

Project Monitoring Report

For

Doris North Gold Mine Project (NIRB File No. 05MN047)

Proponent: Hope Bay Mining Ltd.

Project Monitoring Officer: Li Wan

October, 2009

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1 Introduction

1.1 Project Components and History

In September of 2006, the Nunavut Impact Review Board (the NIRB or Board) issued Project Certificate # 003 (PC) to Miramar Hope Bay Ltd. (Miramar) for the Doris North Gold Mine Project (Doris North project or Project), following the successful completion of the NIRB Part 5 Review process. The Doris North Project is located approximately 65 kilometres (km) to the east of Omingmaktok and 110 km south of Cambridge Bay on the Canadian mainland. The site is located in the West Kitikmeot region of Nunavut on Inuit Owned Lands with surface and subsurface mineral rights. Site is access by sealift for fuel, equipment and supplies, and by air for personnel in and out.

The major components proposed for the Doris North project included a campsite, underground mine and associated mill plant at Doris North mine site, a jetty, fuel tank farm and laydown area at Roberts Bay area with a 5 km all-weather road linking the Roberts Bay area to the Doris mine site.

In the original development proposal, tailings produced during the milling process would be deposited in Tail Lake, about 5 km southeast from the proposed mill location. Tailings deposition would be sub-aqueous, requiring the construction of two dams: one on the south end and the other on the north end of the lake. An all-weather service road would be constructed along the east side of Tail Lake to its southern end, with a tailings pipeline following the roadway and emergency tailings dump ponds constructed at strategic locations.

In the early 2008, Newmont Mining Corporation (Newmont) successfully purchased all interests of Miramar and its subsidiaries properties which include the Doris North project. Newmont then established a new business entity, Hope Bay Mining Ltd. (HBML) to operate the Doris North Project.

1.2 Current Project Status

Upon completing an evaluation of the original development plan, HBML decided to defer the underground gold mine development, the associated crushing and milling plant, as well as the other processing facilities. HBML is currently conducting advanced exploration program in the Hope Bay Belt with the intention of pursuing a broader belt-wide development strategy for the Doris North project. Construction of some infrastructure has been completed by the time this site visit. The completed Project components include:

- The Roberts Bay jetty, fuel tank farm and laydown area at Roberts Bay area;
- A 5 km all-weather road linking Roberts Bay and Doris mine site with a 900 m air strip along the road alignment; and
- 118 person camp and associated facilities including fire fighting system, water supply, sewage treatment and power generator.

The complete infrastructure is being used to support ongoing advanced exploration and drilling programs in the Hope Bay Belt, and ultimately will be incorporated into a larger project proposal (Hope Bay project) which is currently under study.

2 MONITORING ACTIVITIES

On December 5, 2008, the NIRB issued recommendations to HBML (Appendix A) based on the NIRB's monitoring activities reported in 2008 and the comments from Parties regarding HBML's 2007 Annual Report for Doris North Project.

On December 22, 2008, the NIRB received a letter from HBML¹, re-iterating its decision to defer the Doris North project. HBML also indicated it would develop a new project description for the project which would include three known deposits at Doris North, Madrid and Boston, and was expected to be submitted to the Board in 2009. The completed infrastructure from the Doris North project primarily was used to support ongoing advanced exploration and drilling programs in the Hope Bay Belt, and would ultimately be incorporated into the larger Hope Bay project proposal. Upon completion of the new project description, HBML would apply to the NIRB for an amendment to the existing Doris North Project Certificate (PC), and to the Nunavut Water Board for amendment to its Type A Water Licence for the Project.

On January 5, 2009, HBML sent the NIRB another letter², requesting an amendment to the Doris North PC based on its decision to defer the Doris North project. Specifically, the letter spoke to the deferral of the underground mining, milling, waste rock disposal and tailings impoundment. HBML discussed the applicability of the PC Term and Conditions by breaking all the Terms and Conditions into three categories:

- 1. Conditions with which HBML is in compliance despite the deferral of the Doris North project;
- 2. Conditions with which HBML requests modification and or partial suspension due to the deferral of the Doris North project; and
- 3. Conditions with which HBML requests a suspension due to the deferral of the Doris North project.

On February 17, 2009, the NIRB received further correspondence from HBML³ regarding its compliance with Terms and Conditions as stipulated in the PC, and the possible NIRB environment assessment options upon submission of its new project description.

The NIRB replied to HBML's requests on February 20, 2009, providing a detailed explanation of the Board's expectations regarding compliance with the PC for the Project, taking into account HBML's decision to defer development, as well as the project activities currently being conducted⁴. In its response, the Board explained that all Terms and Conditions, except those related to project components and activities which had not occurred yet (e.g., mine construction and operations), should be complied with. Once the NIRB received the submission of HBML's new project description, the Board indicated that it would be subject to screening, and:

"...assuming the decision is that the new project requires review (which seems likely given the predictably large increase in most, if not all, aspects of the planned mine), the relevant Ministers could provide issues to focus on during the Review. For its part, NIRB would

⁴ NIRB Letter to Chris Hanks, HBML Re Request for PC Reconsideration-OGAE dated February 20,2009

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¹ Letter to Stephanie Autut, from Chris Hanks, HBML on December 22, 2008 Re: Requested Extension for filing Annual Update Report under Section 4, Commitment 5 of the Project Certificate

² Letter to Stephanie Autut, from Chris Hanks, HBML on January 5, 2009 Re: Requested Extension for filing Annual Update Report under Section 4, Commitment 5 of the Project Certificate.

³ Letter to Stephanie Autut, from Chris Hanks, HBML on February 17, 2009 Re: Doris North Project

ensure all parties have a thorough opportunity to comment on the new project proposal in the ordinary course of Article 12 screening and, potentially, review."

On April 20, 2009 HBML wrote to the NIRB, requesting to change the proponent's name as listed in the Doris North PC, and also providing an update relating to HBML's project development in Hope Bay Belt and the status of HBML's compliance with the NIRB PC. In response to this letter, the NIRB sent correspondence to the Doris North Project Distribution List and requested comments on: 1) the request for a name change to the PC, and 2) whether the indefinite deferral of the Doris North Project as a stand-alone project in order to pursue a broader belt-wide strategy created any issues of non-compliance with the PC.

After soliciting Parties' comments, the NIRB replied to HBML⁵, indicating it would report the name change request to the Minister of Indian and Northern Affairs Canada (INAC), while also bringing forward a similar request related to the MeadowBank Project. With respect to the update on HBML's compliance with the PC, the NIRB conducted a thorough review and acknowledged its agreement with most of the updates, identifying certain items which still appeared to be noncompliant with the PC.

On July 7, 2009 the NIRB received HBML's 2008 Annual Report for Doris North Project, and distributed it to relevant federal and territorial government departments, and Inuit organizations for commenting. A summary of comments received from Parties is presented in Section 3 of this report.

On August 18, 2009 the NIRB conducted its 2009 annual site visit to the Doris North Project site, and used the opportunity to further discuss the identified issues regarding HBML's compliance.

Following the NIRB 2009 site visit and discussion at Doris North project site, a correspondence was send by HBML to the NIRB on September 11, 2009. In the correspondence, HBML provided the NIRB the proposed solutions, as well as further discussions regarding items with compliance issues identified by the NIRB.

