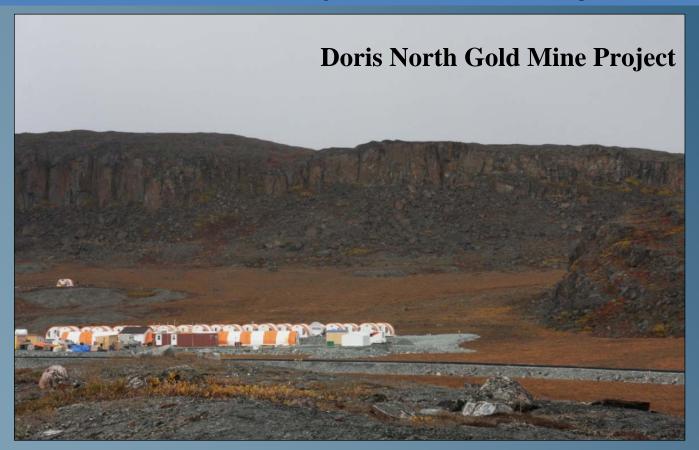


# Project Monitoring Report



**Proponent:** Hope Bay Mining Ltd.

Project Monitoring Officer: Li Wan

October, 2008

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#### 1 PROJECT INTRODUCTION

# 1.1 The project components and history

The Doris North Gold Mine Project (Doris North project), proposed by Miramar Hope Bay Limited (MHBL), is located approximately 65 km to the east of Omingmaktok and 110 km south of Cambridge Bay on the Canadian mainland. The project is located on Inuit Owned Lands with mineral rights also owned by the Inuit.

The site is located in the West Kitikmeot region of Nunavut with no roads that link it to any communities or facilities, and therefore primary access to the property for fuel, equipment and supplies is by sealift via the Arctic Ocean. A 95-m jetty and a laydown area have been built at Roberts Bay to facilitate the project construction.

The proposed mill plant associated with the underground gold mine will be located at the Doris mine site, approximately 5 km from Roberts Bay. A 5 km all-weather road links the Roberts Bay site with Doris mine site where all other mine infrastructure is being constructed at the time of this report. An airstrip has been built and operates along the alignment of the road.

Tailings produced during the milling process will be deposited in Tail Lake, about 5 km from the proposed mill location. Tailings deposition will be sub-aqueous, requiring the construction of two dams. An all-weather service road will be constructed along the east side of Tail Lake all the way to its southern end. The tailings pipeline will follow the roadway, and emergency tailings dump ponds will be constructed at strategic locations.

In the early 2008, Newmont Mining Corporation (Newmont) successfully purchased all interest of Miramar and its subsidiaries properties including the Doris North project, and established a new business entity, Hope Bay Mining Ltd. (HBML, Newmont's operating company at Hope Bay), in this manner becoming the new owner of the Doris North Project.

#### 1.2 Current status

The Doris North project is under infrastructure construction stage, and the underground gold mine development is deferred as stated in the correspondences from Newmont on September 11, 2008 (see Appendix I). It is noted that HBML is re-evaluating the original development plan proposed by Miramar; however the infrastructure completed and ongoing construction would facilitate ongoing exploration and mine planning at Hope Bay district for a long term development strategy. The completed project components include:

- The Roberts Bay jetty and laydown area;
- 4.8 km all-weather road linking Roberts Bay with Doris mine site;
- A 900 m airstrip;

The infrastructure currently under development includes:

- Fuel storage (5 million liter) tank at Roberts Bay site and 1.5 million liter at Doris North site:
- Camp facilities at Doris mine site; and
- Other accessory mine facilities at Doris mine site.

#### 2 MONITORING ACTIVITIES

Following the Board meeting in October 2007, NIRB issued Appendix D of the Doris North Project Certificate (NIRB Certificate No. 003) to Miramar, and copied to relevant parties regarding the monitoring and reporting requirements for the post-environmental assessment Monitoring program for the Doris North project.

At the end of 2007, Newmont initiated its acquisition of Miramar and its controlling interest including the Doris North gold mine project. Upon completing the acquisition in early 2008, the NIRB was advised by Newmont that, based on the company's global mining experience and an initial evaluation of Miramar's timelines, they are not able to proceed with the Doris North project in year 2008 as originally scheduled. In March 2008, a notice regarding the Doris North project delay was distributed to all regulatory agencies associated this project.

In May 2007, HBML submitted its 2007 Annual Report for Doris North Project. Subsequently, a meeting was held between the NIRB and HBML in June 2008. At this meeting, the project's developing status and related post-environmental assessment monitoring program were discussed.

In July 2007, the NIRB distributed HBML's 2007 Annual Report for Doris North Project to Federal and Territory governments and agencies and Inuit organizations for commenting. A summary of comments from the aforementioned parties is presented in section 3 of this report. On September 10, 2008, the project Monitoring Officer Li Wan and Technical Advisor Ryan Barry conducted NIRB's 2008 site visit of Doris North project site. A detailed Site Visit Report is also attached in this monitoring report as well.

# 2.1 Post-Environmental Assessment Monitoring Program (PEAMP)

As per the Doris North Project Certificate (PC), on November 26, 2007 the NIRB issued Appendix D, the Doris North Gold Mine Monitoring Program, to MHBL and copied to other authorizing/government agencies associated with Doris North project to ensure the Monitoring Program is successfully implemented.

In the Appendix D, the required monitoring plans and responsibilities related to the project monitoring program are explicitly specified. In light of the project being under construction stage and mine development was postponed by HBML, a meeting between NIRB and HBML was held on June 25, 2008. At the meeting, the updated information regarding project implementation and future development, the 2008 monitoring programs, in particular the applicable PEAMP, as well as outstanding issues identified 2007 Annual Monitoring Report for the Doris North Project, were discussed from both sides. Followed the meeting NIRB sent a meeting minute to HBML for confirmation/commenting (See Appendix II).

The discussed issues between NIRB and HBML which are included in the meeting minute included:

- The Doris North project development and outlook;
- Applicable monitoring activities in 2008 determined by the Appendix D of Project Certificate;
- The implementing status regarding issues identified in 2007 Annual Monitoring Report for the Doris North Project; and
- 2008 site visit.

Those issues are partially addressed by the correspondence<sup>1</sup> received on September 30, 2008 from HBML. In the correspondence, HBML notifies the Monitoring Officer that they are working on issues discussed in June meeting to determine the viable reporting requirement stipulated by the NIRB's Project Certificate based on HBML's deferring decision in respect to underground mine and mill plant in Doris North project, specifically, based on which parts of the project are either being built or will be built.

# 2.2 Wildlife Mitigation and Monitoring Plan

In the Project Certificate, the requirements for the Wildlife Mitigation and Monitoring Plan (WMMP) including Cumulative Effects Assessment are specified in the Condition 22-26.

As per condition 22 and 26, the updated WWMP was submitted to NIRB by MHBL on January 2, 2007. In light of the issues raised by GN-DoE from the WMMP, NIRB recommended, as part of the NIRB's overall 2007 Annual Monitoring Report for the Doris North Project, which both HBML and the GN-DoE provide status reports on the outstanding issues listed as the following:

- 1. Omission of muskox as a species to be monitored;
- 2. Consultation with the DOE on NIRB condition #25;
- 3. Monitoring of habitat loss should be related to specific VEC;
- 4. Need to define adaptive management measures that will be used to reduce the ZOI and provide triggers for their implementation. Re-evaluation of the study area for collecting control data;
- 5. Source of caribou herd estimates;
- 6. Traffic management plan;
- 7. Rationale for caribou surveys;
- 8. Using wolverine hair snagging posts for grizzly bear monitoring;
- 9. Using hair snagging posts to monitor wolverine; and
- 10. Mitigation of mine-related disturbance to raptors.

MHBL submitted its plan of action in December 2007, including the response to aforementioned issues. In that plan of action, HBML confirmed and acknowledged some of the items, and addressed/clarified others. Further, by the correspondence received in January 2008, GN-DoE notified NIRB that issue 1 and 5 had been resolved between GN-DoE and HBML. Furthermore, a meeting between GN-DOE and HBML along with other parties was proposed to be held in Kugluktuk in February 2008 to resolve remaining issues. However this meeting did not occur as planned.

