BAFFINLAND IRON MINES CORPORATION

MARY RIVER PROJECT

2013 ABANDONMENT AND RECLAMATION PLAN

FOR ADVANCED EXPLORATION ACTIVITIES

JANUARY 2013

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EXECUTIVE SUMMARY

The Mary River Project is an advanced iron ore exploration Project (the Project) located on north Baffin Island, in the Qikiqtani Region of Nunavut. The Project is wholly owned and operated by Baffinland Iron Mines Corporation (BIM) which is jointly owned by Arcelor Mittal and Iron Ore Holdings L.P. In 2008, BIM released a Definitive Feasibility Study demonstrating the robust potential of full-scale development and initiated the regulatory approval process for full-scale development at that time. Currently, the Project has received federal approval based on the recommendation of the Nunavut Impact Review Board (NIRB) and the NIRB is anticipated to soon release a Project Certificate which will allow the Project to enter the regulatory permitting phase. Up to the present time, site programs and activities are designed to support surface exploration, bulk sample reclamation activities, and undertaking various studies and work that support the advancement of the Project to full-scale development.

This Abandonment and Reclamation Plan (the A&R Plan) was prepared to address closure and reclamation as a condition of the surface lease held by BIM with the Qikiqtani Inuit Association and Type B Water Licence issued by the Nunavut Water Board (NWB). This A&R Plan applies to all infrastructures, equipment and material associated with advanced exploration activities for the Project, including facilities located at, and between: the Mary River Camp, the Mid Rail Camp, the Steensby Inlet Camp and the Milne Inlet Camp. The A&R Plan does not address future mine development activities as described in the Final Environmental Impact Statement for the Project (submitted February 2012). Once a Type A Water Licence and a new QIA Land Lease are issued for the Project (estimated April 2013), there will be a requirement to update the A&R Plan based on an expanded work scope that will include mine infrastructure construction and development.

The 2013 A&R Plan and associated financial security estimate have been updated in accordance with the requirements of the Qikiqtani Inuit Association (QIA) Abandonment and Reclamation Policy for Inuit Owned Lands and the NWB water license (License Number: 2BB-MRY1114). The A&R Plan addresses Project-related activity areas and infrastructure related to the Mary River Project and reflects changes in reclamation requirements caused by operations and reclamation activities since issuance of the last version of the A&R Plan (February 2012).

Abandonment Scenarios

All Project-related facilities were designed and constructed to minimize the footprint and to be temporary in nature. These design and construction considerations have facilitated reclamation plans and minimized the engineering required to support the complete decommissioning and reclamation of the site.

Two abandonment scenarios have been described in this A&R Plan: temporary suspension and final abandonment.

A temporary suspension of activities means the temporary cessation of the current program operations, either as planned or due to unforeseen circumstances, typically lasting for weeks to months but could conceivably last for a year or longer. All facilities would be secured in a manner similar to the seasonal shutdown of the existing Mary River Camp that has occurred in past years.

As per the QIA Abandonment and Reclamation Policy, the security estimate assumes a hypothetical worst-case bankruptcy scenario where QIA assumes authority over Project components on Inuit Owned Land. The closure costs assume a hypothetical closure date of October 10, 2013 to reflect the QIA selected date for abandonment.

Final closure and reclamation will include removing all equipment and materials either off-site or into an on-site landfill at Mary River (for inert, non-hazardous, non-combustible materials), and contouring ground surfaces to mimic the natural surrounding topography and to re-establish previous drainage patterns. Materials and Equipment at Mid Rail Camp will be flown to Steensby Camp or the Mary River Camp. Equipment and materials to be taken off-site will be transported overland from Mary River Camp to Milne Inlet. Arrangements will be made with a sealift contractor to collect the shipment of materials and equipment at Milne Inlet and Steensby Inlet and ship material off-site.

A reclamation schedule has been developed assuming productive use of resources performed in a logical manner with consideration given to unique challenges of working in the arctic such that reclamation can be accomplished in a timely fashion and in accordance with the A&R Plan and the regulatory framework established by the Inuit, Federal and Territorial governments. All significant work is scheduled to be completed in Years 3 and 4 with continued land farming and post-closure environmental monitoring taking place through to Year 6. No items are expected to be left as a result of the Project that will require monitoring or management in perpetuity.

Estimated Cost

A spreadsheet costing model as per the QIA Abandonment and Reclamation Policy format has been developed with a comprehensive work item list that addresses all Project-related activity areas and infrastructure related to the Mary River Project. The cost model is made up of a detailed direct cost estimate for each of approximately 220 individual tasks described in the A&R Plan supported by detailed material and fuel balances and detailed estimation of indirect costs such as helicopter and fixed wing aircraft support, camp operations, sealifts, supervision, engineering and post-closure environmental monitoring. Scopes of appropriate detail have been developed for contractor execution of decommissioning, demolition and movement of material to safely meet the reclamation plan objectives.

The cost estimate follows the QIA Abandonment and Reclamation Policy guiding principles and stated assumptions.

Under a worst case abandonment scenario, the reclamation cost is estimated to be about $24,879,000 including contingency, reserve and engineering design and execution planning.