2.1 Major Achievements by HBML in 2009

a) Thermistor cables and temperature loggers (Term and Condition #19):

MHBL shall install thermistor cables and temperature loggers in the jetty foundation. MHBL shall monitor the effects of the jetty on shallow water permafrost through operations and report the results of the monitoring collection to NIRB's Monitoring Officer.

Following the NIRB's recommendation issued to HBML on December 5, 2008, and the Board's correspondence regarding the PC compliance issued to HBML on February 20, 2009, HBML completed installation of the required thermistor cables and temperature loggers in March of 2009. An associated construction summary memo and a monitoring plan were submitted to the NIRB in May of 2009. These instruments have been operating since installation, and monitoring results will be reported to the NIRB in 2010.

b) Wildlife Mitigation and Monitoring Plan (Term and Condition #27):

MHBL shall update and revise the Wildlife Mitigation and Monitoring Plan to reflect these terms and conditions and shall submit the revised Wildlife Mitigation and Monitoring Plan to NIRB. NIRB may consult with relevant Government departments and the Nunavut Wildlife

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⁵ Letter to Chris Hanks, HBML Re Doris North Project Certificate-OT1E on August 24, 2009.

Management Board prior to approving the revised Wildlife Mitigation and Monitoring Plan. The Wildlife Mitigation and Monitoring Plan must be submitted within three (3) months of the issuance of a Project Certificate and it must be approved by NIRB prior to the commencement of construction. MHBL must also submit an updated plan on an annual basis which must also be approved by NIRB.

The original *Wildlife Mitigation and Monitoring Plan* (WMMP) was revised after issuance of the PC and submitted by Miramar to the NIRB in 2007. The wildlife mitigation and monitoring programs contained within the WMMP were implemented by HBML in 2007 and 2008, and the annual reports associated with this plan have also been submitted by HBML. There remain a few outstanding issues which have been raised by the Government of Nunavut, Department of the Environment (GN-DoE) regarding the revised WMMP. Based on the review of HBML's 2007 annual WMMP report, GN-DoE highlighted the following issues in correspondence to the NIRB dated January 16, 2009⁶:

- The need to initiate a hair snagging monitoring program for grizzly bears and wolverines for DNA extraction;
- The need to explicitly outline mitigation actions that will be undertaken within an adaptive management framework;
- The need to clarify caribou survey data and survey protocols as well as the inclusion of Dolphin and Union Caribou herd in the monitoring program; and
- The need to estimate and mitigate for mine-related disturbance to raptors.

Upon receipt of these comments, the NIRB forwarded the submission to HBML and directed HBML to dialogue with GN-DoE for resolution of pertinent issues. In the correspondence dated September 11, 2009, HBML provided the following proposed solutions and clarification to address the above noted issues:

- HBML has committed to run one year DNA hair study recommended by GN-DoE in the 2010 study season as mentioned in the item 4.22;
- HBML believed that the implementation of explicit mitigation strategies related to mine
 activities for Valued Ecosystem Components (VECs) seemed premature for the advanced
 exploration program currently being undertaken at Hope Bay. However, an appropriate
 plan is necessary and should be implemented prior to mine construction and operations;
- An expanded caribou baseline program has been proposed to include the Dolphin and Union Caribou herd as part of the development of the new Project Description. The data will be collected in March or April of the 2010 field season when the herd migrates back to Victoria Island: and
- Current exploration programs do not impact raptors significantly; however, a plan for mitigation of potential effects of mine development on raptors will be developed as part of the new HBML proposal for mine development.

In addition to these proposed measures, HBML continued to request that NIRB approve the current WMMP. While the NIRB believes the commitments and clarifications provided by HBML will be helpful in resolving the concerns of GN-DoE, prior to the approval of the WMMP further discussions between HBML and GN-DoE would be recommended.

c) Air Quality (Term and Condition #30)

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⁶ GN-DoE comments Re: Review of Doris North's Wildlife Mitigation and Monitoring Plan – 2008 Annual Report dated January 16,2009

MHBL will install and fund an atmospheric monitoring station. This station and its location shall be developed in consultation with EC and HC air quality officials and focus on particulates of concern generated at the mine site. The results of air-quality monitoring are to be reported every six (6) months to NIRB through the Monitoring Officer, and from there to all of the parties.

This requirement focuses on the concerns related to particulates generated at the mine site. In connection with the National Air Pollution Surveillance Network, HBML has built an atmospheric monitoring station in 2009 to monitor air quality, even though the mine construction and operation was deferred. According correspondence dated September 11, 2009, the results of air quality monitoring will be presented to the NIRB in the 2010 monitoring report.

2.2 Outstanding PC Compliance Issues

a) Fuel Handling Facility (Term and Condition #20)

MHBL shall ensure the use of containment booms and berms to control potential spills whenever fuel and or waste is transferred between a barge and the shore. MHBL shall ensure spill kits are at hand at these locations at all times.

The regulatory requirements under the *Canada Shipping Act* for HBML's Oil Handling Facility (OHF) in Roberts Bay, were raised by Transportation Canada (TC) in its correspondence to the NIRB dated July 28, 2008. Consequently, the NIRB directed HBML to communicate with TC to resolve this compliance issue. In a letter to the NIRB dated February 18, 2009, HBML stated that this requirement was the responsibility of its oil shipping contractor Northern Transportation Company Limited (NTCL), specifically before the fuel is transferred into HBML's fuel tank. The NIRB communicated this information to TC on March 27, 2009, and in reply on April 17, 2009,TC indicated its disagreement with HBML's interpretation regarding this issue, and further clarified HBML's responsibilities.

In the most recent correspondence from HBML, it is noted that HBML continues to follow up with NTCL to confirm that NTCL has all of the required pollution prevention and response plans in place. Further communication between HBML and TC appears to be necessary to ensure compliance with this regulatory requirement.

b) Training for on-site Wildlife Specialist (Term and Condition #24)

As part of the training for MHBL's on-site wildlife specialist, MHBL shall provide training to that person in areas of bear encounters and safety, effects of noise on wildlife, recording wildlife sightings, waste management, records management, and reporting to NIRB's Monitoring Officer and regulatory officials.

According to HBML's correspondence to the NIRB, it currently has biologists as on-site acting as Environmental Coordinators. And all site personnel receive annual updated training from *BearWise*, a Northern firm specializing in management of wildlife encounters. Also, the current HBML manager of Social Responsibility located in Cambridge Bay is a former GN Wildlife Officer who is qualified in carnivore deterrence, and acts as back up to site personnel. Furthermore, the HBML Director of Environment and Social Responsibility is a former United States Forest Service Alaska Region Trainer for Bear and Firearms Safety. Other staff members,

such as the Director, Compliance Manager, the Senior Environmental Coordinator and Environmental Coordinator have all previously been trained in the implementation of ISO-14001, which is one of the major international standards for environmental record keeping. HBML is currently developing an ISO records system and will ultimately take Hope Bay project through ISO-14001 certification when the operation goes into production.