In comments of GN-DoE regarding HBML's 2007 annual report for Doris North project, the same issue (a revised WMMP) was re-addressed and requested for the final approval.

To comply with Condition 25, HBML submitted to NIRB its wildlife baseline studies completed in 2007, attached in its 2007 Annual Report for Doris North project on May 30, 2008. However, as per the reporting requirement predetermined in the WMMP, a standalone annual Wildlife Mitigation and Monitoring Reports should be filed before the required date (April 1.2008). However this report was not received by NIRB at the time of this report.

<sup>&</sup>lt;sup>1</sup> Letter to Li Wan NIRB, from Chris Hanks, HBML on Sep.30, 2008 Re: update on 2007 - Doris North Wildlife Mitigation and Monitoring Program and other issues related to the Project Certificate.

As per the condition 25 of the Project Certificate, and indicated in Appendix D: "MHBL shall file a monitoring plan focused on assessing and mitigating interaction between humans and wildlife at the mine site, including associated infrastructure... A quarterly report must be sent to NIRB's Monitoring Officer on interactions that have occurred, any effect the interaction may have had on humans and wildlife, and mitigation measures taken to avoid similar interactions in the future". This required quarterly report (due July 30) has not been received by the Monitoring Office by the date of this report.

On August 11, 2008 the NIRB Monitoring Officer sent HBML a letter <sup>2</sup> requesting the solution for those outstanding issues related to WMMP, and requested the HBML submit 2007 annual wildlife mitigation and monitoring reports as well as the quarterly wildlife report. By subsequent email <sup>3</sup> and the most recent correspondence (see foot note 1) from HBML, the 2007 *Wildlife Mitigation and Monitoring Report* has been delayed by its consultant Golder Associates Ltd. (Golder), and once it is completed, it would be submitted to NIRB at around October 15, 2008, then HBML would contact GN-DoE to set up a meeting for solving the outstanding issues.

According to Condition 23, HBML has clarified that site Senior Environmental Coordinator Matthew Kawei is HBML's on-site wildlife specialist for the Doris North Project. Except wildlife/bear safety training currently being conducted to all on site employees twice a year, there is no other information regarding the training on the subjects of: effects of noise on wildlife; recording wildlife sightings; waste management and records management as required by Condition 24, is reported to NIRB's Monitoring Officer.

#### 2.3 Noise Abatement Plan

In the Project Certificate (Condition 29), HBML was required to file a Noise Abatement Plan with NIRB's Monitoring Officer 6 months prior to the issuance of the Project Certificate (March 15, 2007). MHBL was also required to select locations for the placement of sound meters in consultation with Environment Canada to be set up immediately upon issuance of the Project Certificate. On March 14, 2007 MHBL filed a Noise Abatement Plan with NIRB in consultation with Environment Canada (EC).

The noise program completed in 2007 was based on four monitoring sites located in the vicinity of the planned operating facility. The results and brief analyses were included in HBML's 2007 Annual Report for Doris North project. However, detailed information was not provided regarding results analysis related to the noise monitoring during construction/blasting activities, as well as associated noise abatement measures employed to mitigate those noise in this report.

In a follow-up email from HBML after the 2008 site visit, the detailed noise monitoring location for 2007 season was provided to NIRB (see Appendix A of site visit report). This noise monitoring was conducted by a mobile data collector therefore there is no permanent facilities placed on the monitoring sites.

<sup>&</sup>lt;sup>2</sup> The letters sent to Chris Hanks, HBML by Leslie Payette, signed by Li Wan, NIRB on August 11, 2008, Re: *Hope Bay Mining Ltd.'s Wildlife Mitigation and Monitoring Plan.* 

<sup>&</sup>lt;sup>3</sup> The email from Chris Hanks, HBML to Leslie, cc: Li Wan on August 11, 2008 Re: *NIRB*: 05MN047 - Correspondence Re HBML's WMMP

# 2.4 Air Quality

The condition 30 requires MHBL to 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.

During 2008 site visit, it is found an atmospheric monitoring station has been installed and is in operation, located on the northern shore of Doris Lake and the southwest side of the Doris camp. It was indicated by site personnel that this monitoring station is operated and maintained by trained professionals, and appeared to be in good working condition. However, the required biannual air quality report was not submitted to NIRB's Monitoring Officer to date.

# 2.5 Socioeconomic Monitoring Committee and Monitoring Program

# 2.5.1 SEMC monitoring

In the Project Certificate (Condition 28) a Hope Bay Belt Socio-Economic Monitoring Committee (SEMC) was required to be formed to supplement, not duplicate, the Inuit Impact Benefit Agreement (IIBA). The condition stated that the SEMC should include the same members as those on the Kitikmeot Socio-Economic Monitoring Committee (associated with the Jericho project). Immediately upon the SEMC's formation, MHBL was to provide the terms of reference for a socio-economic monitoring program (SEMP) to the SEMC for review and subsequent direction by NIRB.

In the summer of 2007, with input from governments and other stakeholders, HBML developed Terms of Reference for the Doris North SEMC, in addition, the Doris North SEMP, with a detailed impact-indicator matrix ("Appendix A") was annexed. These 2 documents were distributed to KIA, GN, and INAC for further commenting and reviewing upon submission to NIRB from MHBL in August 2007. By October 2007 NIRB received comments from both INAC and GN; both parties were generally satisfied with the revised SEMP, particularly with the level of the detail and the perceived ability of indicators to fulfill the monitoring objectives. NIRB provided HBML with opportunity to respond to the aforementioned comments in October 2007.

HBML submitted its response <sup>4</sup> in early June 2008 referring to the reasons: Newmont's acquisition; decision to postpone construction for Doris North project and proposing regional SEMC evolution. At the same time, BHML expressed its disagreements to part of comments in its response (see Appendix III), the major comments include:

# INAC:

• **Reporting process:** It is the proponent who has the primary responsibility for socio-ec monitoring reporting to NIRB.

<sup>&</sup>lt;sup>4</sup> email from Alex Buchan, HBML to Li Wan cc'ed Jeff Rusk, NIRB on June 2, 2008 re: *SEMC update on Doris North Project* 

• **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.

However, it is noticed in the submitted HBML 2007 Annual Report for Doris North Project, significant implementation on community engagement, community consultations, along with communities' participation was conducted actively by HBML, considering the limited construction activity on the project site in 2007. The major activities include:

- Mechanism setup for regular email notifications of company updates amongst key stakeholders in the Kitikmeot Region;
- Establishment of regional office at Cambridge Bay;
- Sponsorship in series of regional initiatives: the Kitikmeot Trade Show in Cambridge Bay; Nunavut Mining Symposium in Iqaluit; Kimberlite Summer Camp in Yellowknife
- Support for various community initiatives including the Kugluktuk Traditional Knowledge Camp, the Kugluktuk Fishing Derby, sponsorship of Skills Canada Nunavut, and the purchase of shop tools for Netsilik School in Taloyoak;
- Participation in the Kitikmeot roll out and associated training to initiate the Nunavut Community Skills Information System along with KIA, KEDC and Department of Education Staff; Suicide Prevention Walk in Cambridge; and
- Other community activities attempted to enhance communities' relations.

Because the proposed Regional Socio-Economic Monitoring in the whole Territory chaired by GN, still in evolution, with consideration of synchronizing the project specific SEMC and regional SEMCs to avoid duplicated efforts, finalizing and implementing Doris North SEMP does not further proceed at the time of this report.

#### 2.5.2 Inuit Impact Benefit Agreement Monitoring

The Inuit Impact Benefit Agreement (IIBA) was signed between the KIA and MHBL in September 2006. As discussed in summer 2007, the 2007 Doris North project IIBA implementation report was submitted to NIRB by KIA on September 19, 2008. This report enclosed the IIBA implementation in category of employment, training and Inuit business opportunities. KIA indicates in its IIBA report that the experience with HBML during implementation of IIBA is positive though it has been frustrated by the project delay. KIA also expressed its concerns in terms of how HBML would decide on how to proceed with the Hope Bay Belt development in 2008.