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ᓄᓘᔭᕐᓂ ᐅᔭᕐᓂᐊᖅᑕᐅᓇᓱᒃᑐᖅ ᐱᕆᐊᖅᓯᒪᔪᑐᖅᑲᐅᓕᖅᑐᖅ ᓴᕕᕋᔭᒃᓴᒥᒃ ᖃᐅᔨᓴᕐᓂᖅ ᐱᓕᕆᐊᕐᒍᓪᓗᓂ ᕿᕿᖅᑖᓘᑉ ᐅᐊᕐᓇᕐᒐᓂ, ᑕᒫᓂ ᕿᑭᖅᑖᓃᒃᑯᑦ ᓄᓇᕐᑯᑎᕐᒐᓂ ᓄᓇᕗᒻᒥ. ᑖᓇ ᐅᔭᕐᓂᐊᖅᑕᐅᓇᓱᒃᑐᖅ ᓇᕐᒥᓂᕆᔭᐅᔪᖅ ᐊᒻᒪ ᐊᐅᓚᑕᐅᓪᓗᓂ ᐸᕙᓪᓛᓐ ᓴᕕᒃᓴᓕᕆᔾᑦ ᐅᔭᕐᓂᐊᖅᑏᑦ ᑯᐊᐳᕆᓴᓐ (ᐹᕙᓪᓛᓐ). ᑖᒃᑯᐊᓗ ᐱᖅᑎᖅᑲᖅᑯᑎᒃ ᓇᕐᒥᓂᖅᑲᖅᑐᑦ ᑖᒃᑯᓄᕐᒐ ᐊᓯᓕᐅ ᒪᑎᐅᒃᑯᑦ ᐊᒻᒪ ᓴᕕᒃᓴᓂᒃ ᑎᒍᒥᐊᖅᑏᑦ (LP). 2008ᖑᑎᓪᓗᒍ,ᐹᕙᓪᓛᓐᑯᑦ ᓴᖅᑭᑎᑦᑎᓚᐅᖅᑐᑦ ᓇᓗᓇᐃᔭᖅᓯᒪᔪᒥᒃ ᕿᓇᐅᔭᓕᐅᕈᓐᓇᕐᓂᕐᒪᑕ ᖃᐅᔨᓴᕈᑎᕐᒪᓂᒃ ᓇᓗᓇᐃᖅᓯᓯᒪᕗᖅ ᐱᐅᔫᒪᕆᐅᓪᓗᓂ ᐊᔪᕐᓃᕈᕐᓇᕐᓂᕐᒪ ᐊᑦᕿᔪᒥᒃ ᓴᓇᔭᐅᓕᕐᓗᓂ ᐊᒻᒪᓗ ᐱᕆᐊᖅᑎᓪᓗᒋᑦ ᒪᓕᒐᑎᒍᑦ ᐊᕐᒋᖅᑕᐅᔭᕆᐊᖃᕐᓂᕐᒋᑕ ᑐᑭᒧᐊᕐᓂᒃᓴᕐᒐ ᑲᔪᓯᑎᓐᓇᓱᓪᓗᒍ ᐊᐅᓚᓂᒃᓴᕐᒐ ᑕᐃᔅᓯᒪᓂ. ᒪᓐᓇᐅᔪᖅ, ᐅᔭᕐᓂᖅᑕᐅᓇᓱᒃᑐᖅ ᑐᓂᔭᐅᓯᒪᕗᖅ ᒐᕙᒪᑐᖅᑲᒃᑯᑦ ᓇᒻᒪᒃᓴᕐᓂᕐᒋᑦ ᐊᕐᒋᖅᓱᑎᒃ ᐊᑐᖅᓯᓪᓗᑎᒃ ᑖᒃᑯᐊ ᐊᑐᓪᓕᕐᑯᔭᕐᒋᓐᓂᒃ ᓄᓇᕗᒥ ᐊᕙᑎᓕᕆᔨᒃᑯᑦ ᑎᒥᕐᒐᑦᑕ (NIRB) ᐊᒻᒪᓗ ᑖᒃᑯᐊ ᐊᕙᑎᓕᕆᔨᒃᑯᑦ ᑎᒥᕐᒐᑦ ᖃᓂᑦᑐᒃᑯᑦ ᑐᓂᓯᔪᒪᓪᓗᑎᒃ ᐅᔭᕐᓂᐊᕐᓂᐅᑉ ᐱᔪᓐᓇᐅᑎᕐᒐᓄᑦ ᑖᓐᓇᓗ ᐊᔪᕐᓃᖅᑎᑦᑎᓂᐊᖅᐳᓂ ᐅᔭᕐᓂᐊᖅᑕᐅᓇᓱᒃᑐᒥᒃ ᐊᑐᕐᓗᑎᒃ ᒪᓕᒐᓕᕆᓂᕐᒧᑦ ᐱᔪᓐᓇᐅᑎᑦᑖᕋᓱᕐᓂᕐᓂᒃ. ᓘᓐᓇᒧᑦ ᑎᑭᕐᓗᒍ, ᐅᔭᕐᓂᐊᕐᕕᐅᔪᒥ ᐱᓕᕆᐊᒃᓴᐅᔪᑦ ᐊᒻᒪᓗ ᐱᓕᕆᐊᕐᕈᔪᑦ ᐊᖅᑭᒃᓯᖅᓯᒪᕗᑦ ᐃᑲᔪᖅᑐᐃᓪᓗᑎᒃ ᖃᕐᒐᓂ ᖃᐅᔨᓴᕐᓂᐅᔪᓂᒃ, ᖃᐅᔨᓴᐅᑎ ᓴᕕᒃᓴᖅ ᐱᐅᓯᕆᐊᖅᑎᑦᑎᓃᓪᓗ, ᐊᒻᒪᓗ ᖃᔅᓯᒐᓚᐅᔪᓂᒃ ᖃᐅᔾᓇᓱᕐᓃᑦ ᐊᒻᒪᓗ ᐱᓕᕆᐊᒃᓴᐅᔪᑦ ᐃᑲᔪᖅᑐᐃᔪᑦ ᓯᕗᒧᐊᒃᐸᓪᓕᐊᓂᒃᓴᕐᒐᓄᑦ ᐅᔭᕐᓂᐊᕐᓂᐅᓇᓱᒃᑐᖅ ᐊᐅᓚᓕᕐᓗᓂ.

ᑖᓐᓇ ᓴᒃᑯᐃᓂᕐᒧᑦ ᐊᒻᒪᓗ ᐱᐅᓯᕆᐊᖅᑎᑦᑎᓂᕐᒧᑦ ᐸᕐᓇᒃᓯᒪᔪᖅ ᓴᖅᑭᑕᐅᓯᒪᕗᖅ ᓇᓗᓇᐃᖅᓯᓪᓗᓂ ᒪᑐᔭᐅᓂᒃᓴᖓ ᐊᒻᒪᓗ ᐱᐅᓯᕆᐊᕈᑎᒃᓴᓄᑦ ᖃᓄᐃᓕᖓᓂᒃᓴᖏᑦ ᑕᒪᑐᒧᖓ ᖃᖓᓄᑦ ᐱᔪᓐᓇᐅᑎᖃᕕᐅᔪᓂ ᑎᒍᒥᐊᖅᑕᐅᔪᑦ ᐹᕙᓪᓛᓐᑯᓐᓄᑦ ᑕᒃᑯᓇᓐᖓᑦ ᕿᑭᖅᑖ ᐃᓄᐃᑦ ᑲᑐᔾᔨᖃᑎᒌᖏᓐᓄᑦ ᐊᒻᒪ ᓇᓗᓇᐃᒃᑯᑕᓕᒃ Bᒥᒃᐃᒥᕐᒧᑦ ᓚᐃᓴᓐᓯ ᓴᓇᔭᐅᓯᒪᔪᖅ ᓄᓇᕗᒻᒥ ᐃᒥᓕᕆᔨᒃᑯᑦ ᑎᒥᕐᑯᑎᖓᓐᓄᑦ (NWB). ᑕᓐᓇ ᐸᕐᓇᐅᑎᐅᔪᖅ ᑐᕌᖓᕗᖅ ᐊᑦᑎᖅᓱᕐᒥᑦ ᐱᕐᑯᑎᕐᔪᐊᑦ, ᓴᓇᔾᔪᑏᑦ ᐊᒻᒪᓗ ᐱᕐᑯᑏᑦ ᑐᕌᖓᔪᑦ ᖃᔪᓯᓂᕐᒥᒃ ᖃᐅᔨᓴᕐᓂᐅᔪᓂᒃ ᐅᔭᕐᓂᐊᕐᓗᑎᒃ, ᐃᓚᖅᑲᕐᓗᑎᒃ ᐱᓕᕆᔾᔪᑎᒃᓴᓂᒃ ᐅᑯᓇᓂ, ᐊᒻᒪ ᐊᑯᓐᓂᖓᓂ: ᓅᓗᔭᒃ ᓄᓇᖓ, ᓄᓇᒃᑯᕈᑎᑯᑖ ᐊᖅᑯᑎᖓᑕ ᕿᑎᐊᓂ, ᐃᒃᐱᑭᑦᑐᕐᔪᐊᕐᒥ ᐊᒻᒪᓗ ᒥᑦᑎᒪᑕᓕᐅᑉ ᕿᓐᖑᐊᓂ. ᑖᓐᓇ ᐸᕐᓇᐅᑎ ᓇᓗᓇᐃᖅᓯᓯᒪᓕᖅᑎᑦᑐᖅ ᓯᕗᓂᑦᑎᓐᓂ ᐅᔭᕐᓂᐊᕐᕕᐅᑉ ᐱᓐᖑᖅᑎᑕᐅᕙᓪᓕᐊᓂᒃᓴᖓᓄᑦ ᓇᓗᓇᐃᔭᖅᓯᒪᔪᑦ ᑕᕝᕙᓂ ᐅᓂᒃᑳᓕᐊᕐᒍᓯᒪᔪᒥ ᑭᖑᓪᓕᖅᐹᖅᓯᐅᑎᒥ ᐊᒃᑐᐃᓂᕐᒧᑦ ᐅᔭᕐᓂᐊᖅᑕᐅᓇᓱᒃᑐᒧᑦ (ᑐᓂᔭᐅᓂᑯᐃᑦ ᕕᕝᕚᐊᕆ 2012ᒥ). ᑕᐃᒪᓕ ᐱᔭᐅᒍᑎᒃ ᓇᓗᓇᐃᒃᑯᑕᓕᒃ (Type Aᒥᒃ) ᐃᒥᕐᒧᑦ ᓚᐃᓴᓐᓯ ᐊᒻᒪᓗ ᓄᑖᖅ ᕿᑭᖅᑖᓃᒃᑯᑦ ᓄᓇᒧᑦ ᐊᑐᖅᑐᐊᕈᑎ ᓴᓇᔭᐅᓗᓂ ᐅᔭᕐᓂᐊᕐᓂᐅᓇᓱᒃᑐᒧᑦ (ᓂᕆᐅᒋᔭᐅᔪᖅ ᐃᐸ 2013ᒥ), ᐱᑦᖃᕆᐊᖃᕐᓂᐊᕐᒥᔪᖅ ᐊᑐᕆᐊᖃᕐᓗᓂ ᓄᑖᕈᕆᐊᕐᓗᒍ ᐸᕐᓇᐅᑎ ᓴᒃᑯᐃᓂᕐᒧᑦ ᐊᒻᒪ ᐱᐅᓯᕆᐊᖅᑎᑦᑎᓂᕐᒧᑦ ᐸᕐᓇᐅᑎᐅᔪᖅ ᐊᑐᕐᓗᑎᑦ ᐊᕐᒋᓪᓕᕆᐊᖅᓯᒪᓂᕐᒋᑦ ᐱᓕᕆᐊᒃᓴᐅᔪᑦ ᐃᓚᖅᑲᕐᓂᐊᖅᑐᓂ ᐅᔭᕐᓂᐊᕐᕕᐅᑉ ᐱᓕᕆᔾᔪᑎᒃᓴᕐᒋᑦ ᓴᓇᔭᐅᓂᒃᓴᕐᒋᑦ ᐊᒻᒪᓗ ᓴᖅᑭᐸᐸᓪᓕᐊᓂᒃᓴᕐᒋᑦ.

