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Sanikiluaq

October 15<sup>th</sup>, 2010

Mr. Li Wan  
Technical Advisor  
Nunavut Impact Review Board (NIRB)  
P.O. Box 1360  
Cambridge Bay, NU., X0B 0C0

Dear Mr. Wan,

**RE: Consideration of a New Alternative in the Draft EIS for the Mary River Project**

The Qikiqtani Inuit Association (QIA) Department of Lands and Resources has undertaken a review of Baffinland Iron Mines Corporation's (BIMC) *Road Haulage Option*.

QIA recognizes the recent material submitted by BIMC is the result of serious considerations on the development options associated with the Mary River Project. BIMC's development efforts also include a commitment towards completing a Road Haulage Option Feasibility Study. As expressed in BIMC's *Road Haulage Option* document there are significant merits to exploring the use of the Tote Road in the context of mine operation. Given the attention BIMC is directing to the *Road Haulage Option*, QIA is appreciative of the opportunity to provide commentary to NIRB. In soliciting comments from interested parties NIRB has asked for feedback on the following points:

- Any additional information to that has been outlined in the EIS Guidelines for the Project which might be required by reviewers to ensure that the proposed "Road Haulage Option" can be adequately assessed as part of the technical review of the Draft EIS.
- Any other related comments or concerns regarding the inclusion of the proposed alternative in the Draft EIS.

In developing our comments, QIA has undertaken numerous discussions with communities in the project area. QIA's efforts include face-to-face discussions with BIMC and community members, as well as, follow-up meetings with CLARC, HTO and Hamlets in each of the three communities (Arctic Bay, Pond Inlet, Clyde River) immediately affected by the *Road Haulage Option*.



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In preparing comments QIA undertook a review of the following documents:

- Mary River Project Development Proposal. BIMC, March 2008.
- Guidelines for the Preparation of an Environmental Impact Statement for Baffinland Iron Mines Corporation's Mary River Project (*"the Guidelines"*). NIRB, November 16, 2009.
- Consideration of a New Alternative in the Draft EIS for the Mary River Project. NIRB, September 10, 2010.
- Consideration of a New Alternative in the Draft EIS for the Mary River Project and Road Haulage Option. BIMC, September 7, 2010.

## Alternatives Assessment and Guideline Adequacy

Responding to the first of NIRB's comment areas requires discussion of several topics. For QIA, the initial topic is whether or not the *Road Haulage Option*, as presented by BIMC, respects the intent and requirements of the alternatives assessment established by the *Guidelines*. Another, equally important topic is whether or not the *Guidelines* require amendment(s) to address the *Road Haulage Option*.

With respect to alternatives assessment, section 6.1 of the *Guidelines* requires that:

*"The EIS shall include an explicit analysis of all alternative means of carrying out the Project components, including a "no-go" alternative, the identification and application of criteria used to determine the technical feasibility and economic viability of the alternatives to the Project (e.g. transportation, natural, social, economic and cultural environment). This analysis must be done to a level of detail which is sufficient to allow NIRB and the public to compare the Project with the alternatives in terms of the economic costs and the environmental, social and economic impacts and benefits. The proponent must include reasons for selection of the Project as the preferred alternative, and the reasons for rejection of other alternatives."*

Section 6.1 of the *Guidelines* further directs that alternatives assessment for the Mary River Project include the routing of the railway and the location of the seaport, and, alternatives to year round shipping from Steensby Inlet. Although the specific alternatives identified in the *Guidelines* mention of the use of Milne Inlet and project shipping, the *Road Haulage Option* is not captured as an explicit alternative.



Prior to the release of the *Development Proposal (2008)* BIMC determined, and made publically known, their plans to conduct commercial shipping of iron ore using a fleet of icebreakers through Steensby Inlet. As demonstrated in Table 1, the *Road Haulage Option*, brings back into focus the vital importance of Milne Inlet and the Tote Road. The increased reliance on Milne



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Inlet and the Tote Road, particularly given the project history and the importance of the area to Inuit, will require additional attention throughout the review process.

Though QIA understands the *Road Haulage Option* offers a host of potentially positive project opportunities (such as advancement of permanent, local, full-time jobs and local contracting) QIA is equally committed to ensuring a fulsome review of the project occurs. The *Road Haulage Option* clearly expands potential project impacts over a larger project area. Consequently, the *Road Haulage Option* will add an additional level of complexity to the community consultation elements of the review process.

In preparing these comments, QIA sought and received feedback from Community Lands and Resource Committees (CLARC) in Arctic Bay, Pond Inlet and Clyde River. Additionally, the CLARC and Hamlet of in Pond Inlet held a public meeting to discuss the *Road Haulage Option*. Also, in Arctic Bay a public radio session was chaired by QIA. As demonstrated in Appendix 1, community members in Pond Inlet feel the *Road Haulage Option* has the potential to cause a domino effect to the marine environment. Furthermore, community members feel current Baffinland activities are already affecting caribou migration patterns.