#### 2.6 2008 Site Visit

# 2.6.1 Site visit findings

As part of monitoring activity, NIRB 2008 site visit to Doris North Project was conducted by Li Wan and Ryan Barry on September 10, 2008. In addition to the completed facilities in 2007, significant infrastructure at mine site has being constructed since 2008. In general, the construction site is well-maintained and in excellent condition. However, certain findings resulting from this site visit warrant further instruction from Board to HBML as per the monitoring provisions stipulated by the Doris North Project Certificate:

- **Roberts Bay Jetty:** The required thermistor cables and temperature loggers in the jetty foundation required by Condition 19 of the Project Certificate were not installed.
- Fuel transfer from barge at jetty to fuel tank in Quarry #1: A properly designed fuel transfer pipe/hose and associated spill prevention measures as per condition 20 have not yet been installed.
- **Doris mine site modification**: Many modifications to the original project design have been implemented during construction, without notification being given to the NIRB's Monitoring Officer as per Condition 34 of the Project Certificate.
- Site wildlife specialist training: All on-site site personnel including HBML's on site Wildlife Specialist get wildlife safety related training two times per year, and wildlife sightings are reported and subsequently recorded. HBML's site Wildlife Specialist does provide training to site personnel in areas of bear encounters and Bear Safety. However, the information regarding the specific training in subjects of: effects of noise on wildlife; recording wildlife sightings; waste management and records management, which were required by Condition 24 of the Project Certificate, is unknown and is not reported to the Monitoring Officer.
- Air quality monitoring reporting: Atmospheric monitoring stations have been set up and are in operation, though the air quality monitoring results were not reported to the NIRB's Monitoring Officer every six (6) months as required by Condition 23 of the Project Certificate.

The detailed observations and findings obtained in this site visit are presented in attached 2008 NIRB Site Visit Report (Appendix IV).

#### 2.6.2 Following up of the site visit

Following the 2008 site visit, NIRB Monitoring Officer sent an email to HBML for clarification and supplementary information on the following issues:

- 1. The approximate date to deliver the annual Wildlife Mitigation and Monitoring report, and the time frame consequently to meet GN-DoE, KIA and other parties, if deemed necessary, to discuss and solve outstanding issues raised by GN-DoE for submitted WMMP.
- 2. A time frame to implement the applicable post environment assessment monitoring plans, which fit current project stage (construction). We discussed this issue in June meeting and described in a Meeting Minute send to you in early July;
- 3. The time frame to install themistor cables and temperature logger in the jetty foundation.

- 4. All required reports indicated in Appendix D of project certificate;
- 5. Some information related to the site visit carried out a on September 10,2008:
  - a. As per condition 24 of the Project Certificate, HBML is required to 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. As we discussed on site, company might fulfill the requirements by different approaches, so if HBML has any document regarding this training, it would be very useful in this regard.
  - b. The detailed modifications at the Doris North site (digital site layout drawings including the one I have hardcopy would be preferable. Required by condition 34 in the same certificate)
  - c. The overhead photo of Doris Camp and a photo of rock shoals before sedimentation (if possible ).
  - d. A brief starting time and finish time of the all-weather road and the jetty (if possible).

This request by the project Monitoring Officer is replied on September 30, 2008, HBML noted that 2007 wildlife report would be submitted to NIRB by about October 15, 2008 due to delay by their wildlife consultant Golder, and once the revision of their WMMP has been completed, they would set up a meeting with GN-DoE to discuss outstanding issues.

For the fulfilling of the monitoring responsibilities stipulated by the Project Certificate and detailed in the Appendix D, HBML states that based on their construction decision (the project components have been or will be built), they were tabulating the requirements in NIRB's Project Certificate and to determine which parts of the Project Certificate reporting may not longer be relevant. It is also advised that all of the foot print rearrangements (modifications for locations), which have been made on Doris mine site, have been discussed with our land lord KIA, HBML would provide NIRB as built layout plan on the structures which have been built. (See Appendix V)

#### 3 COMPLIANCE MONITORING FROM AUTHORIZING AGENCIES

On May 30, HBML submitted its 2007 Annual Report for Doris North Project to NIRB with environmental baseline studies including wildlife studies annexed. On July 7, 2008 NIRB distribute this report to the Doris North distribution list for commenting with regards to the following:

#### 1) Compliance Monitoring

- How each authorizing agency has incorporated the terms and conditions from the project certificate into their respective licenses, authorizations or permits;
- Whether any inspections have been conducted, and the results of those inspections; and
- Whether HBML is in compliance with any licenses, permits and authorizations that have been issued.

# 2) Effects Monitoring

• Whether the Environmental Studies conducted by HBML within reporting year are in accordance with submitted Wildlife Mitigation and Monitoring Plans;

- Whether the conductions related to baseline noise measurement are consistent with submitted Noise Abatement Plan, if any amendments have been made to this plan by HBML with consultation to relevant Authorization Agencies, then whether this measurement reflected the amendments;
- Whether the Socio Economic monitoring carried out by HBML in reporting year fulfills the requirement stipulated in the Project Certificate;
- Whether the conclusions reached by HBML in the 2007 Annual Report are appropriate provided the current status of the project implementation;
- Any areas of significance requiring further studies; and
- Changes required to the monitoring programs.

By August 20, comments were received by NIRB from the following parties: Fisheries and Oceans Canada (DFO),the Government of Nunavut, Department of Environment (GN-DoE), Indian and Northern Affairs Canada (INAC), Kitikmeot Inuit Association (KIA), Natural Resources Canada (NRCan) and Transportation Canada (TC). This section will summarize the key issues raised by the parties regarding HBML's 2007 Annual Report for Doris North Project. The detailed comments can be found from NIRB's FTP site at:

http://ftp.nirb.ca/MONITORING/05MN047-DORIS%20NORTH/03-ANNUAL%20REPORTS/02-PROPONENT/2007/03-COMMENTS/

#### 3.1 **DFO**

- 1. DFO would like to request a copy of the detailed 2007 aquatic baseline information from HBML as it will be used to support their permitting and monitoring requirements.
- 2. As the Fisheries Act authorizations will identify specific monitoring requirements, schedules and conditions, modifications to the proposed construction, operation, maintenance, and decommissioning schedules may result in the need to change conditions of future and existing authorizations. Therefore DFO looks forward to working with HBML and NIRB to identify and resolve any issues related to HBML's project modifications.

#### 3.2 **GN-DoE**

- The Wildlife Mitigation and Monitoring Plan (WMMP) has not been approved by DOE to date, and DoE requests HBML submits a revised WMMP to DoE and other relevant parties for approval. Then DoE will also review the baseline studies done in 2007 to determine whether the baseline studies conducted are appropriate and consistent with the WMMP.
- 2. The Noise Abatement Plan as required under the NIRB Project Certificate term # 29 has not been submitted for review; therefore it is not appropriate to evaluate whether noise baseline studies conducted in 2007 are consistent with the plan. Nevertheless, DoE has some comments to make about the baseline studies. HBML has chosen four locations for the studies; however, they have not justified how the locations as well as the number of the locations are chosen, in relation to project infrastructure, ecologically sensitive areas and site conditions such as wind speed and direction. This information can be included in the Noise Abatement Plan to be submitted.

#### **3.3** INAC:

- 1. As the the Doris North Mine development has deferred, INAC will anticipate that HBML's annual reports will present information on all aspects of monitoring that are required once the mine is under operation in the future,. However, as per NIRB's Appendix D of the Project Certificate, HBML should ensure that a comprehensive post-environmental assessment Monitoring program (PEAMP) is developed for the Project. In MHBL's Report, the company had proposed a meeting with NIRB in July 2008, in order to determine the appropriate PEAMP for the Project. INAC would appreciate it if NIRB could provide INAC with any updates/outcomes with regard to this (proposed) meeting. If there is any suitable opportunity, INAC would be pleased to collaborate HBML and NIRB in developing an effective PEAMP for the Project.
- 2. INAC has issued a waterlot lease in July 2007 for the construction and operations of a jetty at Robert's Bay. A compliance monitoring plan, associated to this lease, should be developed and implemented. Accordingly INAC would like to request of NIRB that the Appendix D of the Project Certificate should also be updated.
- 3. The SEMP framework with its detailed impact-indicator matrix (Appendix A), allows the Proponent to report on project objectives and impact predictions including mitigation measures as contained in its FEIS. While it may be too early in the project for HBML to comment on many of the project's socio-economic objectives (and their corresponding indicators).
- 4. The proponent states that the work completed in 2007 includes the construction of the jetty, a laydown area for unloading barges, some quarrying in Quarry 1, and a portion of the all-season road to the planned Doris Camp. INAC requests that more information on these components be reported such as more details of which segment of the road was constructed, any impacts and implemented mitigation measures resulting from the construction of the jetty as well as any associated monitoring that would have occurred, such as, on aquatic and permafrost effects.