Mary River Project Area	2008	2009	2010	2011	2012
Mary River Camp	• Partial reclamation of historical and currently generated hazardous materials from the Mary River Project. Materials manifested and shipped off-site by sealift for disposal in approved facilities.	• All historic exploration core has been containerized for long term storage as required by the A&R Plan. Annual generation of new exploration core is stored in containers. • The disposal of all historical hazardous waste from the Mary River Project was completed in 2009. All material was shipped off site by sealift for disposal in approved facilities. Only current working inventories from annual operations remain and disposal occurs annually. • Pond Inlet was used as a primary staging area for the Project between 2004 and 2008. All residual equipment and material was either landfilled or removed from Pond Inlet by sealift. All hazardous material was packaged and shipped south and disposed of in an approved facility. All reclamation work in Pond Inlet has been completed.	• Construction of the access road to the Mary River Landfill and the non-hazardous solid waste landfill was completed in 2010. • All non-hazardous solid waste from the Mary River and Milne Inlet temporary lay down areas created during the bulk sample program, as well as all the historical 1960's waste was landfilled in 2010 and no inventory remains. Current generation of non-hazardous solid waste is directed to the landfill as it is generated. • All hazardous material from the previous year's operation has been packaged and was shipped off-site by sealift to approved disposal facilities. • All residual bulk samples explosives and detonators were detonated at site by the manufacturer in 2010. No explosives, detonators or other explosives products remain at site.	• The tanks-a-lot system (3 concrete tanks, 1 plastic tank and wood infrastructure) was decommissioned and disposed of in the landfill.	Continued deposition of non-hazardous waste into the on-site landfill and backhauling of non-hazardous wastes to licensed recycling and disposal facilities in southern Canada.
Milne Inlet Camp	No activities	• All historical wastes from the 1960's (primarily barrels blown by the wind) and waste from local North Baffin Community use (all terrain vehicles, snowmobiles etc.) were removed from the Phillips Creek estuary by helicopter.	• Residual scrap sealift material from the 2006 sealift executed adjacent to the Pond Inlet HTO cabin north of Milne Inlet camp was removed. No BIM material remains at that site and reclamation has been completed.	No activities	No activities
Steensby Inlet Camp	No activities	• Over 6000 barrels of fuel stockpiled at Steensby Inlet in secondary containment and all contractor equipment was demobilized from Steensby Inlet in 2009. The secondary containment liners have all been reclaimed are packaged ready for disposal in the south on the next scheduled Steensby Inlet sealift. Only a small quantity of barrelled fuel remains in one stand alone secondary containment area supporting operation of the 40 person camp	No activities	No activities	No activities

Mary River Project Area	2008	2009	2010	2011	2012
Milne Inlet Tote Road	No activities	• All historical waste from the 1960's and waste from local North Baffin Community use (snowmobiles, barrels, etc..) were removed from the Milne Inlet to Mary River Corridor by Helicopter. • The Milne Inlet Tote Road was upgraded in a number of areas identified by a geotechnical assessment to ensure the long term physical stability of the road.	• Monitoring of the Milne Inlet Tote Road did not identify any areas requiring additional upgrades. All sections of the road were stable through 2010.	No activities	• The Milne Inlet Tote Road was upgraded at a number of water crossings to ensure the long term physical stability of the road.
Exploration, Geotechnical and Other Areas	• Litter and debris were removed and test pits, channels and in-ground sumps were backfilled as part of the 2008 geotechnical drilling program. All geotechnical non-drill sites have been reclaimed. • Upon completion of the bulk sample extraction in 2008, the pit on Deposit No. 1 was contoured and sloped to ensure the benches were free draining, long term slope stability and safety of the area. The Pit and benches were assessed as stable in 2008 as per the Nunavut WCSS Mine Inspectors Report. Berms restricting vehicle access to the edge of the mountain constructed in 2008 and two seasons of freshet have found zero accumulation of water in the pit. Reclamation of the bulk sample has been completed.	• Reclamation of 50% of the geotechnical drill hole sites along the proposed rail alignment and at the port site have been completed. All future geotechnical and exploration drill hole sites will be reclaimed in the year they are drilled as part of BIM's standard operating practice. • The wind power generation study data collection tower installation located approximately 10 km North East of Mary River has been removed and reclamation of the area is complete. • The historical 1960's exploration camp located half way up the south side of Deposit No. 1 was dismantled and all material removed. • Pond Inlet was used as a primary staging area for the Project between 2004 and 2008. All residual equipment and material was either landfilled or removed from Pond Inlet by sealift. All hazardous material was packaged and shipped south and disposed of in an approved facility. All reclamation work in Pond Inlet has been completed.	• Partial reclamation of historical exploration drill sites on Deposit Nos. 1 and 3 was completed in 2010.	• Reclamation of all geotechnical drill hole sites drilled in 2011.	• Five of the six contractor drill rigs and associated equipment were backhauled. • Continued progressive reclamation of areas associated with drilling and bulk sample programs.

7.0 TEMPORARY SUSPENSION

A temporary suspension of activities means the temporary cessation of the current program operations, either as planned or due to unforeseen circumstances.