In Arctic Bay, when asked about the effects that the increased shipping will have on marine mammals the CLARC stated:

*Narwhal's go into the Inlets to give birth and they will be affected, Bearded Seals, Ringed Seals, Harp Seals also have birthing area's on the shipping route so they will also be affected. Bowhead Whales also migrate along the route so they will be affected too. Zoo plankton, fish and cod also live in those areas so they will be affected also. CLARC Committee asks that there be no ship movement during the time the fish are going up stream. Orcas also migrate along the route so they have the potential to be affected.*

The potential for Milne Inlet to be used as the primary port and shipping location during rail construction to Steensby Inlet now exists. The potential for the Mary River Project to operate as a 21-year mine supported entirely through Milne Inlet now exists. In each of these scenarios the mine model changes - albeit to a project with differences in local and regional environmental impacts. Based on the opinions expressed by the communities to date, the test for the *Road Haulage Option* will lie in the presentation and reception of baseline information, impact assessment and management plans. From QIA's perspective the increase in project magnitude (i.e. multiple development options) will be reflected in the magnitude of the review process.

Appendix 1 is included for reference purposes so NIRB and other interested parties are aware of the materials presented to each of the three North Baffin communities.





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## Review Capacity

The *Road Haulage Option*, when combined with the Steenbsy Rail Option, will require a greater amount of review attention and therefore greater participation from interested parties. QIA, as a non-profit Inuit organization is concerned that the breadth, depth and complexity of the review will lead to significant resourcing challenges. QIA is strongly requesting that NIRB, in conjunction with the Minister of Indian and Northern Affairs, consider the role intervener funding can play in the involvement and efficiencies of the review process.

## Project Communications

QIA encourages BIMC to present a clear project development vision as early as possible. QIA understands that BIMC intends to submit the Draft Environmental Impact Statement on or before December 20<sup>th</sup>, 2010. From QIA's perspective greater certainty around the project development path at or near the onset of the review process will afford the proponent a more certain review process. QIA also feels it is important to mention that our offices will likely be closed for several weeks over the Christmas season.

Knowing the way in which project changes can change public understanding and perception, QIA strongly encourages strong communications between BIMC and communities in the project area. As evidenced by Appendix 2 the proponent is strongly encouraged to improve their community interaction. QIA hereby requests that BIMC present for distribution a more wholesome communication strategy to address the proposed *Road Haulage Option* and project specific community interactions. The strategy should include how information can be shared in advance of community visits for all those with an interest in the project. The strategy should also include a schedule of anticipated events. Materials should be equally available in Inuktitut and English. QIA feels the need to improve communications has been repeatedly conveyed to BIMC, unfortunately there still exists a level of discomfort and mistrust between communities and BIMC. Given the number of communities involved in the project assessment, QIA feels there are clear solutions that will not only address community concerns, but will also prove to be economically beneficial for BIMC.

As raised in previous project submissions to NIRB, the amount of material available in Inuktitut is an element requiring additional attention. Inuktitut materials are required for QIA to hold CLARC meetings, for fulsome public understanding and engagement. QIA believes BIMC is aware of the need for Inuktitut materials and is striving to ensure materials are available. Furthermore, QIA strongly request that other parties, including NIRB, strive to make Inuktitut materials available. For instance at recent CLARC workshops the absence of a complete Inuktitut version of the *Guidelines* created significant difficulty when conducting discussions on the application of key environmental assessment features such as Valued Ecosystem Components. Additionally, QIA feels it is prudent at this stage in the review process to raise the timing of Inuktitut documents



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## Table 1

QIA Analysis of Original Development Proposal  
and Possible Impacts with Proposed Road Haulage Option – English and Inuktitut

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<b>Project Component</b>	<b>Development Proposal (2008)</b>	<b>Tote Road Haulage Option</b>	<b>Changes between Development Proposal (2008) and Tote Road Haulage Option</b>	<b>Possible Impacts Resulting from Project Changes</b>	<b>NIRB Guidelines</b>
<b>Open Water Shipping along North Baffin to Milne inlet</b>	<p>Open water shipping during the 4-year construction phase.</p> <ul style="list-style-type: none"> <li>• 12 Ships First Year, 3 to 4 next four years</li> <li>• Additional shipping as and when required for large equipment.</li> <li>• Shipping route through Eclipse Sound passing Pond Inlet into Baffin Bay</li> </ul>	<p>Open water shipping during construction and operation</p> <ul style="list-style-type: none"> <li>• 3-4 commercial shipping vessels per week</li> <li>• Additional supply vessels</li> <li>• 50-60 return trips/season</li> <li>• Shipping route through Eclipse Sound passing Pond Inlet into Baffin Bay</li> </ul>	<p>Increased frequency and magnitude of shipping activities</p>	<p>Potential negative impact to marine wildlife.</p> <p>Potential negative impact on Inuit Harvesting rights in Eclipse Sound and Milne Inlet.</p>	<p>6.5.8 (Marine Shipping)</p> <p>8.1.13 (Marine Wildlife and Marine Habitat, baseline data)</p>
<b>Use of the Milne Inlet lay down area</b>	<p>Temporary lay down areas during construction phase:</p> <ul style="list-style-type: none"> <li>• 21.3 Million Litres First Year, 13.3 ML Second Year, 8.8 ML Third Year, 15.7 ML Fourth Year, 0 Litres Fifth Year</li> <li>• Temporary/seasonal port facilities</li> </ul>	<p>The following areas will be required during construction and operation phases :</p> <ul style="list-style-type: none"> <li>• Permanent laydown areas for fuel, equipment and supplies (quantities unknown)</li> <li>• ore stock piles</li> <li>• ore loading and conveyance systems</li> <li>• Floating dock facilities with on-land winter storage</li> </ul>	<p>Likely larger footprint, i.e. greater space requirements.</p>	<p>Potential increased disturbance to land.</p> <p>Potential disturbance to archaeological sites.</p>	<p>6.5.1 (Milne Inlet)</p> <p>8.2.8.2 (Culture, Resources, and Land Use, IA)</p>