The objective of Term and Condition #24 is to ensure that wildlife encounters are dealt with by properly trained personnel, and recorded and reported in an appropriate manner. The intent of the requirement is to minimize or reduce the impacts on wildlife from daily operations of the Project. The NIRB understands the HBML's staff generally works on shifts at the Project site; those personnel noted in the correspondence presumably might not be on-site when urgent wildlife encounters occur. Therefore, the NIRB would like HBML to provide more information to ensure that the objective set in Term and Condition #24 has been or will be met.

c) Socioeconomic Monitoring Committee and Monitoring Program (Term and Condition #28)

Within six (6) months of the issuance of a Project Certificate, a Hope Bay Belt Socio-Economic Monitoring Committee ("SEMC") shall be formed to supplement, not duplicate areas covered by the Inuit Impact Benefit Agreement negotiated for this project. In order to ensure consistent data collection and tracking of data trends in a comparable form to be shared at the regional level and to minimize the duplication of efforts, the composition of the SEMC should include the same membership as the Kitikmeot Socio-Economic Monitoring Committee approved by the Minister. Additionally, the SEMC must engage the affected communities of Cambridge Bay, Kugluktuk, Gjoa Haven, Taloyoak, and NIRB's Monitoring Officer, and consider concerns from Bathurst Inlet and Omingmaktok. In consultation with these parties and immediately upon the SEMC's formation, MHBL shall provide the terms of reference for a socio-economic monitoring program to the SEMC for review and subsequent direction by NIRB. The terms of reference are to include the role of MHBL in data collection and analysis; the key socio-economic indicators to be monitored; the reporting requirements; and the funding formula.

The Doris North SEMC was established in April 2007, and Terms of Reference for a socio-economic monitoring program (SEMP) were developed and revised by Miramar based on the comments from GN and INAC near the end of 2007. However, the Terms of Reference and the associated SEMP were not approved by the Doris North SEMC owing to disagreement regarding the SEMP, and also, the intention of GN and INAC to develop additional regional SEMCs. On December 5, 2008, following a letter to Regional SEMC Members⁷, the NIRB requested that the Doris North SEMC finalize its Terms of Reference and approve the SEMP for implementation in the monitoring of the Doris North project.

The NIRB recognizes HBML's efforts made to engage communities and achieve tangible results, as well as its participation in development of the Regional Kitikmeot SEMC. Until such time as the Regional Kitikmeot SEMC can completely fulfill the socio-economic monitoring requirements set out in Term and Condition #29 for the Doris North Project, the NIRB expects the Doris North SEMC will conduct the required socio-economic monitoring. Furthermore, the

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⁷ The NIRB letter to Regional Socio-Economic Monitoring Committee Members Re: *Regional Socio-Economic Monitoring Committees Applicability to Project Certificate Requirement*, dated July 2,2008

NIRB is not endorsing the proposed regional approach over the currently required project-specific monitoring.

d) Noise Abatement Plan (Terms and Condition #29)

MHBL shall develop and implement a noise abatement plan to protect people and wildlife from mine activity noise, including blasting, drilling, equipment, vehicles and aircraft. The noise abatement plan will be developed in consultation with GN-DoE, EC and HC, and includes: restrictions on blasting and drilling when migrating caribou, birds or local carnivores may be affected; the establishment of strict standards for noise levels; use of equipment and vehicles with the best noise attenuation devices; when practical, the use of fences or berms around noisy machinery or sites; flight corridor restrictions over sensitive areas with known concentrations of wildlife and birds whenever possible; and requiring with the exception of take off and approach for landing, a minimum flight altitude of 300 metres above ground level when flights to and from the mine site are passing near sensitive wildlife and bird areas. The noise abatement plan will also incorporate the use of sound meters to monitor sound levels at sites in and around the mine site and local study area. The location and design of the sound meters shall be selected in consultation with EC and set up immediately upon issuance of the Project Certificate for the purpose of obtaining baseline data, and during and after operations. The final noise abatement plan shall be filed with NIRB's Monitoring Officer within six (6) months of the issuance of the Project Certificate.

Miramar had previously submitted the required Noise Abatement Plan to the NIRB, and HBML reported its summary reports on noise measurements and analysis in both the 2007 and 2008 field seasons. However, required information was not provided regarding noise abatement measures employed to mitigate potential impacts, in particular the impacts on wildlife. The NIRB understand HBML's decision to defer the mine construction and operation, however, the Board believes it is appropriate for HBML to revise the Noise Abatement Plan to reflect the current project activities in the project region for the interim period. Meanwhile, the annual reports should address abatement measures employed as indicated in Term and Condition #19.

In correspondence to the NIRB dated September 11, 2009, HBML indicated that it would consolidate its current noise abatement measures into an interim Noise Abatement Plan, applicable to the current exploration activities, to address the concerns of the NIRB.

2.3 2009 Site Visit and Findings

As part of its monitoring program for this file, the NIRB's 2009 site visit to the Doris North project was conducted by the NIRB staff (Li Wan and George Taptuna) on August 18, 2009. In general, all sites are well maintained and in good condition and results from the visit have been compiled into a site visit report (Appendix B). However, certain findings resulting from this site visit will warrant further discussion between the Board and HBML. Issues that were noted in the site visit report include the following:

- Fuel transfer from barge at jetty to fuel tank in Quarry #1
- Wildlife issues

3 MONITORING FROM AUTHORIZING AGENCIES

On July 7, 2009, HBML submitted its 2008 *Annual Report for Doris North Project* to the NIRB. The NIRB subsequently distributed this report to the Doris North Distribution List on August 24.

2009, with a request for comments with regards to Compliance Monitoring and Effects Monitoring. By September 14, 2009, comments were received from INAC and Environment Canada (EC). The key points raised by INAC and EC are as follows, and complete comment submissions are located at:

http://ftp.nirb.ca/MONITORING/05MN047-DORIS%20NORTH/03-ANNUAL%20REPORTS/02-PROPONENT/2008/03-COMMENTS/

3.1 INAC:

- Compliance Monitoring:
 - o INAC was not aware of any non-compliance issues at this time with respect to the commitments included in the Causeway Lease (Jetty) (Nunavut Lease No. 77A/3-1-2) issued by INAC.
 - INAC Inspectors noted drums of fuel near water, ammonium nitrate spills due to disintegrated and damaged bags, improper incinerator use, debris on-site, need for better refuel and fuel handling protocols in the quarry/fuel tank area, and evidence of several fuel or petro product spills in and around the Nuna Logistics shop.

Effects Monitoring

- Comments relating to socio-economic issues will be communicated through other venues such as the Regional SEMCs.
- With respect to other areas, INAC understands that as a large number of activities described in the Final Environmental Impact Statement (FEIS) have not been undertaken, the overall biophysical impacts of the project activities to date are expected to be of much lower magnitude than if the mine was under construction. And the annual report stated this point several times. However, conclusions on impacts would be more meaningful if HBML focused on the predicted versus actual impacts of each project component that has been undertaken.

3.2 EC

• EC has reviewed the Annual Report and supporting documents provided and believes that conclusions reached in the 2008 Annual Report are valid, and that no changes are required to the monitoring program at this time.