#### 3.4 KIA

KIA did not have comment for HBML 2007 Annual Report for Doris North project.

# 3.5 NRCan

- 1. Further information and clarification regarding Jetty construction are required including:
  - No details have been provided on the construction including the timing, modification
    to original plans (modification to DFO fisheries Authorization) and any mitigation
    measures implemented.
  - Condition 19 of final hearing report: This condition is related to maintenance of integrity of the jetty and its foundation. The report does not indicate whether any instrumentation has been installed for monitoring the thermal condition of the jetty foundation.
- 2. Infrastructure: The Proponent provides a list of work completed with respect to construction of infrastructure (e.g. jetty, laydown area, all season road etc.). No details

have been provided regarding these components including construction details, section of the road completed, mitigation measurements implemented or monitoring conducted related to effects on permafrost or water quality. NRCan recommends that further information regarding these details be provided.

3. Baseline data collection and monitoring activities: Condition 11 (in final hearing report) provides the requirements for the information that monitoring information must contain and these include date, time and place of data collection, analytical methods or techniques utilized and results of any analysis. NRCan suggests that the Proponent has not satisfied Condition 11 as this information is lacking. In addition the Proponent has not commented on the significance of the results obtained in 2007 with respect to earlier baseline data collected, validity of predictions (of impacts and proposed mitigation) made in the EIS etc.

# 3.6 TC

1. TC regulatory requirements for an Oil Handlin Facility (OHF). Part II of the Response Organizations and Oil Handling Facilities Regulations and the Oil Handling Facilities Standards stipulates the proponent's specific responsibilities. The fundamental requirement is the production of an Oil Pollution Prevention/Emergency Plan for the fuel transfer with a ship. An OHF is a tank farm of a combined storage capacity of greater than 100 cubic meters that is filled directly from a ship (i.e. a tanker or barge greater than 150 gross tons). This plan must be submitted and reviewed by Transport Canada prior to such tanks being put into use. This plan is a regulatory requirement.

#### 4 SUMMARY

The project construction for Doris North Project, as indicated by HMBL in the early 2008 was delayed. Also originally proposed underground mine development has been deferred due to ongoing re-evaluation of Miramar development plan by HBML. As confirmed through the observations from NIRB's site visit, the overall status of all constructed permanent facilities, and temporary facilities established for construction, demonstrates good management and maintenance, with adequate environmental protection protocols and procedures in place.

Due to the decision made by HBML to defer underground mine and mill development, parts of the PEAMP monitoring program, in particular those closely related to underground mine and mill plant operation, might too early to request HBML to implement at current stage. However other monitoring programs, including those being implemented such as Wild life Mitigation and Monitoring Plan, have been triggered by the commencement of construction of the project. further discussion between Monitoring Officer and HBML is necessary to determine: which plan(s) should be implemented, while which plan (s) can be held temporarily as long as HBML schemes its overall development plan for Hope Bay district.

<sup>&</sup>lt;sup>5</sup> The letters sent Stephanie, cc'ed to Li Wan, NIRB from Alex Buchan, HBML on Jan.22, 2008, Re: *HOPE BAY: Doris North Update.* 

Pursuant to NLCA Sections 12.7.1 and 12.7.2, in order to fulfill the post environmental assessment monitoring mandate for Doris North project, the Monitoring Officer has completed a Board Memo, which contains suggested recommendations for Doris North Project. As long as Board made a final decision to those recommendations, then approved recommendations shall be integrated into this monitoring report and distribute to the proponent (HBML) and parties.

Overall, the Proponent appears to comply with most of the terms and conditions contained within the Doris North Project Certificate. However, there are certain conditions where non-compliance is evident and which requires the Board's consideration. Furthermore, there are other Parties referenced in the Project Certificate which have yet to fulfill their responsibilities related to the role of the SEMC and this also requires the Board's consideration.

# Appendix I



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11 September 2008

Stephanie Autut Executive Director Nunavut Impact Review Board PO Box 1360 Cambridge Bay, NU X0B 0C0 sautut@nirb.ca

Dear Ms. Autut.

# Re: Hope Bay Mining Ltd. (HBML) development of the Hope Bay belt and the Miramar Doris North Project

I would like to update you on progress on the Hope Bay Project. Based on a review of the Doris North project plan and associated mine development scenarios, HBML (Newmont's operating company at Hope Bay) has decided that the approach which best allows the company, the Inuit Beneficiaries and communities in western Nunavut to realize the highest value in the belt is to focus our efforts on a district wide mining and milling plan. Such a plan for the Hope Bay belt will include the Doris, Madrid/Narrtuk and Boston deposits and continued exploration drilling throughout the district.

The infra-structure currently being established under the Doris North Project, together with the separate authorizations regarding Windy Road, is critical to develop the long-term access and modern facilities needed to move Hope Bay forward. Exploration and mine planning at Hope Bay are restricted by a lack of infra-structure. Updated works in 2008 that will facilitate ongoing development of Hope Bay include but are not limited to:

- A new airstrip at Doris;
- Modern camp facilities;
- Fuel storage;
- 11 km of all weather road including Windy
- Exploration and project drilling.

Tail Lake also remains a critical project component. In a re-engineered configuration, it will provide the project's tailings facility for the development of the larger project.

Our commitment is to develop and operate Hope Bay as a world class operation. To that end, Newmont Mining Corporation is re-examining the optimal path to realizing the value of the Doris deposit in conjunction with the development of the Madrid/Narrtuk and Boston resources. As we continue in that re-examination, we have decided to defer proceeding with the Doris North underground operation as a stand alone project as was originally proposed by Miramar. The deferral will allow us to optimize the mining methods, establish centralized mill locations and help accelerate overall timing for development across the whole belt.

Going forward, HBML will meet with the NIRB, NWB, and the federal and territorial regulators to look at the monitoring necessary, as our current activity is refocusing on advanced exploration and infra-structure programs and the assessment and permitting processes that will be necessary to move the belt wide project forward.

Thank you, very much for your time and consideration of this letter. Should you have any questions please feel free to contact me at 720-917-4489 or at <a href="mailto:chris.hanks@newmont.com">chris.hanks@newmont.com</a>

Sincerely yours,

Chris Hanks
Director, Environment and Social Responsibility
Hope Bay Mining Ltd. an affiliate of
Newmont Mining Corporation

# **Appendix II**

# Minutes of Meeting between NIRB with Newmont

**Date & Time**: Wednesday, June 25<sup>th</sup>, 2008 @ 9:30 am

**Participants:** 

NIRB: Li Wan, Leslie Payette and Pam Gross (summer student)

Newmont: Chris Hanks and Alex Buchan

# **Project Progress Introduction:**

### Newmont:

- Newmont essentially is unable to operate mine as permitted to do due to the new planning for whole Hope Bay properties.
- Facilities to be constructed: Doris North Camp, Road, Water Treatment Plant and Airstrip.
- Newmont will make a decision in the next few months about future construction plans for Doris North.
- Newmont will combine comments by August of 2008 from the GN about wildlife Mitigation and Monitoring Management Plan (WMMP).
- Newmont agrees that any modifications during the project execution, as a result of engineering refinery, should be reported to the NIRB, i.e. the adjustment of the location of fuel tank pad and mine site camp, whether those changes trigger a new Environmental Assessment.
- Scoping of future 'big' project (i.e. next potential big mine project subject to review)
  - Baseline information will continue to be gathered for bigger project.
  - Newmont will provide the status of all plans.
  - \*Possible proposal of amendments to not include mine however airstrip, port, etc.
  - New 'Big' Project maybe submitted in 2009, 2010 with the intention to start development in 2012, 2013.

#### NIRB:

- NIRB Received 2007 Annual Report; ready to distribute for comment.
- If the any those adjustments, i.e. location of fuel tank pad and campsite at Doris trigger a Environment Assessment from related Authorizing Agency, it is very possible for NIRB to exempt the screening.