A planned shutdown occurs when there is a potential for economic or operational difficulties that would cause a temporary cessation of current operations at the Project sites. Temporary suspension typically could last for a period of weeks to several months but could conceivably last for a year or longer. The intention however, would be to immediately resume operations as soon as all issues have been resolved. All facilities will be secured in a manner similar to the seasonal shutdown of the existing Mary River camp that has occurred in past years.

7.1 PROCEDURES FOR INITIAL SITE ASSESSMENTS

Prior to the temporary suspension, the following site assessments will occur:

- visual inspection of camp structures;
- visual inspection of the bulk sample pit for stability and free drainage;
- inspection of stockpiles if remediated or stability assessment if not remediated;
- testing of stockpile seepage for metals;
- inspection of borrow areas for stability;
- inspection of the fuel storage areas for potential leaks;
- inspection of the water supply system; and
- assessment for needed repairs prior to closure.

7.2 BULK SAMPLE PIT

Mining from the side-hill cut bulk sample pit was completed in 2008. The bulk sample pit was confirmed by land survey at its completion in 2008 and by visual observation during the 2009 and 2010 freshet to be free draining. The pit will be visually inspected as part of the monitoring program to identify any indications of acid generation or metal leaching, and the drainage that collects downstream of the bulk sample pit will be sampled and tested for general chemistry and metals during the semi-annual (twice per year) site visits (discussed below).

7.3 STOCKPILES

The weathered ore at top of Deposit No. 1, including the weathered ore roadbed between the stockpile and the pit has been reclaimed and is expected to be physically stable in the long term. Inspection will be carried out to verify this. Side slopes of the non-representative ore at the crusher location and residual ore stockpiles at Milne Inlet will be re-graded if temporary suspension exceeds 8 months. Any seepage observed from the stockpiles will be sampled and tested for general chemistry and metals during the semi-annual (twice per year) site visits (discussed below).

7.4 CAMP AND RELATED FACILITIES

The following measures have been performed at the Milne Inlet, Steensby and Mid Rail camps and will be undertaken at the Mary River camp facilities in a temporary suspension scenario.

- Tents and camp facilities (i.e., kitchens, outhouses, showers, warehouses, etc.) will be thoroughly cleaned and all open food and wastes incinerated. All unopened food supplies will be contained in sealed and secure containers so as not to attract any wildlife to the site.
- Oil stoves and propane systems will be shut off and supply oil drums and propane cylinders firmly closed.
- Diesel generators will be shut down and winterized according to their manufacturer's procedures.
- Fuel hoses will be drained and storage tanks connected to the power supply will be sealed and inspected.
- Site will be cleaned of any remaining debris.

7.5 EQUIPMENT

Heavy equipment and vehicles will be consolidated at the Mary River and Milne Inlet camps. Small equipment will be returned to a designated warehouse where they will be securely stored.

7.6 ROADS AND AIRSTRIPS

No closure measures are proposed for roads and airstrips during temporary suspension. An inspection of the airstrips and roads will be undertaken to ensure there is no impeded drainage or substantial erosion that requires attention.

7.7 BORROW AREAS

Progressive reclamation of borrow areas as part of operations has commenced, including stabilization of side slopes and grading for natural drainage. Active borrow areas will be left in a stable condition prior to temporary suspension.

7.8 FUEL STORAGE

Bulk fuel storage facilities at Mary River and Milne Inlet sites will be inspected for leaks and all valves and dispensers closed and secured. Drums of fuel will be left within the lined containment areas.

7.9 CHEMICALS

All chemicals present, such as cleaning supplies, lubricants, antifreeze, oils, and greases will be stored away in secure buildings and properly sealed. Any hazardous material will be secured and stored within lined containment areas.

7.10 EXPLOSIVES

All explosives will be placed in the explosives magazines and locked. Currently no explosives or detonators exist on-site.

7.11 WATER SUPPLY AND WASTE MANAGEMENT

The water supply systems (tanks, pipes and lines) will be completely drained, removed and stored away. Waste water treatment facilities will be shut down according to manufacturer's procedures, and any remaining sewage or sludge will be directed to the polishing/waste stabilization ponds.

Non-hazardous inert wastes will be deposited in the landfill and cells will stabilized prior to temporary closure.

Hazardous waste will remain stored in a manner that minimizes environmental risk in preparation for final off-site disposal and/or recycling.

7.12 MONITORING

BIM will arrange semi-annual (twice per year) site visits to inspect the camps, and repairs will be made as necessary. These visits would continue until activities resume. Under this scenario, BIM would notify the NWB and QIA of planned site visits so that the NWB and QIA could chose to attend if desired. QIA and NWB will be copied on all follow-up reports.

Water quality monitoring will be carried out at the stockpile locations and the bulk sample pit as indicated above, and in accordance with the conditions of the water license.

8.0 FINAL CLOSURE AND EXECUTION PLAN

The Mary River Project is an advanced exploration Project with temporary facilities, equipment and infrastructure in support of programs and activities designed to advance the Project to full-scale development. In general, the programs and activities have included exploration drilling and resource evaluation, geotechnical drilling at Project development areas, environmental baseline and monitoring studies, a Bulk Sample Program and the operation of camps, related infrastructure and the Milne Inlet Tote Road. It has been assumed for the purposes of this A&R Plan that essentially all BIM owned assets from the Mary River Project will be placed in the Mary River landfill, or shipped off site as hazardous material. The closure tasks required to achieve final reclamation are based on well defined scopes of work for all aspects of the Project. No items are expected to be left as a result of the Project that will require monitoring or management in perpetuity.

Final closure and reclamation will include removing all equipment and materials either off-site or into an on-site landfill at Mary River (for inert, non-hazardous, non-combustible materials), and contouring ground surfaces. Equipment and materials to be taken off-site will be transported overland from Mary River Camp to Milne Inlet. Materials and Equipment at Mid Rail Camp will be flown to Steensby Camp or the Mary River Camp. Arrangements will be made with a sealift contractor to collect the shipment of materials and equipment at Milne Inlet and Steensby Inlet and ship material off site.

This section outlines the final closure and reclamation plan for all aspects of the Project.

8.1 CLOSURE ASSUMPTIONS

At closure, the following assumptions have been made:

- a scenario where QIA assumes authority over Project components on Inuit Owned Land;
- independent third-party contractor reclaims the site including the use and mobilization and demobilization of third-party contractor equipment;
- the use of on-site fuel for reclamation purposes is not accepted; and
- salvage values for on-site equipment and materials are not accepted as a security credit, in most cases all equipment and materials will be treated as waste.

8.2 PROJECT SITE ABANDONMENT

BIM's Operations Manager, Officers of the Company and Board of Directors have a legal requirement and personally liability to ensure the health and safety of employees and the security of the site to prevent any adverse effect on the environment. Prior to abandoning the site BIM will ensure the water, sewage, fuel, power and hazardous materials are secured. This work will be conducted by BIM Staff prior to abandonment and carries no cost. Specific tasks that will be completed are as follows:

- drain, isolate and secure camp water systems;

- drain, isolate and secure camp sewage treatment plant, lines and lagoons;
- drain, isolate and secure all local fuel storage supply systems;
- isolate and secure all bulk fuel storage systems such that tanks and bladders are isolated and contained within secondary containment;
- secure all barrelled fuel in secondary containment;
- secure all hazardous waste in secondary containment; and
- isolate and safely secure all mechanical and electrical elements.

Upon notification of abandonment of the Project the QIA will need to complete a post-abandonment inspection which is expected to include the following items:

- a commercial flight from Ottawa to Iqaluit return for three people;
- a commercial flight from Iqaluit to Mary River to Milne Inlet to Mary River and return to Iqaluit for three people;
- perform an inspection and secure critical areas of the Project Site; and
- completion of a preliminary assessment to support the closure design and future A&R Plan execution.