4 SUMMARY

Due to the decision made by HBML to defer underground mine and mill development, parts of the Post Environmental Assessment Monitoring Program (PEAMP), in particular those directly related to underground mining, mill plant operation, and tailings containment are not to be implemented at current stage. However other monitoring requirements, as indicated in the NIRB's letter to HBML dated February 20, 2009, are still valid and have to be implemented by HBML. Some monitoring plans may warrant revisions to reflect the current operations until new monitoring instruments/plans are designed and in place for the Hope Bay project.

Overall, remarkable efforts have been made by HBML in 2009 to meet the requirements of the PC, and to date most of the relevant terms and conditions are being met. However, there are certain conditions that have yet to be fully implemented, and these require the Board's consideration. Furthermore, all Parties need to fulfill their responsibilities related to the role of the Doris North SEMC as set out in the PC for this project. Pursuant to NLCA Sections 12.7.2

and 12.7.3, the NIRB will continue to provide periodic evaluation of monitoring efforts, results and compliance, and will also provide further direction to guide Parties as monitoring for the Doris North proceeds into the future.

APPENDIX I



NIRB File No.: 05MN047

December 5, 2008

Chris Hanks

Hope Bay Mining Limited

300-889 Harbourside Drive

North Vancouver, BC

Via email: Chris.Hanks@Newmont.com

Re NIRB Recommendations for Doris North Project

Dear Mr. Hanks:

Pursuant to NLCA Sections 12.7.1 and 12.7.2, in order to fulfill the post environmental assessment monitoring mandate, and achieve objectives specified in the Project Certificate of Doris North Gold Mine Project, the Nunavut Impact Review Board (NIRB) suggests the following recommendations to Hope Bay Mining Ltd. (HBML) based on NIRB's 2008 Monitoring activities, and the comments from Parities regarding HBML's 2007 Annual Report for Doris North Project.

We understand that there are changes related to the overall plans Newmont has for their operations in this area and we appreciate your indication that further information will be provided to NIRB at the earliest opportunity. We look forward to correspondence from Newmont related to this direction, specifically where it is relevant to the information requirements of Conditions 5 and 34 of the Project Certificate. In the meantime, the Board is issuing a number of recommendations which should be taken into consideration by Newmont to ensure appropriate monitoring activities continue in relation to the Project Certificate issued for this file.

1. HBML 2007 Annual Report for Doris North project

On May 30, 2008 NIRB received HBML's 2007 Annual Report for Doris North Project with Summary of Baseline Studies in Hope Bay for 2007 attached. On July 7, 2008 NIRB distributed this report to Doris North distribution list for comments. Based on a complete review by the Monitoring Officer, and comments received by NIRB from Parties:

Recommendations:

Appendix I

- a. HBML submit a copy of the detailed 2007 aquatic baseline studies to DFO for their permitting and monitoring requirements.
- b. HBML submit to NIRB a detailed supplementary report in respect to the implementation of the Noise Abatement Plan regarding results analysis of the noise monitoring activities during construction/blasting activities, as well as associated noise abatement measures employed to mitigate noise impacts.
- c. HBML submit to NIRB a detailed section in its 2008 Doris North Annual Report, in respect to the infrastructure completed in 2007, with details regarding construction, impacts and associated mitigation measurements implemented and/or monitoring conducted related to ecosystem (including water quality) and wildlife during each construction activities.

2. Roberts Bay Jetty

The thermistor cables and temperature loggers in the jetty foundation required by Condition 19 of the Project Certificate were not installed at the time of the 2008 site visit.

Recommendation: HBML report to NIRB a schedule for installing required thermistor cables and temperature loggers in the jetty foundation, in conjunction with its 2009 development plan by January 30, 2009.

3. Project Modification

Modifications to the original Doris North mine site layout plan have been implemented during construction, without formal notification being given to the NIRB's Monitoring Officer as per Condition 34 of the Project Certificate.

Recommendation: MHBL be encouraged to give notice of planned significant changes to the mine facility, with associated rational and potential impacts analysis for components of mine facility; this includes the completed modifications at Doris camp site in 2008 construction period.

4. Oil Pollution Prevention/Emergency Plan for fuel transfer from barge to shore facility

Transport Canada (TC) regulating requires an Oil Pollution Prevention/Emergency Plan. Also, according to condition 20, which states that MHBL shall ensure the use of containment booms and berms to control potential spills whenever fuel and or waste is transferred between a barge and the shore, MHBL shall ensure spill kits are at hand at these locations at all times.

Recommendation: HBML be encouraged to submit an Oil Pollution Prevention/Emergency Plan to TC for review and approval for its Oil Handlin Facility (OHF) at Roberts Bay jetty and fuel tank in Quarry #1, and submit to NIRB the final Oil Pollution Prevention/Emergency Plan after it is approved by TC.

5. The post Environmental Assessment Monitoring Program (PEAMP)

By way of correspondences to the NIRB, HBML has decided to defer underground mine and mill development in Doris North project.

Recommendation: HBML submit to NIRB a comprehensive update of PEAMP required by Appendix D of the Project Certificate, in particular the Environmental, Health and Safety Management Plan comprising of eleven (11) sub-plans, by indicating development/update/amendment status, viability of immediate/future implementation upon completing of its new development plan for whole Hope Bay district, with consideration of project components to be built, to be altered or to be canceled, which have been covered by the NIRB Project Certificate.

6. Training for HBML's on-site wildlife specialist and wildlife quarterly report

This training is part of the requirements of Condition 24. However, there is no information provided to NIRB's Monitoring Officer on the training HBML has provided to its on-site wildlife specialist regarding:

- Effects of noise on wildlife;
- Recording wildlife sightings;
- Waste management; and
- Records management.

Recommendation: HBML submit to NIRB's Monitoring Officer information with regards to the required training which have been or to be implemented for its on-site wildlife specialist with time. And submit NIRB the quarterly wildlife report (due July 30, and October 30 for 2008) before January 30, 2009.

7. Air Quality

Condition 30 requires MHBL to install and fund an atmospheric monitoring station, and the results of air-quality monitoring are to be reported every six (6) months to NIRB through the Monitoring Officer. Although this atmospheric station has been built and been in operation, air quality monitoring reports have not been provided to NIRB.

Recommendation: HBML submit NIRB's Monitoring Officer its first 6-month air quality monitoring report by January 30, 2009 with monitoring results, analysis and planned reporting schedule through the project life time.

8. Socio-Economic Monitoring Program (SEMP)

Considering the construction of various infrastructures for the Doris North Project has been ongoing since 2007, and the SEMP document has been accepted in principle by the SEMC members, immediate action is recommended to finalize the SEMP to achieve the objective of the Doris North SEMP and the Project Certificate.

Recommendation: the NIRB recommends that INAC, GN and HBML meet as soon as practical, and resolve the remaining issues, such that a satisfactory final SEMP is developed and implemented provided that the SEMP document has been consented to in principle by the SEMC (please see Appendix A).

Appendix I

If you have any questions or concerns, please feel free to contact me at (867) 983-4606 or via email, lwan@nirb.ca.