# Regional SEMC vs. Project specific SEMC:

#### Newmont:

- Newmont provides KIA Board of Directors with reports annually that contains indicators etc.
- Newmont and KIA have communicated and achieved initial agreement regarding KIA's participation to project specific SEMC.
- Appendices in PC in particular the commitment list are inconsistent with front end of document, and the list was not agreed by the proponent at the time this PC was issued. It makes Alex Buchan's Socio-Economic monitoring difficult.
- Newmont's monitoring reports will follow 12 months following construction.
- Newmont will share information between themselves and KIA

#### NIRB:

- Outlined Board Motion on regional SEMCs and project specific SEMCs. Board declare its standing points regarding the functionality of regional SEMCs, and is drafting the letter to INAC and GN regarding fulfilling the requirements stated in PCs.
- NIRB's project monitoring officer will work with the Doris North SEMC members to finalize the Terms of Reference (TOR) of SEMC proposal from Newmont upon the Board the received comments from INAC, GN and work out final decision.
- Regarding those discrepancies between the front end and associated appendix, NIRB's opinion is the main text should prevail. However Alex can list those discrepancies to monitoring officer to see if any solution can be worked out.

# Discussion based on the Outline of discussion for 2008 Monitoring Programs Doris North Project (prepared by NIRB'S Monitoring officer and attached ):

- 1. Post-environmental assessment monitoring program.
  - A. Environmental, Health and Safety Management Plan, comprising of the flowing list:

The name of the Plan		<b>Current Status</b>
1) '	Wildlife Mitigation and Monitoring Plan	Under mplementation
2) ]	Environmental Protection Plan	Status Unclear
3)	Emergency Response and Spill Contingency Plan	Emergency Response plan is
for Mine, Spill Contingency has been covered by Water License.		
4) (	Occupational Health and Safety Plan	Status Unclear
5) l	Reclamation Plan	Related to Mine Operations
6) l	Education and Orientation Plan	Will not as stated in FEIS
7) ]	Human Resources Plan	Will not as stated in FEIS
8) 1	Inuit Involvement Plan	Related with IIBA
9) (	Community Relations Plan	Under Implementation

10) Monitoring and Follow-up Plan

Status Unclear

11) Auditing and Continuous Improvement Plan

Status Unclear

B. Noise Abatement Plan

*In implementing but unclear whether it* 

has been finalized regarding

the content and format

- C. All Compliance Monitoring Plans or Programs, such as those associated with:
- 1) Fisheries Act and associated Authorization

Reported in the annual report

2) Nunavut Water Board Class A License

*Implementing waiting for the* 

MMER amendment

Newmont will provide an update to NIRBs Monitoring officer regarding aforementioned plans and relevant applicability and implementations in light of current state of project development.

2. The implementing status regarding issues listed in NIRB 2006 Monitoring Report

#### Recommendation #1

Item #1 and #5 have been solved. Items #2-4, 6-10, not yet.

Consulting firm (Golder) has discussed with GN for solutions, and will work out and report to NIRB.

#### Recommendation #2

It is fulfilled as included in the submitted 2007 Annual Report dated on May 30, 2008

#### Recommendation #3

It is fulfilled as included in the submitted 2007 Annual Report dated on May 30, 2008

#### Recommendation #4

Newmont states that it is unclear yet, but will be reported.

#### Recommendation #5

Newmont states that it is unclear yet, but will be reported.

#### 3. The site visit

NIRB's preliminary site visit will be arranged for early September 2008.

# **Appendix III**

# SEMP Government Comments Responses

# **Engaging Communities**

Both GN and INAC have asked for greater detail on how we will engage communities during SEMC meetings. We feel that community engagement for our activities is addressed by our Community Relations Plan which has previously been submitted to NIRB and has been implemented for 2 years.

There are long standing concerns from the KIA regarding community involvement in a SEMC. Our company feels it is critical that KIA be involved in our SEMC and that we cannot have actual community representation on the SEMC as KIA would strongly object and most probably refuse to participate, as they have stated already clearly to NIRB on the Jericho SEMC.

### **Reporting Process**

INAC has concerns over the reporting process. They believe we have the primary responsibility on socio economic reporting. We disagree. Nowhere in Condition 28 does it say that we are primarily responsible. NIRB direction is clear that they understand that data on Socio Economic matters is a shared responsibility between the proponent and Government as the proponent is not the owner of many critical data indicators. It does say we must suggest to the Committee and NIRB what the reporting requirements should be. This we have done.

#### **INAC- NIRB Issues**

It is apparent that INAC and NIRB have different visions of socio economic monitoring of projects, based on the comments from INAC to NIRB on our SEMC proposal. We are not in a position to influence this level of discussions and as a result, we must allow these groups to reach agreement on a vision for socio economic monitoring and concentrate on meeting Condition 28.

# GN -Flexibility and Modification

Several GN comments are directed at the SEMC and SEMP being flexible and open to modification. We have formed the basis of the SEMC and SEMP to operate and if we are given approval to proceed, we will be mainly in the role of a Committee member. If the SEMP requires modification, this is set up as a Committee decision within the TOR. We cannot foretell what the Committee may decide in the future. The only concern we may have is that if changes are made to indicators within a 24 month mine life, then actual trend analysis will probably be very difficult.

# **GN** – Data Availability

GN points out some data may not be available. We thank them for this notice. However, if we remove indicators where data may not be available, the end result will be that it will appear these indicators have been discounted, which would not be accurate. Indicators without data should also be noted.

### **GN- Baseline Report**

GN questions how the monitoring is linked to baseline information. Baseline information was collected in 2003 and there are now probable gaps in the information. A general response to this is that baseline and monitoring is linked by the EA process of issue identification, development of VECS, impact analysis and public review, which has already occurred. In terms of relevance, if baseline information is relevant to the indicators being tracked under the SEMP, and this information is available from Government sources from 2004 to 2007 inclusive, then it should be linked to the SEMP. We would look to GN to provide this data.

# **GN Indicator Specific Comments**

GN has made specific and detailed comments on some of the SEMP indicators. They have also made some suggestions as to changes in what should be monitored and how. Generally, our response should be that this is Committee business. We may have our own ideas and responses to each of these issues, however, as an example it is possible that KIA may have its own thoughts on topics. Therefore, to be fair to other parties, these should only be discussed at the Committee level. For some of these suggested changes, AMEC is advising us that there are good reasons for the indicator datum to stay as written. This advice could be requested in writing from them. For some other comments, a simple change is acceptable.

# **GN Direct Employment of Nunavut Residents**

This can be tracked and this suggestion can be brought to the Committee in the future.

### **GN Total Payroll and Overall Economic Benefit**

If the GN has some other ways of measuring overall economic benefit, we should be pleased to consider their proposal to provide further information at the Committee level.

#### **GN Collecting Data at a Reasonable Cost**

The way it is written, the Committee decides whether the cost of data is reasonable. We cannot be left open to sign blank cheques to fund GN basic economic research.

# GN - Addition of New Objective - Nunavut Inuit Employment

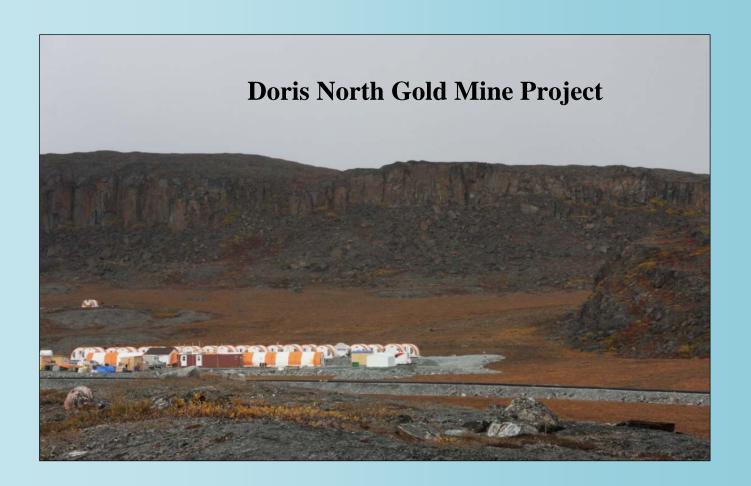
This can be tracked and this suggestion can be brought to the Committee in the future.