<b>Milne Tote Road</b>	Upgraded for the construction season	Upgraded for continuous operations	Likely changes to the design requirements of the road in support of increased usage.	<p>Potential increase in dust.</p> <p>Potential barrier to caribou crossing and migration.</p> <p>Potential impacts to other terrestrial wildlife.</p> <p>Potentially more numerous and/or larger quarry sites.</p>	<p>6.5.2 (Tote Road)</p> <p>8.1.2.1 (Air Quality, Baseline Information)</p> <p>8.1.3.2 (Noise and Vibration, Impact Assessment(IA))</p> <p>8.1.6.2 (Groundwater/Surface Waters, IA)</p> <p>8.1.10.2 (Terrestrial Wildlife and Habitat, IA)</p>
<b>Milne Accommodation Complex</b>	Small contingent during construction	Current Milne Inlet accommodation complex will be expanded to ~100 beds	<p>Increased physical presence – people, supplies, equipment and flights.</p> <p>Increased waste water disposal.</p>	<p>Potential increase in impacts associated with noise, air, terrestrial and marine environments.</p>	6.5.1(&2) (Milne Inlet, Project description)
<b>Mary River ore loading and handling</b>	Crushing, Screening and handling for rail transport to Steensby Port	Increased crushing, screening and ore handling for truck transport to Milne Inlet, increase footprint.	Increase in early ore production, affecting all aspects of operations	<p>Potential increase in project size and footprint.</p>	<p>6.5.3.2 (Ore Loading and Handling)</p> <p>6.5.3.3 (Overburden &amp; Waste Rock Disposal)</p>
<b>Maintenance services</b>	Mine, rails and road corridors	Maintenance services likely need to be expanded to accommodate ore haulage trucks and road support crews at both Mary River and Milne Inlet sites.	Potential increase in immediately available jobs/training opportunities		<p>8.2.2 (Education &amp; Training)</p> <p>8.2.7 (Contracting &amp; Business opportunities)</p>
<b>Mary River accommodations and administrative</b>	Current organization structure to manage proposed operations	Increased numbers of operators and support staff will be required to manage the trucking activities.	Potential increase in immediately available jobs/training opportunities		6.5.3.8 (Other Facilities at the Mary River Mine Site)

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Table 1 QIA Analysis of Original Development Proposal and Possible Impacts with Proposed Road Haulage Option

## Appendix 1

CLARC Meeting Materials



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## Arctic Bay, Clyde River and Pond Inlet CLARC's

The Department of Lands and Resources is asking the CLARC's in the affected communities to comment on Baffinland's the proposed Road Haulage Option.

The Road Haulage Option contemplates trucking ore from Mary River to Milne Inlet. Ore would then be shipped during open water shipping season (approximately July to October). This will require three ships a week for approximately 50 to 60 passages a year through Eclipse Sound to Baffin Bay. Baffinland is planning this option for 21 years the suggested life of the project. Relative to the Development Proposal (March 2008), this Road Haulage Option will dramatically increase the shipping frequency through Milne Inlet and Eclipse Sound. The tote road usage would dramatically increase.

QIA is requesting feedback about this new option. Here are some questions to consider when looking at the Road Haulage Option:

- Which marine mammals may be affected?
- Where will marine mammals be affected?
- Do you feel that the increased shipping will affect traditional harvesting practices with Narwhal's, ring seals and bowhead whales? Would this impact other harvesting (I.E. Fish)?
- Are there concerns about effect the increased tote road usage may have on wildlife. I.E. Caribou, dust impact, migration of caribou, etc?
- Do you feel that Baffinland has adequately explained the proposed changes within your own community? How and when did address the community?
- Does the CLARC wish to inform their community about this project change and seek comment from the community?

QIA has included a table to better explain the proposed changes, additionally NIRB has translated the documents sent to NIRB. If you have any questions or comments please contact Matthew Akavak at 867-975-8421.

Sincerely,

Nigel Qaumariag

Environmental and Regulatory Affairs Advisor



September 7, 2010

Ms. S. Autut  
Executive Director  
Nunavut Impact Review Board  
P. O Box 1360  
Cambridge Bay, Nunavut  
X0B 0C0

Via email: [sautut@nirb.ca](mailto:sautut@nirb.ca)

Dear Ms Autut

**Re: Consideration of a preferred alternative as part of the Draft Environmental Impact Assessment**

The purpose of this letter is to provide the Nunavut Impact Review Board (NIRB) with a description of a current study which may be incorporated into the Mary River Draft Environmental Impact Statement (DEIS). Please find enclosed the web link for two recent press releases dated June 10, 2010<sup>1</sup> and July 12, 2010<sup>2</sup> outlining the Company's intention to undertake a study to evaluate the economic feasibility of trucking iron ore from the Mary River Deposit # No.1 to Milne Inlet, and then ship the ore to markets during the open water season. The road haulage construction and operation will occur in parallel with the construction and operation of the Port Steensby rail line corridor. The attached document provides a synopsis of this "road haulage alternative".