Sincerely,

Li Wan

Technical Advisor

Monitoring Officer for the Doris North Gold Mine Project

Nunavut Impact Review Board

cc: Doris North Project Distribution list Attachment: NIRB Letter to Doris North SEMC

Appendix I

Appendix A



NIRB File No.: 05MN047

December 4, 2008

To: Doris North Project Socio-Economic Monitoring Committee

Via email

Re: Doris North Project Socio-Economic Monitoring Program

Dear Committee Members:

A draft Terms of Reference (TOR) for the Doris North Project Socio-Economic Monitoring Committee (SEMC) and an associated Socio-Economic Monitoring Program (SEMP) were developed by Hope Bay Mining Ltd's (HBML, previously Miramar Hope Bay Ltd.). The TOR and SEMP were reviewed by SEMC members in Iqaluit during the SEMC meeting in April, 2007. These two documents are requirements of Term and Condition # 28 of the Doris North Gold Mine Project Certificate, issued on September 15, 2006 by the Nunavut Impact Review Board (NIRB). The NIRB would like to take this opportunity to recognize the progress made by the SEMC members

Based on comments submitted to the NIRB by INAC and GN regarding the draft TOR and the SEMP, HBML revised both documents and resubmitted them to the NIRB in August 2007. The NIRB distributed the revised SEMP to INAC and GN for further review and comments. By October 12, 2007 the NIRB received comments from both parties with indications that both were generally satisfied the revised document, particularly with the level of the detail and the perceived ability of indicators to fulfill the monitoring objectives as designed. However, several issues were identified that required further discussion with HBML. The following is a summary of these issues:

INAC:

- **Reporting process:** It is the proponent who has the primary responsibility for socioeconomic monitoring reporting to NIRB.
- **Communities' engagement**: There is no indication in the revised SEMP on how the proponent intends to engage impacted communities in socio-economic monitoring throughout the life of the project.

GN:

• Communities' engagement: The SEMP does not include a discussion of how Miramar plans to fulfill the engagement of affected communities as required by the project certificated.

- **Data availability required by HBML**: The Nunavut Bureau of Statistics has provided a table outlining the availability regarding the data, noting that some of the information requested by HBML is not available in respect of the 19 indicators.
- **Baseline Report:** The SEMP does not indicate how monitoring will tie in with baseline information. Miramar should provide clarity on this issue as soon as possible.
- Other specific issues: Specific issues raised by the Department of Economic Development & Transportation and the Nunavut Bureau of Statistics regarding the SEMP document.

The NIRB subsequently provided HBML with an opportunity to respond to the above issues and HBML submitted its formal response to the NIRB in June, 2008

The key point in the revised SEMP, over which both HBML and GN differ in opinion, is the data gap associated with socio-economic indicators. The revised SEMP currently contains 42 socio-economic indicators; HBML committed to provide data for 23 indicators and requested other members of the SEMC provide data for the remaining 19. The NIRB has reviewed the indicators proposed by HBML and comments from the Nunavut Bureau of Statistics, and acknowledges that some of the required data may not be readily available. However, as mentioned in INAC's October 2007 submission of comment in respect to the revised SEMP, the GN Bureau of Statistics' "Nunavut Data Development Action Plan" (NDDAP) is being funded by INAC and could rectify this data gap in the near future. Therefore, the NIRB is of the opinion that the current data gap should not be an obstacle for finalizing and implementing the SEMP if relevant modification is deemed appropriate by SEMP members.

As for the issue in respect to engagement of impacted communities, which is a requirement of Condition 28 of the Project Certificate and has been implemented by HBML as indicated in its 2007 annual report, HBML shall include it in the revised SEMP as an organic part. HBML indicated in its reply that this issue had been addressed by its Community Relations Plan. NIRB encourages the Doris North SEMC members to review this plan (Community Relations Plan) and incorporate it into finalized SEMP.

It is the NIRB's understanding that other issues, such as reporting responsibility and the reporting process itself, are procedural matters in nature and can be successfully resolved by the SEMC members within SEMC.

It is important to bear in mind that the Doris North Gold Mine project, was previously proposed to be operating for a total period of two years. Even though HBML has deferred the underground mine and mill development, however in light the construction of infrastructure has been ongoing since 2007, immediate action is required to finalize the SEMP to achieve the objective of the Doris North SEMP and the Project Certificate. Therefore the NIRB strongly recommends that INAC, GN and HBML meet as soon as practical, and resolve the remaining issues such that a satisfactory final SEMP is developed and implemented provided that the SEMP document has been consented to in principle by the SEMC. Furthermore, the NIRB requests that HBML copy the NIRB on all correspondences between the SEMC and HBML in this regard.

If you have any questions or concerns, please feel free to contact me at (867) 983-4606 or via email, lwan@nirb.ca.

Sincerely,

Call

Li Wan

Technical Advisor Monitoring Officer for the Doris North Gold Mine Project Nunavut Impact Review Board

cc: Geoff Clark, KIA (geoff@qiniq.com)



Site Visit Report

For Doris North Gold Mine Project

(NIRB File No. 05MN047)



October, 2009

Appendix II

Project: Doris North Gold Mine Project

Project Owner: Hope Bay Mining Limited,

300-889 Harbourside Drive North Vancouver, BC V7P 3S1

Tel: (604) 985-2572 Fax: (604) 980 0731

Site location: The West Kitikmeot region, Nunavut

Contact: Chris Hanks

Director of Environment and Social Responsibility,

Hope Bay Mining Limited

Alex Buchan

Manager of Community and External Relations,

Hope Bay Mining Limited

Visit conducted by: Li Wan: NIRB's Monitoring Officer

George Taptuna: NIRB's Assistant Technical Advisor

Date of visit: August 18, 2009

Photography: Li Wan

1. Introduction

The Doris North Gold Mine project (the Project) is located on the mainland in the West Kitikmeot region of Nunavut, approximately 125 kilometre (km) Southwest of Cambridge Bay, 75 km Northeast of Umingmaktok, and 5 km South of Roberts Bay. On September 15, 2006 the Nunavut Impact Review Board (NIRB) issued Project Certificate #003 to Miramar Hope Bay Mining Ltd. (Miramar), pursuant to Section 12.5.12 of Article 12 of the Nunavut Land Claims Agreement (NLCA).

In March 2008, Newmont Mining Corporation (Newmont) completed acquisition of the Doris North/Hope Bay property from Miramar, and established a new business entity, Hope Bay Mining Ltd. (HBML), to operate the Project.

At the time of the site visit, the construction of project infrastructure, mainly the all weather road connecting Roberts Bay and the Doris Camp, the airstrip, and the associated camp facilities at Doris North, has been completed. In order to pursue a broader belt-wide development strategy, HBML has deferred the originally planned development of an underground mine and mill plant at Doris North, and consequently the current infrastructure is primarily used to facilitate HBML's advance exploration and baseline environmental studies in the Hope Bay Belt.

2. Objectives & Purpose of Site Visit

Pursuant to Sections 12.7.1 and 12.7.2 of the NLCA, the NIRB is responsible for monitoring the Project in accordance with Project Certificate #003. As part of this monitoring program, the objectives of the NIRB's site visit included the requirements to:

- a) determine whether, and to what extent, the land or resource use in question is being carried out within the predetermined terms and conditions [NLCA Section 12.7.2(b)]; and
- b) provide the information necessary for agencies to enforce terms and conditions of land or resource use approvals [NLCA Section12.7.2(c)].

