on Aimaogaktag (Spyder) Lake at Latitude 67 degrees 39 Minutes North and Longitude 106 degrees 22 Minutes West, approximately 65 kilometers south of Melville Sound. Activities at the Boston camp during 2003 focused on continued exploration drilling on the Boston deposit and regional exploration activities operated out of the Boston camp. The camp was open from February 28 with the initial camp start up crew and exploration activities commenced in early March. The camp remained operational until late September when a small crew remained to complete minor maintenance work with camp closure occurring on October 15, 2003.

There were three reportable spills which are explained in Part B Item 7 (h) below.

### Annual Report as per Requirements of Part B – Item 7 (a-p) of NWB1BOS0106

- a) The monthly and annual quantities in cubic metres of fresh water pumped from Aimaogaktag (Spyder) Lake at SNP station 1652-1a: Metered Potable Water Intake at Station 1652-1a Aimaogaktag (Spyder) Lake.

Daily water use allowed is 150 m <sup>3</sup> per day	Monthly Volume (m <sup>3</sup> )
March	138
April	185
May	162
June	221
July	268
August	292
September	225
October	140
Total water usage in 2003	1631
Average use per day	7.1

- b) *The monthly and annual quantities in cubic metres of mine water pumped from underground: **There was no discharge from the underground in 2003 .***
- c) *The monthly and annual quantities in cubic meters of treated Mine water discharged at Station Number 1652-2: **There was no minewater discharged at Station Number 1652-2 in 2003.***

- d) The monthly and annual quantities in cubic meters of treated Sewage effluent discharged at Station Number 1652-3: **As all water used at the site reports to the RBC unit and the difficulty in metering a sewage discharge due to the elevated solids, where flow meters become inaccurate we have estimated that the discharge from the RBC approximates the water usage which for 2003 was 1676 m<sup>3</sup>. MHBL will investigate methods that can accurately measure the flows from the RBC and include this in the 2004 Annual report.**
- e) The monthly and annual quantities in cubic meters of Sludge removed from the Sewage Disposal Facility: **There were no sludges per se removed from the RBC, during plant winterization the RBC was flushed a number of times which was then discharged through the existing pipeline.**
- f) Tabular summaries of all data generated under the "Surveillance Network Program":

2003 Water Analysis Results:

	SNP STATION 1652-3 SEWAGE –END OF PIPE						
Parameters							
Sample Date	Mar. 22	April 30	May 29	June 25	July 23	Aug.27	Sept.03
Physical Tests							
pH	7.89	7.45	ND*	7.42	7.49	7.54	7.12
Total Suspended Solids (mg/l)	42	71	116	108	62	300	171
Bacteriological Tests							
Coliform Bacteria – Fecal (Cfu/100ml)	140000	900000	12000000	5000000	3600000	14000000	26000000
Extractables							
Oil and Grease (mg/l)	Non-vis	4.2	20.4	12.7	Non-vis	Non-vis	Non-vis
Organic Parameters							
BOD-5 (mg/l)	68	99	61	110	255	185	150

Note: ND\*- sample misplaced at external Lab.

	SNP STATION 1652-4 SEWAGE EFFLUENT POINT DISCHARGE INTO SPYDER (AIMAOGAKTAG) LAKE						
<b>Parameters</b>							
<i>Sample Date</i>	<i>July 13</i>	<i>Aug.27</i>	<i>Sept.03</i>				
<b>Physical Tests</b>							
pH	6.93	7.02	6.15				
Total Suspended Solids (mg/l)	12	6	50**				
<b>Bacteriological Tests</b>							
Coliform Bacteria – Fecal (Cfu/100ml)	3	ND*	ND*				
<b>Extractables</b>							
Oil and Grease (mg/l)	Non-vis	Non-vis	Non-vis				
<b>Organic Parameters</b>							
BOD-5 (mg/l)	<2	29	8				

	SNP STATION 1652-5 SEWAGE EFFLUENT POINT DISCHARGE INTO SPYDER (AIMAOGAKTAG) LAKE						
<b>Parameters</b>							
<i>Sample Date</i>	<i>July 13</i>	<i>Aug 27</i>	<i>Sept. 03</i>				
<b>Physical Tests</b>							
pH	6.59	6.98	6.85				
Total Suspended Solids (mg/l)	6	6	< 3				
<b>Bacteriological Tests</b>							
Coliform Bacteria – Fecal (Cfu/100ml)	<1	ND*	ND*				
<b>Extractables</b>							
Oil and Grease (mg/l)	Non-vis	Non-vis	Non-vis				
<b>Organic Parameters</b>							
BOD-5 (mg/l)	< 2	<2	<2				

*Note: ND\*-misplaced at lab: \*\* Sample taken in very shallow water, poor access.  
There were no samples collected in October due to icing conditions.*