The *Guidelines for the Preparation of an Environmental Impact Statement for Baffinland Iron Mines Corporation's Mary River Project*, dated November 16, 2009 (Final Guidelines) requests the Proponent to undertake a review of alternatives within the Project (section 6.1). In the Guidelines there are several alternatives within the Project that the Company is suggested to consider and stipulates that other alternatives should be evaluated. Previously, the trucking of ore was uneconomic; that is, the cost per tonne of hauling ore by truck per kilometer is more than an order of magnitude higher than by rail. Iron ore prices are now at levels that make this option reasonable to consider. Within the context of these two factors, BIM is considering incorporating road haulage into the DEIS.

The scoping list provided in the Final Guidelines (see section 3.2) and more specifically, the project components listed in section 3.2.1, includes the main elements required for the analysis of the road haulage option. The analysis within the DEIS will be done to "a level of detail which is sufficient to allow NIRB and the public to assess all possible components of the Project in terms of the economic costs and the environmental, social and economic impacts and benefits" (see section 6.1).

During the summer of 2008, Baffinland undertook a bulk sample program where approximately 113,000 tonnes of iron ore was shipped to blast furnaces in Europe. During the bulk sample period, Baffinland learned many valuable socio and operational lessons (use of elders at the site, ore loading periods etc.). The road haulage option provides an expansion and extension of the bulk sample phase activity and we can benefit from what we learned through this phase.

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<sup>1</sup> <http://www.baffinland.com/News/NewsDetails/2010/Baffinland-Reviews-Early-Stage-Production-via-Road-Haulage-and-Accelerates-Completion-of-Draft-Environmental-Impact-Statement/default.aspx>

<sup>2</sup> <http://www.baffinland.com/News/NewsDetails/2010/Baffinland-Initiates-Early-Stage-Production-Feasibility-Study-for-Road-Haulage1122331/default.aspx>

Table 1 provides a comparison of the Project Description modifications when the road haulage option is introduced as part of the Project.

Table 1 – Elements of the Trucking Option

<u>Project Component</u>	<u>Current Project Description</u>	<u>Proposed Preferred Alternative – Road Haulage</u>
1. Shipping along the Baffin Island north coast to Milne Inlet	Open water shipping is proposed during the construction phase and also when large equipment is needed for the Mary River Project.	Open water shipping will occur both during construction and operations. The increased frequency, longer duration and greater magnitude of these activities need to be evaluated in the DEIS.
2. Use of the Milne Inlet laydown area	Temporary lay down areas are proposed during construction.	Temporary lay down areas are still needed for construction. As well, ore stock piles, ore loading and conveyance systems, and port facilities will need to be constructed and operated during the life of the project.
3. Milne Tote Road	Upgraded for the construction season.	Upgraded for continuous operations. All weather water crossings and realignment of certain sections of the road will be constructed with quarry material. Most of this work will be needed even if the haulage alternative was not considered.
4. Milne accommodation complex	Small contingent during construction.	Milne Inlet accommodation complex will be used during operations.
5. Mary River ore loading and handling	Crushing, screening and handling for rail transport to Steensby Port.	Additional crushing, screening and ore handling for truck transport to Milne Inlet.
6. Maintenance services	Mine, rails and road corridors.	Maintenance services need to be expanded to accommodate ore haulage trucks and road support crews at the Mary River camp.
7. Mary River accommodations and administrative support	Current organization structure to manage proposed operations.	Increased numbers of operators and support staff will be required to manage the trucking activity.

A key aspect of the road haulage operation is the need for annual open water shipping from Milne Inlet and trucking along the Milne Tote Road throughout the life of the Project, rather than just during the construction season and periodically during operations when the transport of large equipment is required. Therefore, for the purpose of determining the effects assessment, we will assume road haulage will continue for the life of mining operation (i.e. 21 years). This conservative assumption will lead to an assessment of the scenario where the potential project interactions have the longest duration, frequency and intensity.

The environmental assessment is part of the project planning process that allows for the integration of environmental (including socio economic) considerations and engineering details into the project design and development. The road haulage option is an example of using the environmental assessment as an opportunity to make changes to a Project taking various factors into account.



We have reviewed the Final Guidelines and believe the provisions outlined therein provide sufficient guidance for us to pursue the socio economic and environmental effects analysis. However, we request NIRB review the above noted letter and reference material and provide any guidance you may have as we continue to prepare the Mary River DEIS.

I look forward to your response. Should you wish to discuss this matter further, please do not hesitate to contact Mr. M. Pickard, ([matthew.pickard@baffinland.com](mailto:matthew.pickard@baffinland.com)) Manager Sustainable Development or the undersigned.