# GN - Presenting Data for Years Prior to DN Monitoring Period

The only indicators that can be tracked prior to DN startup are ones we have identified as coming from Government. If GN is willing and able to provide this data, it will not be overlooked.



# SITE VISIT REPORT



September 10, 2008

	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:	
	West Kitikmeot region, Nunavut
Contact:	41 B 1
	Alex Buchan, Manager of Community and External Relations, Hope Bay Mining Limited
Visit conducted by:	
	Li Wan – NIRB Monitoring Officer Ryan Barry – NIRB Technical Advisor
Date of visit:	
	September 10, 2008
Photography:	Li Wan, Ryan Barry

Project:

#### 1. Introduction

The Doris North Gold Mine project (Doris North Project) is located on the mainland in the West Kitikmeot region of Nunavut, approximately 125 km Southwest of Cambridge Bay, 75 km Northeast of Umingmaktok, and 5 km South of Roberts Bay. At the completion of the Part 5 Review of the Doris North project, 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 December 2007, Newmont Mining Corporation (Newmont) successfully purchased the controlling interest of Miramar, the parent company of Hope Bay Mining Ltd. (HBML, Newmont's operating company at Hope Bay). The transit of the various licenses and permits from Miramar HBML was completed in early 2008. In March 2008, Newmont completed the acquisition of the controlling Miramar and its subsidiaries, thereby becoming the new owner of the Project.

Construction of the project infrastructure initiated in early 2007 is currently ongoing. Newmont has been reviewing the previous owner's Project schedule and development plan, and reevaluating both in light of their global mining experience and plans for development of the overall Hope Bay district., by the most recent correspondence, BHML has decided to defer the underground mine and mill plant.

# 2. Objectives & Purpose of Site Visit

Pursuant to NLCA Sections 12.7.1 and 12.7.2, the NIRB is responsible for the post environmental assessment monitoring of the Project in accordance with Project Certificate #003. 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 Article 12.7.2(b)]; and
- b) provide the information necessary for agencies to enforce terms and conditions of land or resource use approvals [NLCA Article 12.7.2(c)].

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

- Doris North Project Certificate #003;
- Final Report on Wildlife Mitigation and Monitoring Program;
- Information regarding screening application during revised Water License Application;
- Noise Abatement Plan;
- Information regarding recent applications with Fisheries and Oceans Canada (DFO); and
- HBML 2007 Doris North Gold Mine Project Annual Report.

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

# 1. Roberts Bay area site

- a. Roberts Bay Jetty
- b. Fuel transfer station
- c. Tank farm facilities
- d. Solid waste disposal and management facilities
- e. Barge anchoring piles

#### 2. All weather road and airstrip

- a. All-weather road
- b. All weather airstrip

# 3. Doris Camp site

- a. The camp construction status
- b. Fuel tank facilities
- c. Water intake facilities at Doris Lake
- d. Explosive Storage facilities during construction
- e. Sewage treatment plant
- f. Quarry 2 operation status

#### 4. Other issues

- a. Wildlife monitoring
- b. Noise monitoring
- c. Air quality

# 3. 2008 Site Visit

On Wednesday September 10, 2008, NIRB Monitoring Officer Li Wan and Technical Advisor Ryan Barry met with Alex Buchan, Manager of Community and External Relations for HBML, and flew to the Doris North site from Cambridge Bay via the HBML charter. Upon arrival at the Project, NIRB staff and Mr. Buchan accompanied Alfred Penner, SNC Site Superintendent for the Project, on a comprehensive tour of the Doris North site. This group was later joined by Matthew Kawei, Senior Environmental Coordinator for HBML and Chris Hanks, Director of Environment and Social Responsibility for MHBL. The site tour included all relevant project components and points of interest identified by the NIRB's Monitoring officer.

### 3.1. General Observations

Upon arrived at the Doris North project site, after a brief introduction of the objectives of this site visit by the NIRB staff, the site visit was carried out by a site tour accompanied by the aforementioned personnel from HBML, this site tour started from the south end of current construction activities- Doris Camp site, and ended at Roberts Bay area.

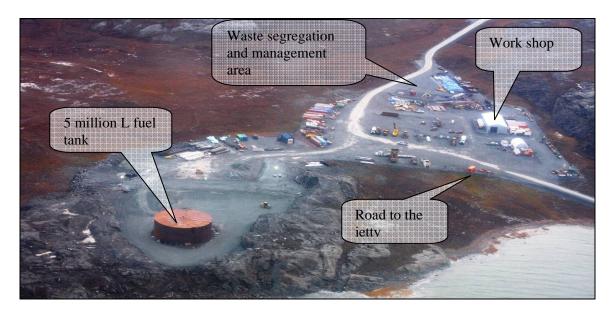


Figure 1. A bird's eye view of Roberts Bay area

The all-weather road begins at Roberts Bay Jetty and runs south to the future Doris North mine site, approximately 5 km total Length. The middle section of the route incorporates the Project airstrip, 900 meter in length, created by significantly widening that portion of the road. Both the all-weather road and airstrip have been completed, and are currently in full operation. From onsite observations, they are functioning as designed and maintained in good working order.

In the Roberts Bay area, the jetty has been fully constructed, but is currently in need of repair. The front part of jetty has slumped and, while not hampering the current use of the jetty as an offloading facility, needs to be repaired to maintain structural integrity. According to Mr. Kawei, this repair work is on hold, awaiting SRK engineer's determination for the proposed work. The repair work is expected to be completed in 2008. Project staff members were anticipating the arrival of a fuel barge from NTCL in the next day or two, and were making the final preparations to ensure a successful fuel transfer.

A 5 million liter carbon steel fuel tank (Figure 1) has been constructed within a secondary containment berm, and is ready to receive the bulk fuel shipment. Project staff explained that NTCL would be transferring all fuel from the barge at the jetty to the storage tank via a dedicated fuel line. NTCL would be responsible for the transport of the fuel until it has been completely transferred into the storage tank.



Figure 2. The road leading to the new camp, with Doris Lake and Quarry 2 visible.

At the Doris camp site, the permanent camp has been constructed. Other facilities, including the fire water tank, power generator house and cold storage buildings for camp and future mine operation are also nearing completion. A modular sewage packaging plant has been positioned on site. The permanent potable water pipes with heat tracing have been placed along the main road at Doris camp site and are awaiting installation. The temporary construction camp facilities, presently used for site personnel, are kept in good order and general appearance. During the site tour, many modifications to the approved site plan were highlighted by Project staff, and explanations were given regarding the necessity of each. Generally speaking, most modifications were required due to improved engineering designs resulting from ground truth analyses by Project engineers.

Following the site tour, a short discussion was held between NIRB and Project staff regarding the new development plan for Hope Bay district. Project staff was confident a formal statement would be issued by Newmont in the coming days.

# 3.2. Roberts Bay Area

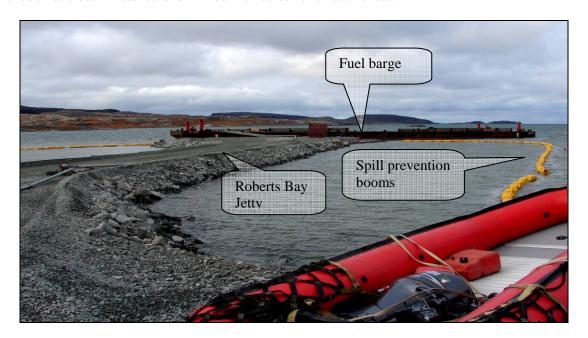
#### 3.2.1. Roberts Bay Jetty

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.

Although the 95 meter long jetty at Roberts Bay was functional during this site visit and being readied for receiving an NTCL fuel barge, the thermistor cables and temperature loggers in the jetty foundation required by NIRB's Project Certificate have yet to be installed. Project staff indicated that, while the intention is to install these features in the near future, other required work had been given higher priority. A definitive timetable for installation of this equipment was not provided.