- g) *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: **Modifications and major maintenance work carried out on facilities at Boston in 2003 included:***
- ***Camp upgrades included the installation of new HDPE insulated water, sewage and effluent piping with heat trace, to replace the old and leaking PVC and metal piping. The pump house remains the same.***
  - ***Repair and maintenance of camp generators and the continuing repair and maintenance of the trailer units.***
  - ***Details on activities associated with remediation work related to the various spills that occurred in 2003 (elaborated on in item “h” below) and included in the attached final report from our consultant –EBA Engineering is referenced for further detail.***
- h) *A list of unauthorized discharges and follow-up action taken: **There were three unauthorized discharges at Boston in 2003, all fuel spills. The three spills can be summarized as follows:***
- ***Spill # 03-452 occurred on June 28, 2003 and approximately 4000 litres of diesel fuel was spilled from the fuel tank supplying the diesel generators. A spill report was filed and follow up action taken, which is provided in the separate report prepared by EBA Engineering entitled “Hydrocarbon Spill Investigation and Initial Remedial Measures – Boston Camp Nunavut dated February 2004.***
  - ***Spill #03-457 which occurred on March 3, 2003, and reported on July 2,2003 was identified during the investigations of the June 28, 2003 fuel spill mentioned above. Please refer to the captioned report above for actions taken to address this incident.***
  - ***Spill #03-541 was a spill of approximately 150 litres of diesel fuel at the generator building, it was reported and cleaned up with further details in the EBA report captioned in bullet 1.***
  - ***Please refer to the EBA report for complete details on all remedial action taken to address the three spills at Boston in 2003 including the land farm constructed to treat all contaminated soils from these spills.***
- i) *Updates or revisions to the approved Abandonment and Restoration Plans, QA/QC, Waste Rock Disposal Plan, and /or Spill Contingency Plan: **A revised QA/QC Plan dated January 2002 and submitted to the Board is considered valid for the 2003 report period. A revised Spill Contingency Plan dated March 2004 is attached for the Board’s review. There was no waste rock extracted from the Boston underground in 2002 and therefore, the existing plan is deemed satisfactory and remains in effect. The Abandonment and Restoration Plan was updated in the application for licence renewal and is deemed to be as up to date as possible.***

- j) *A list of unauthorized discharges and follow up action taken: **Note: This is a repeat of clause (h) and therefore should be removed. Our response in (h) applies here as well.***
- k) *A brief description of follow-up action taken to address concerns detailed in inspection and compliance reports prepared by the Inspector: **Inspections by both KIA Lands and DIAND occurred during the summer period. Concerns raised in the various inspections have been addressed as necessary. It is expected that follow up inspections by KIA and DIAND in 2004 will enable closure of the spill files.***
- l) *A summary of drilling activities and progressive reclamation of drill sites. Drilling activities included approximately 8900 meters of core drilling at Boston and 4300 meters of RC drilling based out of the Boston and Windy camps. No reclamation of drill sites was done in 2003, although visual monitoring of historical sites continues and it is evident that natural rehabilitation is working well. This level of effort is expected to continue in 2004.*
- m) *A public consultation/participation report describing consultation with local organizations and residents of the nearby communities, if any were conducted:*

***As reported last year, Miramar Hope Bay's activities in the Hope Bay Project area is one of advanced exploration and our public consultation report/program can be summarized as follows:***

***The project focuses on the communities of interest (Bathurst Inlet, Umingmaktok and Cambridge Bay), which will be the communities that will be the focus for potential job and business opportunities related to the project. Other communities of influence including Kugluktuk, Gjoa Haven, Taloyoak and Pelly Bay, may benefit from the project in the areas of employment and business opportunities.***

***Miramar's President and other Senior Management of Miramar Hope Bay Ltd attended the KIA Annual Board Meeting in April 2003 in Cambridge Bay.***

***The Manager, Environmental Affairs made informal courtesy visits to Bathurst Inlet and Umingmaktok in August 2003. As reported last year, the purpose of these visits was to inform the residents of our 2003 activities and our expected plans for 2004. Some of our Inuit employees reside in Bathurst Inlet and as such, it is important to meet with them to hear any concerns that they might have. In general, and as previously reported, the local people are very supportive of the project as they see the benefits to the communities that occur as a result of local employment.***

***Although not directly related to the Boston water licence, considerable community interaction was made in 2003 related to the environmental review and permitting process for the Doris North Project currently being done by NIRB. Activities required to meet some of the EIS guidelines given to MHL by NIRB included a Traditional Knowledge workshop that MHL convened in Cambridge Bay in September 2003. Participants at this***

*workshop included elders from Bathurst Inlet, Umingmaktok, Cambridge Bay and Kugluktuk.*

*As reported last year MHBL staff continue to liaise with Nunavut Wildlife personnel regarding a joint caribou-monitoring telemetry program, which is included through the Doris North Project NIRB review and we will continue to pursue this initiative in 2004.*

*MHBL will undertake a similar consultation program in 2004.*

- n) *A summary of any abandonment and restoration work undertaken during the year and an outline of any work anticipated for the next year; and*  
***There was minimal progressive reclamation work at Boston, however; work at the site included treatment of contaminated fuel, construction of a land farm to process contaminated soil that has been collected and stored in the belt and the relocation of fuel drum storage areas at Boston to areas more acceptable to the inspectors. Considerable efforts will be made in 2004 to relocate all non hazardous material to the Boston site for ultimate disposal into the Solid Waste Disposal Site at Boston and currently under review by the NWB.***
- o) *A summary of any specific studies or reports requested by the Board, and a brief description of any future studies planned or proposed; There were no requests received from the Board therefore there is nothing to report.*
- p) *Any other details on water use or Waste disposal requested by the Board by November 1<sup>st</sup> of the year being reported: There were no requests received from the Board.*