Sincerely

A handwritten signature in black ink that reads 'W. A. Napier'.

W.A. Napier

Vice - President Sustainability

Email: ([bill.napier@baffinland.com](mailto:bill.napier@baffinland.com))

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## **Road Haulage Option**

### **A Project Refinement to the Mary River Project**

#### **Introduction:**

Baffinland Iron Mines Corp. (BIM) is conducting an investigation to determine the feasibility (economically, environmentally and operability) of trucking iron ore from the Mary River Deposit # No.1 to Milne Inlet, then shipping the ore to markets during the open water season.

The reasons for undertaking a review of the road haulage option are provided below:

- Current, elevated iron ore prices are expected to remain high for the foreseeable future;
- The Company gained valuable operating experience during the 2008 Bulk sample operation;
- The capital cost of the road haulage option is within the financial range that Baffinland could raise without the assistance of a partner;
- The road haulage option utilizes existing infrastructure – allowing for it to begin sooner than the rail option;
- With a shorter horizon to begin operations - permanent, local, full-time jobs and local contracting opportunities, will be available sooner; and
- Section 6.1 of the NIRB Guidelines required the Company to evaluate alternatives within the Project.

A feasibility study is currently underway and will provide a detailed design of the road haulage option. This information will be available for the DEIS scheduled for submission in late 2010. However, for planning purposes a preliminary outline of the road haulage option is described below.

#### Project Schedule and Project Description

The road haulage construction and operation will occur in parallel with the construction and operation of the Port Steensby Rail corridor. Assuming the project is released from the environmental assessment process by the first half of 2012 and the necessary operating permits are issued by the end of that year, then limited production could occur as early as 2013 with full production occurring in 2014. Contingent on financing, the Port Steensby Rail three to four year construction project would start in 2013 once all the necessary permits have been obtained.

The following assumptions<sup>1</sup> have been used to define the road haulage option:

The current design production for the road haulage option is about 3 million tonnes per annum;

- The trucks used for ore haulage will have a 120-tonne capacity;
- The composition of the ore is similar to that identified in the “Rail Project” with 75% high quality lump iron ore and 25% premium quality fine iron ore (sinter feed);
- The rail line option production would remain at 18 million tonnes per annum;

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<sup>1</sup> The decision to review the road haulage proposal was made in July, therefore the details such as truck size etc. are preliminary. The purpose of this document is to provide the reader with a description of the road haulage proposal at this early stage of development.



- The life of mine operation will be for 21 years, similar to the Rail Project;
- Approximately, 150 to 300 workers will be required during the construction period; and
- Approximately 300 to 500 workers will be required to support the road haulage activity during the operational phase.

The construction, operation and closure phases of the road haulage project are described below:

## **Construction:**

### Introduction

The construction of the trucking option is anticipated to commence in early 2013 allowing for some iron ore to be shipped during Q3, 2013. During 2011 and 2012, upgrading and maintaining the Milne Tote Road will continue. Once the permits have been acquired, construction activities would focus on prestripping and preparing the open pit for mining, upgrading the existing Tote Road, and developing ancillary facilities at Milne Inlet.

### Mining Plan Open Pit and Mary River Camp

The mining plan will use a similar mining location and sequence as described in the existing rail line Project. Preliminary development will include the preparation of the ore and waste pads, removal of overburden, construction of mine haul roads and the placement of crushers and other mining equipment. The Mary River existing camp, potable water supply, power supply, laydown areas, fuel storage, temporary explosives storage, sewage treatment plant and ponds will be upgraded. The airstrip will be reconfigured to accommodate larger aircraft.

### Tote Road

The Tote Road was upgraded to a three season road in 2008 and continues to follow the path of the original 1960's exploration road. Under the Rail Project, the Tote Road would need to be upgraded so that ore sorting and crushing equipment and other Mary River infrastructure and other ancillary facilities can be transported to the mine site. As part of the road haulage option, the Tote Road requires further upgrades to support the year-round ore haulage. These upgrades include realignment of sharp curves, reduction of slope gradients and improved visibility. All of these upgrades will improve safe operations on the road and mitigate erosional damage caused by weather-related events.

### Milne Inlet

The Milne Inlet Camp will accommodate some of the road haulage crew. The Port will provide a staging point for consumables and depot for equipment. A floating or other similar structure dock to allow for the ore transfer to the ore carriers will be constructed. The ore storage area will store the ore during the periods when shipping transport does not occur. The Milne Inlet Port will only operate during the open water season.

The existing 40 person camp, related water supply, sewage treatment plant and ponds, airstrip, power supply, laydown areas, and fuel storage will be expanded to approximately 100 beds. Construction activities include expanding the camp and related infrastructure, fuel storage and the construction of additional laydown, ore stockpiles, ore handling facilities, floating dock structures, dock storage during winter and supply ship unloading.



## **Operations:**

If the environmental assessment process is completed in the first half of 2012, a partial shipment of ore could be shipped from Milne Inlet in late 2013. Full production would occur in 2014. For the purpose of evaluating the environmental and socio economic effects of the Project, it is assumed that the road haulage option continues for the life of the Rail transport project.