Prior to the site visit, the following documents were reviewed:

- Doris North Gold Mine Project Certificate #003;
- Correspondence from HBML dated April 20, 2009 re: Status of Compliance with the Project Certificate;
- HBML Doris North Gold Mine Project 2008 Annual Report; and
- Other miscellaneous correspondence relating to the project monitoring.

From this review, a monitoring check list for this site visit was prepared by the Monitoring Officer, which included inspection of the following project components:

The Roberts Bay Area

- Thermistor cables and temperature loggers at the Roberts Bay Jetty, installation completed in March, 2009;
- Repaired jetty and barge anchors;
- 5 million liter (L) fuel tank and associated secondary containment facilities, installation completed in 2008;

- Containment booms and berms to control potential spills and the availability of spill kits;
- Fuel transfer pipe/hose connecting from the jetty to 5 million L tank; and
- Solid waste disposal facilities.

Quarry #2

- Current status of Quarry #2; and
- Site waste management.

Doris Camp Site

- Completed campsite and associated facilities such as fire fighting and wastewater treatment facilities:
- Reclamation of the previous Matrix Camp (construction camp) site; and
- Camp waste containers and prevention measures for wildlife access.

Other Items

- Power line to weather station on Doris Mountain;
- Floating fresh water intake;
- Completed water intake pipe;
- Tail Lake and water fall location;
- Locations of proposed south dam and north dam associated with future tailings lake:
- Storage facilities for Explosives and Hazardous Materials;
- The All-Weather Roads and Airstrip;
- Dust suppression methods:
- General wildlife issues, including:
 - o The training record of the on-site wildlife specialist, if any
 - Wildlife monitoring and observation log located on site
- Discuss the compliance status of HBML in respect to correspondence dated April 20th, 2009.

3. 2009 Site Visit

On Tuesday August 18, 2008, NIRB Monitoring Officer Li Wan and Assistant Technical Advisor George Taptuna flew to the Doris North site from Cambridge Bay via HBML's air charter. Upon arrival at the Doris North site, a safety briefing was delivered by HBML's camp security personnel. The morning site tour included Roberts Bay area, the all weather road, Doris North camp site and the Doris Lake facilities. The NIRB staff was accompanied by Chris Hanks, Director of Environment and Social Responsibility for HBML, Bill Patterson and Katsky Venter, senior environment site staff. For the afternoon, the NIRB staff visited the air quality monitoring station located at Doris Mountain with Bill Patterson and Katsky Venter. At the conclusion of the site visit, the NIRB staff met with HBML staff to discuss the site visit, outstanding issues from previous correspondence and HBML's follow-up to the outstanding issues. The site tour was a great success encompassing all relevant project components and pertinent issues raised by both parties.

3.1. General update on project sites

In the Roberts Bay area, the jetty has been fully constructed and has been in operation since 2008. During the 2008 site visit, it was noted that the jetty in the Roberts Bay area was in need of repair as part of the front of the jetty has slumped. Maintenance work on the slumped portion at the front end is still ongoing without hampering the current use of the jetty as an offloading facility.

HBML completed the installation of the required thermistor cables and temperature loggers in March 2009 as per Condition 19. These instruments are functioning in accordance with the designed monitoring plan.

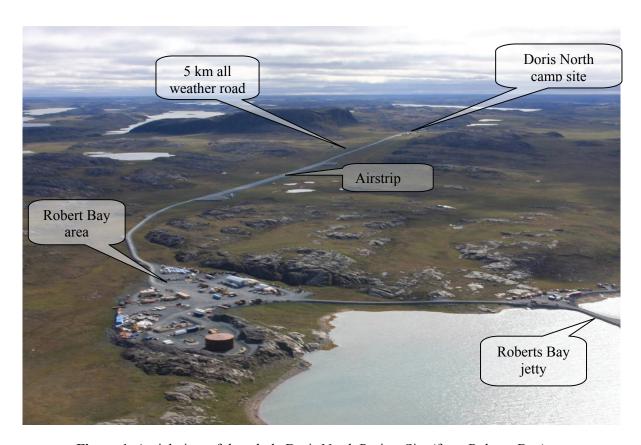


Figure 1. Aerial view of the whole Doris North Project Site (from Roberts Bay)

A 5 million L carbon steel fuel tank has been constructed and installed within a secondary containment berm in 2008 at the Roberts Bay site. Project staff explained that NTCL (Northern Transportation Company Limited) will be transferring all fuel from the barge at the jetty to the storage tank via a dedicated fuel line. Fuel transfer including spill prevention is the sole responsibility of NTCL before the fuel is filled into the storage tank.

All mine construction materials shipped in by the previous owner, Miramar, are stacked in the laydown areas, and kept in a neat and orderly condition. Included in this material is a large amount of empty fuel barrels which are under inspection by HBML's environment staff. Upon completion of the inspection and proper labeling, the empty fuel barrels will be shipped out by

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sealift. Also at the laydown area in Robert Bay, various construction wastes were stored and were waiting to be ship out to an approved waste disposal facilities in the Northwest Territories (NWT).

The all-weather road which connects Roberts Bay Jetty and Doris North camp site, and a 900 meter airstrip combined with the all weather road at upper portion of the road, have been in full operation to support ongoing advanced geotechnical and drilling programs in the Hope Bay District.

At the Doris camp site, the permanent camp and other campsite facilities, including the fire water tank, power generator house, a modular sewage packaging plant and core storage building are in operation. The permanent potable water pipeline with heat tracing has been installed along the main road to supply potable water for the camp from Doris Lake. The previous construction camp has been reclaimed and the site has been modified into helicopter pads.

From on-site observations, each completed project component is functioning as designed and maintained in good working order.

3.2. Roberts Bay Area

3.2.1. Roberts Bay Jetty

Condition 19 states:

MHBL shall install thermistor cables and temperature loggers in the jetty foundation. MHBL shall monitor the effects of the jetty on shallow water permafrost through operations and report the results of the monitoring collection to NIRB's Monitoring Officer.

The thermistor cables and temperature loggers in the jetty foundation required by NIRB's Project Certificate were installed in March 2009. Data is being collected continuously and downloaded on a monthly basis by site personnel, and is transferred for monitoring and analysis by SRK (SRK Consulting [Canada] Inc.), The design of the monitoring protocol was reported to NIRB Monitoring Officer during the site visit and the first monitoring report will be submitted to the NIRB in 2010 according to HBML.

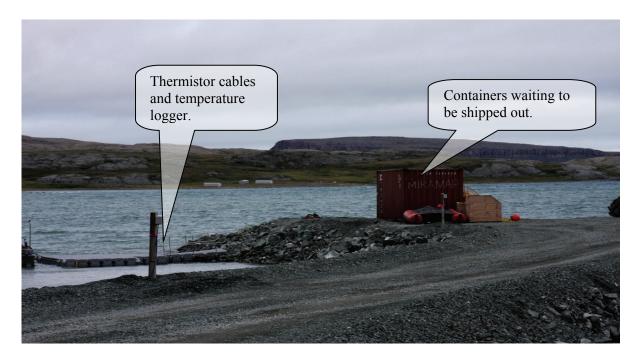


Figure 2. The jetty at Robert's Bay with installed thermistor and temperature loggers.