8.3 BULK SAMPLE PIT

The bulk sample pit on Deposit No. 1 had its slopes stabilized, base sloped for drainage and safety berms installed around the perimeter upon completion of the extraction of the bulk sample in 2008. The bulk sample pit was confirmed by land survey at its completion in 2008 and by visual inspection during the 2009 and 2010 freshet to be free draining and will be left open. There were no stability issues noted by the Nunavut Workplace Safety and Compensation Commission Mine Inspector during his inspection in September of 2008 and no further concerns noted by BIM in subsequent years. At closure, a safety berm restricting access to the sample area will be installed.

Geochemical test results as described in Appendix C have indicated a low risk for release of acidity or metals in response to oxidative weathering of the material in the ore left exposed in the bench walls of the pit. The walls and floor of the pit will be visually inspected as part of the monitoring program to identify any indications of acid generation or metal leaching, and any seepage that collects in or downstream of the bulk sample pit will be sampled and tested for general chemistry and metals during the site visits (discussed below). No metal leaching or acid generation is expected to occur. Humidity cell testing is undertaken as part of the environmental impact assessment process and is anticipated to confirm this expectation.

8.4 STOCKPILES

It has been demonstrated from the 2008 environmental geochemical testing program and from continued testing that there is a low risk for release of acidity or metals in response to oxidative weathering of the material in the i) weathered ore stockpiled on the Deposit No. 1, ii) non-representative ore stockpiled at the Mary River crusher site and the stockpile pad at Milne Inlet, and iii) representative ore left exposed in the bench walls of the pit and stockpiled at Milne Inlet. Any seepage observed below the weathered ore stockpile during follow-up monitoring will be sampled and tested for general chemistry and metals during the annual post-closure site visits (discussed below). No metal leaching or acid generation is expected to occur. Humidity cell testing being carried out as part of the environmental impact assessment process is anticipated to confirm this expectation.

The weathered ore stockpiled at the top of Deposit No. 1, including the weathered ore roadbed between the stockpile and the pit, has been reclaimed and is expected to be physically stable in the long term.

The representative (i.e. ore grade) material left in the bulk sample pit was contoured and left in a stable and free draining state at the end of the 2008 field season and has remained stable and free draining.

The non-representative ore stockpiled at the Mary River crusher site will be re-graded as required to ensure the area is physically stable and covered in 0.5 m of locally available borrow material for aesthetics purposes.

The stockpile of representative ore at Milne Inlet will be re-graded as required over the non-representative ore pad to ensure the area is physically stable and covered in 0.5 m of locally available borrow material for aesthetics purposes and to prevent dusting of the beach head with non-representative ore.

8.5 CAMP AND RELATED FACILITIES

On-site buildings typically consist of Weatherhaven and Norseman accommodation and work tents, pre engineered style buildings and Quonset buildings constructed on temporary foundations. There are no poured concrete foundations.

All buildings, materials, equipment, machinery, infrastructure which are considered non-hazardous will be removed and/or demolished by hand and/or with heavy equipment and disposed of within the on-site Mary River landfill. Where required, materials to be disposed of in the landfill will be drained of all hazardous materials and fluids. Waste oil, residual fuels and oil/fuel filters will be managed as hazardous waste, contained and removed from site to a licensed waste disposal facility. Any materials that do not comply with the landfill approval will be transported to Milne Inlet and sealifted from site for appropriate disposal. Any equipment and supplies owned by contractors that were on-site during operations will be packaged, transported overland to Milne Inlet and sealifted from site. In the case of decommissioning Milne Inlet Camp, the non-hazardous waste for disposal will be trucked to the Mary River landfill. Waste from the decommissioning of Mid Rail Camp will be flown to Mary River landfill. Waste and materials from the decommissioning of Steensby Inlet Camp will be sealifted off site. The two refuge structures on the Milne Inlet Tote Road are owned by a site contractor and will be towed to Milne Inlet for sealift back haul.

Typical equipment and materials include maintenance equipment, pumps, piping, electrical panels, incinerators, sewage treatment plants and tanks, meteorological stations, hydrology stations, etc. All site utilities including bermed, exposed and buried pipelines and on-site power lines will be excavated, if required, and disposed of in the Mary River landfill. The berms will be graded to existing natural contours.

Although no salvage value of any of BIM's assets have been applied to this estimate, a few pieces of BIM owned high value inventory and ready for shipping will be sealifted from site. This list includes such items as the three large camp generators from Mary River, a stacking conveyor at Milne Inlet and residual bulk and barrelled fuel from the Project. Similarly, at Steensby Inlet the 50 person trailer camp and all the mobile equipment will be sealifted from site. All other BIM owned assets from the Mary River Project will be placed in the Mary River landfill, or shipped off site as hazardous material.

General site cleanup will take place at all camp locations ensuring any wastes are landfilled or disposed of as may be appropriate. A loader will be used at Milne Inlet and Mary River Camp to clean up coarse waste products, with waste being landfilled. Clean up of residual fine waste on the ground will follow.

Coarse contouring with dozers and loaders followed by fine grading with a grader of all disturbed areas associated with the camps will be performed. The surface will be contoured and graded to mimic the natural surrounding topography and to re-establish previous drainage patterns. A berm will be placed across the access road to camp lake to prevent runoff from flowing down the road. Cobbles and boulders will be applied down alongside the road to Camp Lake for erosion control.

All camp areas will be inspected for signs of fuel spills and any contaminated materials excavated as described in Section 8.12.

Geotechnical drill holes not progressively reclaimed will be filled, thermocouple cables removed if present, residual casing cut at surface if present, and sumps graded to natural contours. Exploration drill sites will have their water lines removed, residual casing cut at surface, hole and sump filled with drill cuttings with the remaining cuttings spread evenly over the ground surrounding the hole. Any materials at the exploration drill sites will be disposed of in the Mary River landfill. Exploration drill core will be transferred to sea containers for long-term storage. The containers will be welded closed and stored on the North side of the Mary River airstrip on dry, flat stable ground. Geotechnical core will be disposed of in the landfill.

Salt mixing stations and water pump stations will be dismantled and disposed of in the Mary River landfill.

General reclamation measures for Mary River Area, Mary River Camp, Milne Inlet, Mid Rail Camp and Steensby Inlet are shown on Figures 8.1, 8.2, 8.4, 8.6 and 8.8, respectively.

Post reclamation site conditions for Mary River, Milne Inlet, Mid Rail Camp and Steensby Inlet are shown on Figures 8.3, 8.5, 8.7, and 8.9 respectively.

8.6 ROADS AND AIRSTRIPS

The Mary River and Milne Inlet airstrips will remain to allow for future access to the site for exploration, site inspections and other monitoring activities. Temporary airstrip lighting and cable system at Mary River

will be removed and landfilled; the airstrip lighting ditches will be backfilled and graded to existing natural contours. The open ditches around the airstrip at Milne Inlet will be backfilled and graded to existing natural contours. The airstrips are at or slightly below grade in some areas and follow the natural contour of the existing land. Sections of the airstrip above surrounding grade will be graded with cross fall to promote good drainage. Sections below grade and already part of the natural contours will be left in their current state.