### Mining and Mary River Camp

Primary accommodations and flights in and out of the site would be based at the Mary River Camp. Ore would be removed from Deposit # No.1 via conventional open pit mining techniques. The ore will be crushed, screened and transported by truck to Milne Inlet.

The waste rock will be stored in the same locations as identified in the rail transport project. During the first few years of operation the stripping ratio of waste to ore is 0.6:1.0. For the life of the project the stripping ratio is 1.7:1.0. Also, any potentially acid generating rock will be managed in the same manner described in the Rail project. All run-off from the open pit and waste storage area will be controlled as described in the Mary River Project Description.

Crushing and screening will be carried out at Mary River to produce a lump and fine product. Although not finalized, the ore will be crushed to a size of -42mm, then the ore will be screened. The + 28mm rock will be sent for tertiary crushing, the -7 mm undersize ore will be directed to the "fines stockpile" and the - 25mm to +7mm sized rock will be sent to the "lump stockpile".

Trucks with a 120-tonne capacity are used successfully at other Arctic mining operations and will be considered for this Project, although there may be the potential to use larger trucks. The haul distance between Deposit # No.1 and Milne Inlet is approximately 200km, round trip. The estimated cycle time for a truck would be 2 trips per 12 hour shift. Taking into account these factors and an assumption of a truck fill factor of 95%, then approximately 20 to 30 haulage trucks will be required for transporting the lump and fine ores to Milne inlet. An additional 25 heavy duty equipment vehicles and 10 light duty trucks will be needed to support the road haulage operation at the mine, Tote Road and Milne Inlet.

All major project coordination would be conducted out of Mary River including equipment maintenance and administration. The Port operations will be coordinated at Milne Inlet. The activities proposed for the Mary River Camp are similar to the proposed 18 million tonne Rail Project.

### Tote Road

The Tote Road will be used for transporting ore from Deposit # No.1 to Milne Inlet and consumables and equipment from Milne Inlet to the Mary River site. These activities along the road would occur throughout the year with possible short breaks during significant weather events and when driving conditions are unsafe.

Upgrades to the Tote Road include realignment to improve gradients (currently as high as 16%) and road surface; improve visibility; improve safety in the operating environment, improve drainage; reduce ongoing maintenance requirements; facilitate snow clearing; and reduce risk of road washouts during freshet periods. The stream and

river crossings will be examined to provide stable, secure structures. Road maintenance would continue throughout the year.

#### Milne Inlet

All ore vessels would be loaded at Milne Inlet and shipped during ice free period, nominally 90 days long. Milne Inlet would be utilized to receive and send out consumables and equipment during the life of the project. During the ice free period about 3 to 4 ships per week will visit the Milne facilities. Each round trip based upon the assumption of Milne Inlet to Rotterdam as the average voyage would take 25 to 27 days at an average speed of 14 knots. The ship will slow to approximately 8 knots near land.

At Milne Inlet, the ore trucks will be side-dumped on a truck-unload-hopper and stacked via a radial conveyor-stacker into stockpiles, ranging from 500,000 to one million tonnes in size. Efforts will be made to minimize drop points on the stockpile. Other measures will be taken to reduce dusting during transport. The stockpiles will be designed with a capacity of approximately three million tonnes. All run-off will be collected and treated if necessary before released to the receiving environment.

Lump and fine ore stockpiles will be loaded onto the shiploader through mobile equipment (front-end loaders) and a conveyor. Protective side shields, aprons and other mitigation measures will be employed to prevent ore loss during ship loading. Ships will be loaded at an approximate capacity of 3,000 tonnes per hour with minimal trimming of the cargoes. It is assumed that if a one-line shiploader is used, it will operate at an average rate of 2,000 - 2,500 tonnes per hour for 20 hours per day giving a daily capacity of 40,000 to 50,000 tonnes dependent upon the ship being loaded.

One design that could be used for the dock is during the open water season use 2 flat deck barges for an approximate length of 120 metres with a floating dock barge extension. Direct loading onto ships is envisioned with conveyors with increased length to minimize length of hauls. After the shipping season has been concluded the barges will be moved to shore or to a safe designated area until the start of the following year's shipping season.

#### **Closure:**

The objective will be to reclaim Project areas to be both physically and chemically stable in the longterm for both public safety and environmental protection. Materials and equipment will either be removed from site or disposed at site, and all hazardous materials and wastes will be removed from site to licensed disposal facilities. The open pit and waste rock stockpiles will be inspected for physical stability. Roads, airstrips and development areas will be recontoured as appropriate to provide longterm stability and reduce the potential for significant erosion. Major water crossings and culverts on the Tote Road will be removed and the slopes stabilized. The closure and reclamation phase is expected to be one year, followed by a minimum of five years of post-closure environmental monitoring to verify reclamation has successfully met closure and reclamation objectives.