As previously mentioned, the front portion of the jetty has slumped and requires repair. An extension application for an *Authorization for the harmful alteration disruption and destruction of fish habitat* under the *Fisheries Act* had been submitted to DFO by HBML in July 2008, which was approved by DFO on August 28, 2008 would allow HBML carry out the required repairs. Also, DFO had authorized HBML' modification to carry out the installation of rock shoals in the vicinity of the Roberts Bay jetty, to compensate for fish habitat lost by building the jetty. The shoals have been installed and will be monitored for effectiveness.



**Figure 3.** The jetty at Robert's Bay, with an empty barge platform anchored in place.

During the Nunavut Water Board water licensing process (summer of 2007), a pair of concrete barge anchoring piles were proposed to replace the originally designed concrete blocks at the jetty shore as barge anchoring. However, during the site visit it was noticed that these concrete anchoring piles were not present at the shore area. Project staff explained that the concrete piles had been installed previously, but the NTCL barge captain deemed them unnecessary, choosing to fix the barge at jetty only. Therefore the anchoring piles had been subsequently removed.

#### 3.2.2. Fuel tank in Quarry #1

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 liter fuel tank made of carbon steel has been installed within the former Quarry #1 site (Figure 4). A secondary berm, with a 110% containment capacity of the fuel tank, has been created surrounding the fuel tank and is almost complete. An impermeable lining has been buried about 0.3 m under a surface of crushed granular materials within the secondary containment berm. The remaining work for the fuel storage area consists of installing piping from the jetty to the fuel tank, to transfer the fuel from the fuel barge.



**Figure 4.** Fuel Tank (5 million liter) at Quarry #1 near Roberts Bay

#### 3.2.3. The 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.

The jetty area has been readied for the upcoming transfer of fuel from the fuel barge to the 5 million liter storage tank in Quarry #1. Spill prevention booms are anchored in place and floating on the water adjacent to the jetty. To prevent potential spills during fuel transfer, a spill pane has been placed under a temporary fuel transport pump and associated hose joints. A fuel transfer station sits within a secondary containment berm, and spill kits are readily available and immediately accessible. An oil-water separator is also on-site, ready to be set up if required to separate fuel and water deposited in the secondary containment berm.

A series of piping will be required to carry the fuel from the fuel transport area at the jetty to the 5 million liter storage tank in Quarry #1, but this piping has yet to be installed. Project staff explained that the fuel transfer from jetty to the fuel tank was within the fuel carriers' (NTCL) contract, therefore the piping and physical transfer of fuel is fuel carriers' responsibility. The ship's captain is ultimately responsible and will supervise the entire fuel transfer process.



Figure 5. Fuel transfer station with fuel transport pump contained within a berm 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. During the current construction stage, all non-combustible wastes and hazardous materials are shipped off site to authorized waste disposal facilities in the NWT or Alberta, owing to the unavailability of proposed landfill facility in quarry 2#. All combustible waste (including food and human waste), both from the Roberts Bay site and Doris camp site, are disposed of in a new incinerator at the Roberts Bay waste management area.



**Figure 6.** 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 mine site has been completed and is in operation. This road was upgraded in this summer by widening the original design from 6 m to 8 m, based upon requirements from Prevention Services, the Workers'

Safety and Compensation Commission Board Northwest Territories and Nunavut. This work was exempted from screening by the NIRB in this summer .

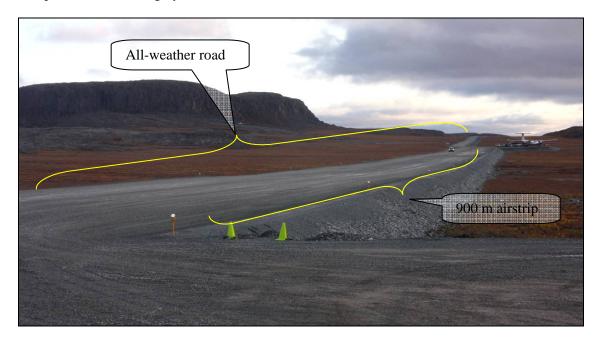


Figure 7. All-weather road and air strip from Roberts Bay to the Doris camp site.

Within the alignment of the all-weather road, a 900 m airstrip has been constructed by widening a significant portion of the road. Signaling stations were installed on both sides of the airstrip and strict operating procedures are in place to meet federal requirements. Prior to traveling along the airstrip, vehicles must radio an operator for permission, and the road is closed for a window of time during incoming and departing flights.

Road turnouts are available on both sides of road with every 1 km interval. Based on the Project's revised NWB water license application supporting documents, there should be 5 caribou crossings along the all-weather road from the Roberts Bay area to the Doris camp site. During this site visit, no such caribou crossings were found on the completed road. Project staff explained that the purpose of installing caribou crossings along a road is to allow caribou across the road when the road base is too high for them to have a clear line of sight to the other side. For the Doris North project, the completed all-weather road bed is not high enough to obscure the caribou's line of sight to other site of road, therefore the originally designed caribou crossings were eliminated during construction.

# 3.4. Mine Site Area

# 3.4.1. Doris Camp site

#### 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.

A 118-person camp at the future Doris North mine site was nearing final construction during the NIRB site visit. The Doris camp facilities include an incinerator, waste water treatment facility, a

power generator house, fire water tank and related accessories, camp/mill sedimentation pond, temporary waste rock pile ground and other facilities. The construction site was well maintained and the temporary construction camp well organized and managed.

During the site visit, it was noted that some modifications to the original project design were implemented by project engineers during construction. Project staff claimed that the required modifications had been approved by KIA and included:

- Adjustments to the location of the mine site camp;
- Adjustments to the location of the power house;
- Addition of the fire water tank and pumps;
- Elimination of original designed fuel tank farm; and
- Elimination of the laydown and chemical reagent storage areas

During a meeting between HBML and NIRB on June 25, 2008, HBML staff discussed the modifications at the Doris North mine site, but a formal and detailed report was not received by NIRB's Monitoring Office. During the site visit, an updated site plan was provided to NIRB staff, with detailed engineering drawings illustrating all relevant features.



**Figure 8.** New camp site at Doris mine site

#### 3.4.2. Freshwater intake

Permanent potable water pipes with insulation and heat tracing have been placed along the all-weather road from Doris Lake to the Doris North camp site. A water pump house has been constructed beside Doris Lake with water pumps installed inside. The temporary potable water facilities including water hose and pump for the construction stage was in operation during the site visit. A stationary water intake dock in Doris Lake, contained within the original project designs, has been replaced by a floating water intake facility. This change was approved during

the NWB licensing process, with the aim of reducing impact to the aquatic environment in Doris Lake.

#### 3.4.3. Sewage treatment plant

A sewage treatment packaging plant, consisting of two modular cars, has been placed at the Doris North camp site. Currently, grey water is treated in a temporary facility, with effluent discharged on the tundra as permitted by the Project's water license. As required by Environment Canada, human waste is incinerated daily in an incinerator located at the Roberts Bay site. The incinerator will be relocated to the Doris camp site when camp officially opens. Project staff noted that it is currently a challenge to meet the discharge standards for grey water using the temporary facility, and this situation is expected to significantly improve once the sewage treatment packaging plant is fully operational.

# 3.4.4. Quarry #2

Condition 33 states:

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

Quarry #2 is currently 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 and operated.



Figure 9. Crushing facility at Quarry #2

Project staff explained that the temporary explosive storage facility was not yet built as planned. Currently explosives required for use in Quarry #2 are ready-made off-site. Materials for manufacturing explosives are currently stored on a dock on the far side of Roberts Bay, a good distance from all other facilities as per regulatory requirements. An explosive storage facility pad

has been built on the east side of the all-weather road for future use. Ammonium nitrate currently stored within the Roberts Bay area, will be moved to this storage facility once it is finished.

# 3.4.5. 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.

#### 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.

Project staff informed NIRB staff that Mr. Matthew Kawei is the HBML's designated on-site wildlife specialist, who is available to work with the NIRB's Monitoring Officer. The training required under condition 24 (see above) is currently provided by Mr. Kawei and other specialists that are brought into camp for that purpose. For example, Mr. Andy MacMullen of BearWise is brought on site each year to provide bear safety training for all project staff. Additional proof of training will be made available to NIRB's Monitoring Officer.