3.2.2. Fuel Tanks

Condition 33 states:

MHBL shall ensure that areas used to store fuel or hazardous materials are contained using the safest methods practically available.

A 5 million L fuel tank made of carbon steel has been installed in a tank farm within the former Quarry #1 with pipelines connecting it to the pump station (see Figure 3). A secondary berm, with a 110% containment capacity of the fuel tank, has been installed surrounding the fuel tank. An impermeable lining was buried about 0.3 metres (m) under the surface of crushed granular materials within the secondary containment berm. The fuel tank is registered through Indian and Northern Affairs Canada (INAC). The facilities have been in operation since 2008 upon the completion of construction, and have been operating properly (no fuel spills to date).



Figure 3. Fuel Tank (5 million liter) at the former Quarry #1 site near Roberts Bay

3.2.3. Fuel transfer at Roberts Bay jetty

Condition 20 states:

MHBL shall ensure the use of containment booms and berms to control potential spills whenever fuel and or waste is transferred between a barge and the shore. MHBL shall ensure spill kits are at hand at these locations at all times.

Fuel is pumped from a barge/container through a specifically designed hose system by NTCL. Proper equipment was on site in accordance with NTCL procedures and HBML's Emergency Response/Spill and General Contingency Plan during the transfer of fuel. According to the HBML site personnel during the site visit, booms are deployed and trained personal was at the transfer point throughout the entire operation. This was observed during last year's site visit when fuel was transferred from a barge to an on-shore facility.

As part of its comments on HBML's 2007 Doris North Project annual report, Transport Canada (TC) raised an issue related to HBML's operation of Oil Handling Facility (OHF) and associated regulatory requirements of an OHF. NIRB provided recommendations to HBML dated December 5, 2008, based on NIRB's monitoring in 2008. In correspondence dated February 23, 2009, HBML indicated that the implementation of an Oil Pollution Prevention/Emergency Plan was not a requirement under the NIRB Project Certificate. However, HBML did follow-up with NTCL with regards to this plan, and believed that the compliance with such a plan was the responsibility of NTCL. TC does not agree with HBML's interpretation and currently this issue remains unresolved.



Figure 4. Fuel transfer station and containers beside the fuel tank at Robert Bay

3.2.4. Waste management at Roberts Bay site

At the Roberts Bay laydown area, wastes are segregated and the site kept in neat and tidy condition. All non-combustible wastes generated during the camp construction as well as demolishing of the previous construction camp has been transported to the waste management area at Roberts Bay for shipping out by sealift. All hazardous materials are regularly shipped off site to authorized waste disposal facilities in the NWT or Alberta. All combustible waste (including food and human waste) generated at Doris camp is transferred to Roberts Bay site and incinerated on a daily basis.



Figure 5. Incinerator at Roberts Bay

3.3. The All-Weather Road and Airstrip

An approximately 5 km all-weather road linking the jetty at Roberts Bay to the Doris camp site has been completed and has been in operation since 2008. Within the alignment of the all-weather road, a 900 m airstrip was constructed by widening a significant portion of the road. Road turnouts are available on both sides of the road for every 1 km interval. The all-weather road and airstrip are in good operating condition, and currently support project activities including advanced geotechnical and explorations programs being conducted by HBML for the Hope Bay belt development. As a dust suppressant, HBML will use EK-35, a widely used dust suppressant at mines in NWT, on its airstrip, roads and camp facilities.

3.4. Doris North camp site

3.4.1. Doris North Camp

Condition 34

If it becomes necessary, MHBL shall give notice of any planned changes to the mine facility, including Tail Lake and its operation, to the regulatory authorities and NIRB through its Monitoring Officer, immediately.

The Doris North camp is located in the previous Quarry #4 site, which provided construction material for the camp and other facilities at Doris North camp site. The quarry operation was completed in early June 2008 followed by site restoration including site grading and slope stabilization. The construction of the 118-person camp was completed at the end of October 2008 and it has been in operation since then. The Doris North camp facilities include a waste water treatment plant, a power generator house, fire water tank and related accessories. An additional

treatment unit of blue-green algae for potable water from Doris Lake has been installed in the camp and is in operation.

During the camp construction phase, some non-substantial but necessary modifications were made to the initial plans based on design delineation and engineering practice. HBML has submitted detailed as-built drawings to the NIRB Monitoring officer in the February 2009 for review.



Figure 6. Campsite at Doris North

3.4.2. Construction Camp

The original construction camp (Matrix Camp) has been demolished and the site has been modified into helicopter pads, with associated communication and office facilities for helicopter operation.



Figure 7. Helicopter pads at original construction site at Doris North

3.4.3. Freshwater Intake

Potable water is taken from Doris Lake by a floating device and pumped to the Doris North camp through a water pump house located on the north shore of Doris Lake. A permanent potable water pipeline with insulation and heat tracing routes have been installed along the all-weather road from Doris Lake to the Doris North camp site. All facilities have been in operation and in good condition.



Figure 8. Potable water pump house at Doris Lake shore

3.4.4. Quarry #2

Quarry #2 is still in full operation, with quarry material being extracted and transported to a nearby facility for crushing and classification of rock fines. This quarry provides granular materials for all site construction. During this site visit, Quarry #2 was well organized. All wastes were properly segregated and stored appropriately at the site.



Figure 9. Quarry #2

3.4.5. Explosive Facilities

HBML indicated during the site visit that currently explosives required for use in Quarry #2 are ready-made off-site and brought to site for immediate use. An explosive preparation and storage unit has been built at the east side of the all weather road, a good distance from the road away from other facility in the area. Currently this facility is not in use but will be put into operation in the future.



Figure 10. Explosive storage an manufacturing facility

3.4.6. Tailings impoundment area (Tail Lake) and associated infrastructure

According to the Environmental Impact Statement for the Doris North project, Tail Lake, which is located at east side of Doris Lake, will be used as a tailings impoundment area. A North dam and a South dam would be constructed, and built prior to operation of a mill at the mine site. To date, no dams or related works have been constructed at Tail Lake.



Figure 11. Northern aerial view of Tail Lake

3.5. Other Issues

3.5.1. Wildlife monitoring

Condition 23:

MHBL shall designate one of its employees as a primary wildlife contact for the mine, who will work with NIRB's Monitoring Officer and regulatory officials in communicating on-site activities and to fulfill reporting requirements.

Condition 24:

As part of the training for MHBL's on-site wildlife specialist, MHBL shall provide training to that person in areas of bear encounters and safety, effects of noise on wildlife, recording wildlife sightings, waste management, records management, and reporting to NIRB's Monitoring Officer and regulatory officials.

Due to its operation schedule (employees work on 3-by-3 week cross-shift), HBML has biologists as its onsite Environmental Coordinators that acts as the primary wildlife contact for the mine. In addition, site operations personnel and HBML's manager of Social Responsibility located in Cambridge Bay also share responsibilities for these conditions. Furthermore, according to HBML, *Bear*Wise, a Yellowknife, NWT firm that specializes in the management of wildlife encounters, is brought on site each year to provide bear safety training for all project staff.