## Appendix 2

CLARC Minutes Arctic Bay, Pond Inlet, Clyde River

**1st DRAFT**  
**Pond Inlet Community Lands and Resource**  
**Committee Meeting Minutes**  
**October 04, 2010**  
**Qaggivik Building**

**Call to order**

Chairperson called the meeting to order at 2:11pm and asked Ikey Milton to open the meeting with prayer, after the prayer Chairperson thanked and welcomed the members

**The Mary River Project**

CLARC secretary David Qamaniq, CLARC member Ikey Milton and CLARC Chairperson Philip Paneak read the correspondences as follows;

Item #1. Baffinland Iron Mines Corporation – letter to Ms. S. Autut Exec. Director NIRB, dated Sept. 07, 2010 english and Inuktitut. Consideration of a preferred alternative as part of the Draft Environmental Impact Assessment.

Baffinland Iron Mines Corporation – Letter –Road Haulage Option. A project refinement to the Mary River Project with no date.

Item #2. Nunavut Impact Review Board – Letter – Mary River project distribution list, re: Consideration of a new alternative in the Draft Environmental Impact Statement for the Mary River Project, dated September 10, 2010 in English and September 23, 2010 in Inuktitut, deadline for submission is October 1, 2010

Gov't of Nunavut letter from Marie Duchaine Avatiliriniq coordinator to Nunavut Impact Review Board –Letter – dated September 14, 2010 to Mr. Ryan Barry Director of Technical services NIRB, re: NIRB 08MN053: comment request for Baffinland's Mary River Project : Road haulage option, asking for extension from October 1, 2010 to October 14, 2010. Extension was granted, copy of e-mail from Tara Arko – Assistant Technical Advisor NIRB dated September 23, 2010 4:52pm.

QIA has included a table to better explain the proposed changes, additionally Nunavut Impact Review Board has translated the documents sent to NIRB. If you have any questions or comments please contact Matthew Akavak at (867) 975-8421. from Nigel Qaumariaq, Environmental and Regulatory Affairs.

Item #3. QIA letter to Arctic Bay, Clyde River and Pond Inlet Community Lands and Resources Committee, with no date, six questionnaires?

**Question # 1 Which marine mammals may be affected?**

- Arctic char

- Bearded seals
- Ringed seals
- Narwhal
- Beluga
- Walrus
- Polar bears

They have already been affected. There no more seals at Milne Inlet. There are use to be abundance of them. Sheatie Tagak was in Milne Inlet on his own hunting trip and was asked if he wants to work for BLIMC to pick up devices that were anchored underwater in and around the vicinity of Milne Inlet up to the vicinity of Qarnaaluk, that may have been used to prevent narwhals and seals to get near the vicinity of the Mary River project.

WE DO NOT WANT THESE DEVICES TO BE USED! People who travel to the Milne Inlet vicinity are complaining that there are no more seals vicinity of Milne Inlet until they reach the vicinity of (Tuqajaat) Cape Hatt.

**Question # 2 Where will marine mammals be affected?**

In the vicinities of the following;

- Milne Inlet,
- Qurluqtuq,
- Tugaat,
- Saviit
- Tasiujaq,
- Nallua, Nunasia
- Sanirutiup imaganga

**Question # 3 Do you feel that the increased shipping will affect traditional harvesting practices with Narwhals, Ringed seals, harp seals, bowhead whales? Would this impact other harvesting? (ie, Fish?)**

- Yes, most definitely current marine activities already has impact.

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**Question # 4 Are there concerns about effect the increased tote road usage may have on wildlife, (ie) Caribou? Dust impact? Migration of caribou, etc.**

- Most definitely the wildlife
- That includes stock pile ranging from 500,000 to 1 million tonnes in size. BLIMC quote "Efforts will be made to minimize drop unquote" EFFORTS NOT GOOD ENOUGH! BLIMC Quote "Other measures will be taken to reduce dusting during transport" WHAT KIND OF OTHER MEASURES? BLIMC quote "the stock piles will be designed with the capacity of approximately three million tonnes. All run off (ACID) (RUST) will be collected and treated if necessary before releasing to the receiving environment unquote" IF

NECESSARY NOT GOOD ENOUGH. Recommendation All run off will be collected and treated before releasing to the receiving environment.

The following will also be affected;

- Air quality
- Noise
- Unique landforms
- Permafrost and ground ice
- Soils
- Berries
- Plants important to wildlife
- Peregrine falcon
- The list goes on and on and on.

**Question # 5 Do you feel that Baffinland Iron Mines Corporation has adequately explained the proposed changes within your community? How and when did they address this issue with the communities?**

- No they have not adequately explain the proposed changes within our community, until now, after they (BLIMC) submitted a notice to Nunavut Impact Review Board about wanting to add on DEIS a consideration of a new alternative in the DEIS for Mary River project.
- Baffinland Iron Mines Corporation held a public meeting yesterday at 7:00pm but, there was hardly anyone there, and the two gentlemen from BLIMC did not seem to be able to answer some of the questions and comments made by the general public, they didn't seem to take notes at all.
- NOTE: They BLIMC wasn't scheduled to meet with representatives from Hamlet council, Mittimatalik Hunters and Trapper Organization and QIA board rep, they BLIMC ended up meeting with them away at 3:00pm yesterday til 5:30 or so.
- Pond Inlet CLARC wants QIA Lands employee and an Executive member to come and meet with Pond Inlet CLARC. Ie;QIA Pres. Q/C Chairperson

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**Question # 6 Does the Community Lands and Resources Committee wish to inform their community about this project change and seek comments from the community?**

- They wish to hold a public meeting or hold a call in radio show and seek comments from the community.