In January of 2007, HBML submitted a Wildlife Mitigation and Monitoring Plan (WMMP) to the NIRB. Due to several outstanding issues raised by the Government of Nunavut – Department of Environment (GN-DoE), this WMMP has not yet been approved by the NIRB. On August 8, 2008 the NIRB's Monitoring Officer directed HBML to resolve the outstanding issues and submit a revised WMMP. This revised WMMP has not yet been submitted to date. Also the 2007 Wildlife Mitigation and Monitoring annual report was not submitted to the NIRB as required by Appendix D of the Project Certificate #003. Project staff had wildlife mitigation and monitoring annual report in hand and were preparing final edits, with the intent of submitting it to the NIRB in the near future. By the newest correspondence from HBML, this report would be submitted to NIRB at round 15,2008. Following this submission, a meeting with GN-DoE will be arranged by HBML to solve outstanding issues.

# 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. Noise data was collected and analyzed from four different monitoring locations in 2007 field season, with results included within the *HBML 2007 Annual Report for Doris North Gold Mine Project*. Project staff explained that noise measurements and monitoring are conducted by specialists from Golder using mobile data collectors. Therefore, permanent devices are not required on site. A site map showing all noise monitoring locations has been provided to the NIRB in following up email. (See Appendix A).

#### 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.

Atmospheric monitoring stations have been installed and are fully operational, located on the north shore of Doris Lake and the southwest side of the Doris camp. These monitoring stations are operated and maintained by trained professionals, and appear to be in good working condition.

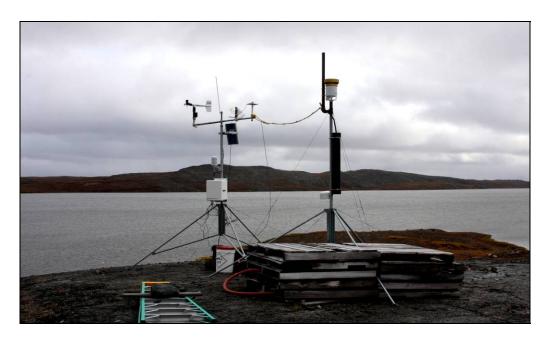


Figure 10. Atmospheric monitoring station on the north shore of Doris Lake.

# 4. Findings

#### 4.1. Roberts Bay Jetty

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

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

A properly designed fuel transfer pipe/hose and associated spill prevention measures as per condition 20 have not yet been installed.

#### **4.3.** Doris mine site modification

Many modifications to the original project design have been implemented during construction, without prior notification being given to the NIRB's Monitoring Officer as per Condition 34 of the Project Certificate,

# 4.4. Site wildlife specialist training

All on-site 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. However, there is no report to NIRB's Monitoring Officer by BHBM to date, regarding the trainings on effects of noise on wildlife, recording wildlife sightings, waste management, records management, which are required by Condition 24 in the Project Certificate.

# 4.5. Air quality monitoring reporting

Atmospheric monitoring stations have been set up and are in operation, though the air quality monitoring results were not reported to the NIRB's Monitoring Officer every six (6) months as required by Condition 23 of the Project Certificate.

# 5. Summary

The Doris North project has undergone significant progress since initial construction commenced in 2007. Several key infrastructure facilities including the Roberts Bay jetty, all-weather road and air strip have been established and are currently in operation. Other infrastructure required for mine operation, such as the permanent camp site, are undergoing construction at both Roberts Bay and the Doris North mine site.

The overall status of all constructed permanent facilities, and temporary facilities established for construction, show good management and maintenance, with adequate environmental protection protocols and procedures in place.

Observations made by NIRB staff during the recent Doris North site visit have shown that HBML has been compliant with the majority of the terms and conditions contained within the Doris North Project Certificate. The findings listed in this report may warrant further direction from the NIRB to HBML in order to ensure the objectives of the terms and conditions in Project Certificate #003 are maintained.

Prepared by: Li Wan

Title: NIRB Technical Advisor/Monitoring Officer

Date: September 19, 2008

Signature: Wesli

Prepared by: Ryan Barry

Title: NIRB Technical Advisor Date: September 19, 2008

Signature:

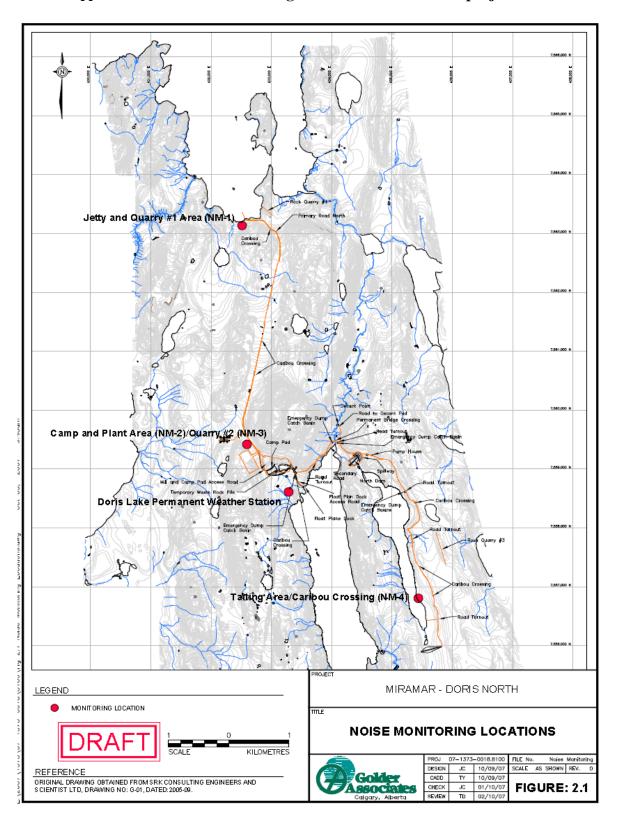
Reviewed by: Jeff Rusk

Title: Director, Technical Services

Date: October 7, 2008

Signature:

Appendix A: the noise monitoring locations at Doris North project site



# Appendix V Site visit follow up from HBML



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30 September 2008

Li Wan Technical Advisor Nunavut Impact Review Board PO Box 1360 Cambridge Bay, NU X0B 0C0 lwan@nirb.nunavut.ca

Dear Mr. Wan,

# Re: Up date on 2007 - Doris North Wildlife Mitigation and Monitoring Program and other issues related to the Project Certificate

I have just gotten off the phone with Golder and Associates. We reviewed my comments on the wildlife report and they have promised to have a report I can send you by about October 15, 2008. I am uncertain why Golder ran so far behind in its reports to Hope Bay this year, but I have requested drafts to be to me by mid-January 2009 for 2008 so that even with revisions we can have them to you by March. Once the revisions are complete I have told the Golder guys that they will accompany to meet with the GN on the outstanding issues. I will notify you of this meeting so that you may attend if you so desire. These edits were necessary to try and clarify issues raised by yourself related to wildlife reporting.

Now that Hope Bay Mining Ltd (HBML) has made it's decision to defer the Doris North underground mine and mill, I am having our land and legal coordinator put together a table based on the Project Certificate so that we can do what I suggested in June, which is to indicate which parts of the project are either being built or will be built. We can then reasonably suggest which parts of the Project Certificate reporting may not longer be relevant. Infra-structure that has or will be built will include the jetty, Roberts Bay tank farm and laydown area, the Doris Road, the airstrip, Doris camp, the Matrix Camp pad which is in the general area of the proposed mill pad, the Doris Lake water intake and the sewage outfall on the tundra, and quarries 1 and 2. Essentially these facilities will be used to support advanced exploration in the Hope Bay Belt. I will forward you a copy of the September 11<sup>th</sup> letter to NIRB.

As per your request, HBML will provide you with plans on the structures which have been built. SNC has informed me that the as built drawings will be available by around November 1, 2008. I will provide them to you at that time. All of the foot print rearrangements that have been made have been discussed with our land lord KIA who is the manager of IOL lands upon which the project is constructed. Once the spread sheet described in the second paragraph is complete, I will contact you to have a discussion with you.

Thank you, for your consideration of this letter. If you have any further questions please feel free to contact me at 720-917-4489 or <a href="mailto:chiral-newmont.com">chris.hanks@newmont.com</a>

Sincerely yours,

Chris Hanks Director, Environment and Social Responsibility Hope Bay Mining Ltd. an affiliate of Newmont Mining Corporation