In regards to HBML's Wildlife Mitigation and Monitoring Plan, GN-DoE raised an issue related to the baseline study methods of carnivore species, specifically grizzly bears and wolverines in the Hope Bay region. Based on its review of HBML's 2007 and 2008 Wildlife Mitigation and Monitoring Plan annual reports, GN-DoE recommended that HBML use DNA sampling as part of its baseline study methods for carnivore species. HBML did not agree with this approach based on the opinion of its professional biologist, however, HBML has agreed to use the DNA sampling technique recommended by GN-DoE for the 2010 field study season in conjunction with its other baseline sampling methods for grizzly bears and wolverines.

3.5.2. Noise monitoring

Condition 29 states:

MHBL shall develop and implement a noise abatement plan to protect people and wildlife from mine activity noise, including blasting, drilling, equipment, vehicles and aircraft. The noise abatement plan will be developed in consultation with GN-DoE, EC and HC, and includes: restrictions on blasting and drilling when migrating caribou, birds or local carnivores may be affected; the establishment of strict standards for noise levels; use of equipment and vehicles with the best noise attenuation devices; when practical, the use of fences or berms around noisy machinery or sites; flight corridor restrictions over sensitive areas with known concentrations of wildlife and birds whenever possible; and requiring with the exception of take off and approach for landing, a minimum flight altitude of 300 metres above ground level when flights to and from the mine site are passing near sensitive wildlife and bird areas. The noise abatement plan will also incorporate the use of sound meters to monitor sound levels at sites in and around the mine site and local study area. The location and design of the sound meters shall be selected in consultation with EC and set up

immediately upon issuance of the Project Certificate for the purpose of obtaining baseline data, and during and after operations. The final noise abatement plan shall be filed with NIRB's Monitoring Officer within six (6) months of the issuance of the Project Certificate.

On March 14, 2007 MHBL filed a *Noise Abatement Plan* with the NIRB. According to the plan, noise baseline data was collected and analyzed from four different monitoring locations in 2007 and 2008 field seasons and results were report to NIRB. It has been found that certain areas (such as abatement measures to mitigate the potential impact) in the reports need to be addressed to better fit the *Noise Abatement Plan*.

3.5.3. Air quality

Condition 23:

MHBL will install and fund an atmospheric monitoring station. This station and its location shall be developed in consultation with EC and HC air quality officials and focus on particulates of concern generated at the mine site. The results of air-quality monitoring are to be reported every six (6) months to NIRB through the Monitoring Officer, and from there to all of the parties.

Metrological monitoring stations have been installed on the north Shore of Doris Lake in 2007 and the southwest side of the Doris camp, and are fully operational. These monitoring stations are operated and maintained by trained professionals, and appeared to be in good working condition. HBML stated the collected meteorological data has been reported to the NIRB's Monitoring Officer in 2008 Air Quality Monitoring Summary report as per Condition 23.



Figure 10. Meteorological monitoring station on the north shore of Doris Lake.

An atmospheric monitoring station has been built on the Doris Mountain near a radio repeater station and has been put into operation since August 17, 2009. Total Suspended Particulate ("TSP") for PM10 and PM2.5 are being collected in accordance with the National Air

Pollution Surveillance Network, the air quality monitoring data and analysis is expected to be reported in the next report.

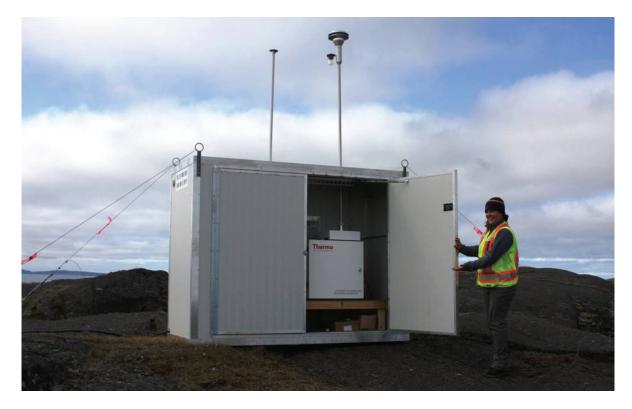


Figure 12. Atmospheric monitoring station on Doris Mountain.

4. Findings

4.1. Fuel transfer from barge at jetty to fuel tank in Quarry #1

HBML told the NIRB staff that specifically designed hose system is applied when fuel is transferred from barge to the fuel tanks, furthermore, associated booms and berms are employed during transfer period (as it was found during site visit in 2008). There was no fuel transferring during this site visit, therefore the NIRB stuff did not see the hose system, and booms and berms on site.

The Oil Handling Facility in Roberts Bay has to comply with *Canada Shipping Act* as indicated by TC in correspondence dated July 28, 2008. HBML regards this as the responsibility of it's the oil shipping contractor (NTCL) before the fuel is transferred into HBML's fuel tank. HBML has discussed this issue with NTCL to confirm that NTCL has in place all of the pollution prevention and response plans required by TC under the *Canada Shipping Act*, Part 8 and under the Regulations. HBML is continuing to follow up with NTCL with respect to these requirements. Further communication between HBML and TC may be necessary to determine which company should be responsible for this regulatory requirement.

4.2. Wildlife issues

1. On-site wildlife specialist training:

All on-site personnel including HBML's on-site wildlife specialist, get wildlife safety related training two times a year, and wildlife sightings are reported and subsequently recorded in the annual Wildlife Mitigation and Monitoring Report and quarterly wildlife report. These two reports have been submitted to NIRB Monitoring Officer by HBML, however the information regarding training for site wildlife specialist (responsible personnel) were not included nor submitted to the NIRB. The required training includes: effects of noise on wildlife, recording wildlife sightings, waste management, records management, which are required by Condition # 24 in the Project Certificate.

2. Wildlife Mitigation and Monitoring Plan

As discussed above, GN-DoE recommended that HBML should use DNA sampling as part of their baseline study methods for carnivore species. HBML has agreed to use the recommended DNA sampling method for the 2010 field study season along with its other baseline study methods and to run the DNA hair sampling technique for one year for both grizzly bear and wolverine. Further discussion is required by both parties to resolve the outstanding issues in regards to the Wildlife Mitigation and Monitoring Plan.

5. Summary

The construction of key infrastructure including the Roberts Bay jetty, tank farm, all-weather road and airstrip, Doris North campsite and accessory utilities have been completed, and are currently in operation to support HBML's advance exploration activities in Hope Bay belt. These facilities and associated operations activities show well managed conditions and maintenance, with adequate environmental protection protocols and procedures in place.

NIRB acknowledges that significant efforts have been made by HBML to meet the compliance requirements, and noticeable achievements have been achieved since the site visit in 2008. These include the installation of thermistor cables and temperature loggers in Robert Bay jetty foundation, and the installation of the air quality monitoring station at Doris North. Observations made by NIRB staff during the site visit in 2009 have shown that HBML has been compliant with the majority of the terms and conditions contained within the Doris North Gold Mine Project Certificate. The findings listed in this report may warrant further discussion between the NIRB and HBML in order to ensure the objectives of the terms and conditions in Project Certificate #003 are satisfied.