Item #4 CLARC Meeting Mary River Sept. 12-17, 2010.

The first half of the workshop on Caribou involve members from 5 Affected communities, Hall Beach, Igoolik, Arctic Bay, Pond Inlet and Clyde River.



The second half of the workshop on Marine mammals would involve members from Hall Beach, Igloolik, Cape Dorset and Kimmirut.

During the workshop participants were presented all the information BLIMC has collected in preparation for the environmental assessment. Participants would also be given a tour of the area so they are more familiar with the project plans.

Pond Inlet CLARC members who were involved on caribou as well as CLARC members who were involved on Marine mammals. Were not happy the way in which BLIMC has set up the meeting, They would have, could have involved everyone north and south, caribou and marine mammals.

#### Item #5 Other comments

- Because deposits 1 and 2 are named Nuluujaak in Inuktitut, if the mine goes ahead the two deposits will no longer exist, we want our younger generations to get cash benefit from the loss of the name Nuluujak, it's been time immemorial that it's been called Nuluujak in Inuktitut.
- BLIMC using outdated caribou study done by Michael Ferguson back in the early eighties or late eighties. We do not like that at all.

Chairperson informed the members that the agenda items have been completed and thanked the member for attending the meeting, meeting adjourned at 4:36pm.

Arctic Bay CLARC Members Meeting  
Held at the HTO Office  
On October 4, 2010 @ 1:00 p.m.

- 1) Opening prayer said by Koonoo Oyukuluk @ 1:08 p.m.
- 2) Introduction from Levi Barnabas about the meeting that was held at Mary River
- 3) Review of letters written by Baffin Land interpreted by Levi Barnabas and CLO, Niore Iqalukjuak and read out to the CLARC members
- 4) CLARC Committee then went over the questions raised by Nigel Qaumariaq one by one and answered them as they went along them

- **Question:** Which marine mammals will be affected?

**Answer:** Narwhal's go into the Inlets to give birth and they will be affected, Bearded Seals, Ringed Seals, Harp Seals also have birthing area's on the shipping route so they will also be affected. Bowhead Whales also migrate along the route so they will be affected too. Zoo plankton, fish and cod also live in those areas so they will be affected also. CLARC Committee asks that there be no ship movement during the time the fish are going up stream. Orcas also migrate along the route so they have the potential to be affected.

- **Question:** Where will Marine Mammals be affected?

**Answer:** The affected areas will be; Eclipse Sound, Navy Board Inlet and Admiralty Inlet – there were hardly any Narwhal's in Admiralty Inlet possibly due to too much ship activity in Lancaster Sound with the Nanook Exercise. However, the Bowhead whales were in great abundance within Admiralty Inlet.

- **Question:** Do you feel that the increased shipping will affect traditional harvesting practices with Narwhal's, ring seals and bowhead whales? Would this impact other harvesting (I.E. Fish)?

**Answer:** Yes it will affect the sport fishing in Milne Inlet

- **Question:** Are there concerns about effect the increased tote road usage may have on wildlife. I.E. Caribou, dust impact, migration of caribou, etc?

**Answer:** Dust will affect wildlife including Caribou, birds of all species: The road will block the Caribou migration routes. Dust will also have an impact on Lemmings, Sandhill cranes, Rabbits, Foxes, Owls, Hawks, Falcons, Ptarmigans, Jaegers and Polar Bears.

- **Question:** Do you feel that Baffinland has adequately explained the proposed changes within your own community? How and when did address the community?

**Answer:** We do not hear of any planned changes. The public is not aware of any changes that are proposed by Baffinland. The only time that some of the people do become aware of the proposed changes is when the CLARC Committee's, Hunters and Trappers Organization and the Hamlet Council receive proposed changes through the NIRB application process but still, it is sometimes too short of a notice when the scheduled meeting dates are too far off and short timeline do not allow some organizations to submit any feedback as sometimes the deadline to submit any information passes by before the required meeting date.

Baffinland does not ask for input from the Communities. If they do come in, they come in without much notice to the public and without informing the Public of what they wish to talk about and they come in after things that they wish to do have already been put in place and have been approved.

- **Question:** Does the CLARC wish to inform their community about this project change and seek comment from the community?

**Answer:** The CLARC Committee wishes to inform the Public through a radio show about the proposed changes and they will meet again on October 12, 2010 to go over what was said during the radio show.

Meeting was adjourned at 4:05 p.m.

**Community Lands and Resource Committee**

**Clyde River**

**Hamlet Office Council Chambers**

October 6, 2010

Meeting called to order at 1:35 p.m.

Lizzie Palituq, CLO, reads the letter from Qikiqtani Inuit Association regarding community concerns on Baffinland road haulage options.

Members that were at Mary River recently also discussed what they were informed of and what they saw while at the site last month.

Since the delegates representing the community of Pond Inlet didn't seem to have major concerns on the project, the members present did not have any new concerns.

They agreed to support the road haulage option as presented by Baffinland.

There are no other items for this meeting.

Meeting adjourned at 2:00 p.m.