Roads located at the Project Site include the Milne Inlet Tote Road, the road to Deposit No. 1 and smaller site access roads such as those to the Mary River landfill, Mary River salt station, Mary River explosives storage area, borrow areas and the Mary River and Milne Inlet general camp roads. Closure of the roads will require the roadbed alignments to be left in a stable post-reclamation configuration. The Milne Inlet Tote Road is required to be left for other users, in accordance with the road's designation of public access in the Nunavut Land Claim Agreement. The post-reclamation use of the road will be primarily for all-terrain vehicles. Reclamation goals for the roads include ensuring stability, minimizing sediment runoff to receiving waters and re-establishing streambed and stream banks, and previous drainage patterns. The following categories of road embankment restoration have been determined and are described below:

Milne Inlet Tote Road and General Site Roads - Water Crossings

The four (4) sea container (box culvert) crossings and the six (6) circular culvert crossings along the Milne Inlet Tote Road which were deemed as navigable waters under authorization by Transport Canada will be removed. In addition to this requirement all other culverts located at the Project Site will be removed to restore previous natural drainage patterns and to remove the requirement of long-term culvert maintenance. The only culverts to be left will be in the airstrip at Mary River.

At every water crossing, the road embankment fill will be removed from within the high water limits of the water body. The excavated material will be relocated from the water crossing location and placed in areas located more than 30 metres from any water body. This material could be placed within nearby borrow areas or on road embankments to be used for stabilization. The surface of this placed material will be track walked to provide nominal compaction. Streambed and banks will be restored and stabilized. Culverts removed from the Mary River area will be disposed of in the Mary River landfill. Culverts from the Milne Inlet Tote Road will be flattened and transported to Milne Inlet for removal from the site by sealift as reclamation of the road will restrict access to the Mary River landfill.

Prior to the commencement of this work a Letter of Advice will be obtained from the Department of Fisheries and Oceans. All work will be completed in accordance with the requirements of this letter.

The location of the water crossings on the Milne Inlet Tote Road and the road to Deposit No. 1 including a typical detail showing a reclaimed water crossing are shown on Figure 8.10.

Milne Inlet Tote Road and General Site Roads - Road Embankment

Based on experience since 2008, the Milne Inlet Tote Road and other site roads are in a stable condition. At the start of the reclamation measures all roads will be evaluated to identify areas of instability or

significant erosion. All areas of road in stable condition will be left intact. Any areas of instability will be managed with the methods described below.

- In areas where the side slope of the road embankment is showing signs of instability the side slope will be regraded to 3H:1V. The regraded slope will be track walked perpendicular to the road alignment to trap fines in the track marks and dissipate energy from runoff. In areas of high erosion potential where slope and grade controls are inadequate, erosion control dissipation will be achieved by strategic use of cobbles and boulders to dissipate energy.

- In areas of significant embankment construction the height of the road embankment may need to be reduced to construct a resulting berm with 3H:1V side slopes. This can be achieved by reducing the elevation of the road crest by removing road embankment. The resulting road alignment should be maintained to allow access for all-terrain vehicles.

- In areas where the road has been cut into a side hill and the cut area is showing signs of instability the cut slope will be stabilized by placing material against the cut to construct a resulting side slope of 3H:1V. The regraded slope will be track walked perpendicular to the road alignment to trap fines in the track marks and dissipate energy from runoff. If additional erosion protection measures are required cobbles and boulders may be strategically placed to dissipate energy.

- In areas where the road has long vertical grades measures will be required to prevent runoff from running down the slope on the road surface. The runoff will need to be directed either to an erosion-controlled ditch or into the natural environment. This can be achieved by grading the surface of the road to direct the water in the required direction or by installing water bars. Water bars can be constructed by; excavating a shallow ditch, constructing a small berm or a combination of the two across the road surface.

The location of the Milne Inlet Tote Road including details of the aforementioned remedial measures is shown on Figure 8.11.

Deposit No. 1 Road

The road to Deposit No. 1 is a continuation of the Milne Inlet Tote Road. This road connects the Mary River Camp with the top of Deposit No. 1. There have been areas of potential instability noted on this portion of road. The following reclamation measures are to be completed.

- Provide erosion control measures on the upper approximately 600 m of the road. The rest of the road has already had erosion control measures installed. Measures would include non-woven geotextile and/or coarse cobble fill lining of the ditches.

- In areas where the road has been cut into a side hill and the cut area is showing signs of instability the cut slope will be stabilized by placing material against the cut to construct a resulting side slope of 3H:1V. The regraded slope will be track walked perpendicular to the road alignment to trap fines in the track marks and dissipate energy from runoff. If additional erosion

protection measures are required cobbles and boulders may be strategically placed to dissipate energy.

- Each of the culverts installed along the road will be removed by excavating the road embankment to the underlying coarse base and then removing the culvert. The side slopes along the road alignment will be graded to a final slope of 3H:1V. The culvert will be flattened and disposed of in the Mary River landfill.

- Measures will be required to prevent runoff from running along the road surface. Diversion of the runoff to the ditch or into the natural environment will be achieved by either grading the surface of the road or by installing water bars. Water bars can be constructed by; excavating a shallow ditch, constructing a small berm or a combination of the two across the road surface. Water bars may also be applied instead of or in conjunction with cross grading.

- In areas where the side slope of the road embankment is showing signs of instability the side slope will be regraded to 3H:1V if possible or to a steeper slope if required due to the natural terrain. The regraded slope will be track walked perpendicular to the road alignment to trap fines in the track marks and dissipate energy from runoff. In areas of high erosion potential where slope and grade controls are inadequate, erosion control dissipation will be achieved by strategic use of cobbles and boulders to dissipate energy.

The location of the road to Deposit No. 1, including details of the aforementioned remedial measures are shown on Figure 8.11.

8.7 BORROW AND QUARRY AREAS

Reclamation of borrow and quarry areas has commenced as part of operations, including maintaining stable side slopes and grading for natural drainage to minimize ponding, erosion and sediment run-off to receiving waters.

In 2009 BIM engaged EBA to complete a comprehensive inspection of all borrow pits along the Milne Inlet Tote Road and develop criteria and a scope of work for reclamation. The scope of the study included the following:

- develop generally accepted criteria for physical reclamation of sites where material was excavated for road construction;

- identify the primary factors that must be addressed during planning and implementing the borrow pit reclamation program;

- visit and document conditions at sites along the route; and

- develop a scope of work for final reclamation.

Priorities were established for each of the approximately 100 sites and all of the high priority work was addressed by the end of 2009. Some reclamation activities continued during 2010.

The three primary borrow sites, two quarries and the multiple borrow pits along the Milne Inlet Tote Road right-of-way will require reclamation at final closure. At closure, a comprehensive inspection of all borrow pits will be performed to identify areas requiring further reclamation to meet reclamation objectives and criteria and to confirm progressive reclamation stability. Reclamation activities, as were partially performed in 2009 and 2010, will primarily involve restoring stability by replacing some of the cover material removed during excavation and flattening slopes and to develop drainage to limit standing water through regrading, importing fill, routing of trapped surface water and minor ditching. All reclamation activities will be performed in a manner that will reduce the risk of erosion and sedimentation to the surrounding tundra and reduce disturbance to the permafrost. The EBA Engineering report on borrow areas is attached in Appendix D.

Borrow and quarry areas will be revisited as part of the post-closure monitoring program, to confirm and document that no substantial thaw settlement has occurred that will necessitate further remedial action.

8.8 FUEL STORAGE

Drums of fuel will be consolidated, inspected and securely sealed. Any open drums of diesel, off-specification fuel and waste oil will be shipped to registered hazardous waste disposal facilities or to recycling depots. Sealed fuel drums will be removed from site. Drums will be transported overland to Milne Inlet or Steensby Inlet camp and loaded onto sealift. Empty fuel drums will be crushed and sealifted off-site for steel recycling or, if suitable for reuse, left intact and transported by sealift off-site where they could be returned to the vendor.

Fuel bladders and associated piping at the Milne Inlet fuel farm and at Mary River will be drained, placed in containers and loaded onto sealift for disposal at a licensed facility. Any fuel remaining will be removed from site by bulk fuel carrier. Containment for each fuel storage facility consists of an earthen berm lined with a petroleum-resistant geomembrane liner. Liners will be sent off-site for disposal at a licensed facility. Any bedding material inside the liner will be tested for petroleum hydrocarbons before being removed. Soil beneath the lined areas will also be tested for petroleum hydrocarbons. Disposal of contaminated soils is described in Section 8.12. The fuel storage areas will be recontoured and regraded to approximate the surrounding topography as closely as possible to restore stability and reduce the risk of erosion.

The 5 million litre bulk fuel facility located at Milne Inlet will have the fuel tank and pipeline dismantled for backhaul or salvage. The liner will be sent off-site for disposal at a licensed facility. Bedding material inside the liner will be tested for petroleum hydrocarbons before being removed. Soil beneath the lined areas will also be tested for petroleum hydrocarbons. Disposal of contaminated soils is described in Section 8.12. The bulk fuel facility will be regraded to match natural topography. Concrete structures will be broken up and concrete/rebar will be covered with overburden to a depth of at least 0.2 m.

8.9 CHEMICALS

Chemicals, such as cleaning supplies, lubricants, antifreeze, oils, and greases will be placed in a sea container and will be transported off-site for either re-use or disposal. Regular inspections will take place to ensure sea containers are safe.

Waste oil will be shipped to registered hazardous waste disposal facilities or to recycling depots. Used batteries and any other hazardous waste will be taken off-site to a licensed disposal facility for recycling or proper disposal.

8.10 EXPLOSIVES

All existing explosives magazines are empty. The eight explosives magazines located at Mary River will be transported to Milne Inlet and sent off site via sealift and returned to the owner.

8.11 WASTE AND WATER MANAGEMENT

An access road and landfill, as approved by the Nunavut Water Board, were constructed and began operation at Mary River for the disposal of bulky inert wastes. No organic or hazardous wastes will be disposed of in the landfill. Operation of the landfill at closure will follow the current operations manual (Appendix F). Final closure of the landfill will include placing a soil cover over the entire surface of the landfill. In order to achieve permafrost encapsulation in the landfill site, the final cover will be thicker than the active layer. Based on an active layer approximately 1 m thick, the final cover will be 1.5 m thick. The cover will be compacted and contoured to shed precipitation from the surface. It is anticipated that this cover will comprise 1.5 m of sand and gravel material. As part of operations, a perimeter berm will be constructed surrounding the landfill site. This will redirect surface runoff originating upstream of the landfill site. Monitoring of the landfill will be completed following closure activities. Inspections will review the condition of the cover, perimeter berms and overall condition of the site.

The water supply system (tanks and lines) will be drained, dismantled, and disposed of in the landfill at Mary River.

Grey-water sumps will be backfilled and contoured to grade. Sewage treatment plants will be decommissioned in accordance with manufacturer procedures/recommendations, and any remaining sewage or sludge will be sent to the polishing/waste storage pond. The polishing/waste stabilization ponds will be decanted and the solids left to dry. Dried solids will either be buried in-situ or disposed of at the on-site landfill upon confirmation as non-hazardous waste. Liners will be removed and the polishing/waste stabilization ponds will be contoured. This material could also serve as a contingency for use in contouring other areas, if required, without triggering borrow royalty fees. The treatment plants will be disposed of at site in the landfill, except for the plant at Milne Inlet which is owned by a site contractor and will be demobilized from site on a sealift.

8.12 CONTAMINATED SOILS

The primary soil contamination that could be expected would result from the use/spillage of hydrocarbons (mainly fuel). Soils which are thought to have been impacted during operations with hydrocarbons (i.e., are likely to contain fuel residues, based on odour testing and visual inspection) would be tested according to applicable legislation to determine total petroleum hydrocarbon content. Any impacted area(s) would be cleaned up according to the appropriate cleanup criteria under the legislation where practicable. Phase I, II and III Environmental Site Assessments may be required.

Soil materials found to exceed acceptable criteria would be segregated and managed in-situ on-site in a land farm at Milne Inlet. Engineering studies will be required to establish remediation criteria, land farm design and civil works plan and operations manual. The Nunavut Water Board (NWB) has approved properly designed landfarms as an acceptable method for remediating hydrocarbon impacted soils. During the follow-up and monitoring period, soil contaminated with petroleum products will be managed in the land farm. This land farm will be decommissioned near the end of the monitoring period. EBA Engineering Consultants Ltd. has prepared a design brief for a Milne Inlet landfarm designed to treat hydrocarbon contaminated soil from the Milne Inlet Bulk Fuel Storage Facility (Appendix B-8). The final landfarm design will depend on the type of contamination, soil characteristics and the total quantity of soil to be remediated.

An allowance has been made in the closure and reclamation cost estimate to send contaminated soils not suitable for land farming off site to an approved disposal facility.

8.13 ENGINEERING DESIGN AND EXECUTION PLANNING

In the event of bankruptcy and abandonment only limited additional site characterization will be needed to develop the engineering specifications and drawings required for contracting. Generally, figures and supporting documentation appended to this plan show; the extent of required reclamation and sufficient detail for quantities, survey as-builts of stockpiles, sampling and analysis of waste rock and seepage water, sufficient detail for structures to determine requirement for demolition and removal.

Reclamation activities for the Mary River Project are predominantly an earthworks exercise with simple demolition. High allowances for engineering and redesign costs are not required as the construction program will be relatively simple. Construction specifications, plans and drawings required above and beyond those presented in this A&R Plan, if required, will not be costly or time consuming to develop.

Where design detail and specifications are lacking at the current time to properly complete reclamation direct costs have been incorporated into the cost estimate. Such items include design and operation of the landfarm, the possibility that Phase I, II and III Environmental Site Assessments may be required due to hydrocarbon impacted soils. Preliminary designs for the landfarm are included in Appendix B-2.

Development of a standalone fully executable plan is not practical in light of the length of the reclamation and the remoteness of the Mary River Project. An engineering design and execution planning indirect cost allowance of 3% of the total direct costs has been incorporated into the reclamation cost estimate.

8.14 TIMING AND SCHEDULE OF FINAL CLOSURE

The following summary provides a general description of the tasks to be completed in each year of the A&R Plan. A more detailed summary of the execution and scheduling of the reclamation activities using a Gantt chart is included in Appendix H.

The schedule has been developed assuming productive use of resources performed in a logical manner with consideration given to unique challenges of working in the arctic such that reclamation can be accomplished in a timely fashion and in accordance with the A&R Plan and the regulatory framework established by the Inuit, Federal and Territorial governments.

The A&R Plan assumes a bankruptcy date of October 10, 2013.

Year 1 (2013)

- Pre-abandonment shutdown tasks and post-abandonment inspection by QIA.

Year 2 (2014)

- Site contractor partial decommissioning and demobilization of Mary River and Milne Inlet Camps;
- Organization of material for shipment for Mary River and Milne Inlet Camps;
- Year 2 freshet management field activities;
- Geotechnical monitoring of borrow areas;
- Operation of the oil water separation process at the Milne Inlet Bulk Fuel farm;
- Activities to begin the decommissioning of the Milne Inlet Fuel farm and 5 ML Fuel Tank;
- Decant May River sewage lagoons and removal of sludge and transfer to landfill;
- Phase 1, 2 and 3 Environmental Assessments for hydrocarbon contaminated soils;
- Mary River and Milne Inlet Camps operation;
- Freight demobilization sealift from Milne Inlet to the Port of Valleyfield;
- Bulk fuel demobilization sealift from Milne Inlet to the Port of Valleyfield; and
- Environmental monitoring.

Year 3 (2015)

- Decommissioning of the mineral exploration areas, remote sites, and stockpiles;
- Mary River, Milne Inlet, Mid Rail and Steensby Camps operation;
- Mary River, Milne Inlet and Steensby Camps are demolished, as appropriate, landfilled or packaged and shipped;
- General site cleanup and contouring and grading takes place at the Mary River, Milne Inlet and Steensby Camps;
- Year 3 freshet management field activities;
- Milne Inlet Tote Road is operated for shipments;
- During the decommissioning of Mary River Camp, Deposit No. 1 haul road and airstrips are inspected, graded and contoured as required;
- Airstrip lighting at Mary River is removed and airstrips at Mary River and Milne Inlet are regraded;
- Regrading and contouring of borrow sites and quarry areas;
- Return excess fuel return from Mary River Camp to Milne Inlet;
- Fuel storage facilities will be fully decommissioned at Mary River and Milne Inlet;
- Waste management including:
    - Closure of the Mary River landfill;
    - Packaging of hazardous waste for future shipment to disposal facilities in the south;
    - Appropriate disposal and closure of sewage and sewage lagoons at Mary River and Milne Inlet;
- Treatment of contaminated soil;
- Support for landfarm operations;

- Freight demobilization sealift from Steensby to the Port of Valleyfield; and
- Environmental monitoring.

Year 4 (2016)

- Year 4 freshet management field activities;
- Removal of Milne Inlet Tote Road box culverts and stabilization of the road for final closure;
- Milne Inlet Camp operation;
- Grading and contouring of road surfaces and removal of culverts from all access roads;
- Treatment of contaminated soil;
- Support for landfarm operations;
- Freight demobilization sealift from Milne Inlet to the Port of Valleyfield; and
- Environmental monitoring.

Year 5 (2017)

- Complete the removal of Milne Inlet Tote Road round culverts for final closure;
- Treatment of contaminated soil;
- Support for landfarm operations; and
- Environmental monitoring.

Year 6 (2018)

- Treatment of contaminated soil;
- Support for landfarm operations;
- Final freight demobilization sealift from Milne Inlet to the Port of Valleyfield; and
- Environmental monitoring.

9.0 POST RECLAMATION MONITORING

Monitoring and follow-up inspections will be conducted at the Mary River Project area in order to assess the physical and chemical stability of the various components after closure and reclamation of the facilities. Annual inspections of the affected sites will be carried out for three years following the final closure of Mary River Camp operations and two years following the reclamation of the Milne Inlet Tote Road and camp to demonstrate that conditions have not changed and remain both physically and chemically stable. The monitoring program may be discontinued earlier than five years, only if monitoring results indicate that site conditions are stable, and agreement can be reached with the landowner(s) and Nunavut Water Board.

The monitoring plan will continue through closure and post-closure periods. Under the assumption of a closure date in October of 2013 (Year 1), all Project-related facilities except for a few items and the operation of the landfarm at Milne Inlet are scheduled to be completed in Year 3 (2015). As a result, post closure monitoring will conclude no later than 2018 (Year 6) for all Project-related facilities.

The physical stability of the bulk sample pit, weathered ore and waste rock stockpile, Milne Inlet Tote Road and other Project components shall be monitored through visual inspection. The inspection would include a review of backfilled areas for potential slope stability, settlement and erosion concerns and would be conducted by a qualified engineer.

The chemical stability of the site will be monitored through visual inspection as well as surface water sampling and analyses, during the closure period and for up to 3 years post-closure, or as otherwise dictated by the water license to document that its quality is not adversely affected by the closed Project components.

No items are expected to be left as a result of the Project that will require monitoring or management in perpetuity.

At the conclusion of the post-closure monitoring period, all development areas related to the Project will be subjected to a closure inspection by a company representative or contractor, and a brief closure and reclamation report with photographs will be prepared, documenting the reclamation work completed and the site conditions following closure.

10.0 ESTIMATED CLOSURE COSTS

The 2013 A&R Plan and financial security estimate have been updated for 2013 based upon the requirements of the QIA Abandonment and Reclamation Policy for Inuit Owned Lands and reflects changes in reclamation requirements caused by operations and reclamation activities since the last version, and continued improvement in cost estimation accuracy.

The A&R Plan and cost estimate is based on BIM's operating and progressive reclamation labour and equipment productivity and experience in North Baffin Island. It is supported by contributions from its consultants, AMEC and Knight Piésold, which have extensive Canadian and international closure experience in Arctic and other environments. Evidence in the form of surveys, detailed material balances, third party independent contractor budget estimates for services, existing contract labour and equipment rates and invoices have been used to determine costs.

A spreadsheet costing model (Appendix G-3) as per QIA A&R Policy format for presentation has been developed with a comprehensive work item list that addresses all Project-related activity areas and infrastructure related to the Mary River Project. The cost model is made up of a detailed direct cost estimate for each of approximately 220 individual tasks described in the A&R Plan supported by detailed material and fuel balances and detailed estimation of indirect costs such as helicopter and fixed wing aircraft support, camp operations, sealifts, supervision, engineering and post-closure environmental monitoring. The cost model outlining the detailed line item breakdown of each cost to complete reclamation of each component is presented in Appendix G-3. Unit rates and quantities for all the main work items for the abandonment and reclamation work have been developed. The unit rates and quantities used for the reclamation cost estimate are substantiated with supporting scope detail and back-up information (Appendix A, Appendix G-3 and G-4 and individual task references). The 2013 basis for the cost estimate of each Individual task contained within Appendix G-3 shall be used in conjunction with the corresponding sub-section contained in Section 8 of the this report and all its referenced drawings to form the complete scope of work and cost estimate. In instances where uncertainty in how quantities and unit cost values are calculated, the limitations in obtaining costing accuracy have been clearly outlined in the cost model per QIA A&R Policy format and a contingency to account for unknowns and limitations has been included for each of the approximately 220 individual reclamation tasks.

All Project-related facilities and infrastructure were designed and constructed to minimize the Project footprint and to be temporary in nature. These design and construction considerations have facilitated reclamation plans minimizing the detailed engineering required to support the complete decommissioning and reclamation of the site. The appropriate level of engineering has been applied to address the technical elements and technical gaps in scope required to meet the reclamation objectives. Scopes of appropriate detail have been developed for contractor execution of decommissioning, demolition and movement of material to safely meet the reclamation plan objectives.

The abandonment and reclamation cost estimate is based on the current state of the Mary River Project on October 1, 2012 and assumes a closure date of October 10, 2013 under a hypothetical bankruptcy scenario.

Contingency amounts have been estimated for each of the individual tasks based upon the quality of the scope, productivity, and other information affecting the cost estimate for that individual task.

Unless otherwise noted in the individual task "Basis for 2013 Estimate" section of the cost estimate tables in Appendix G-3, the following general assumptions and references have been made in developing the cost estimate:

- The general execution plan for the 2013 A&R Plan is as follows:
    - all contractor owned equipment & material is demobilized;
    - a very small select quantity of high value, ready to ship BIM equipment deemed salvageable is demobilized;
    - BIM owned bulk and barrelled fuel is demobilized;
    - the working inventories of hazardous material are demobilized and disposed in approved facilities in the south;
    - clean wood is burned;
    - all other infrastructure, equipment, material, supplies & non-hazardous waste is directed to the Mary River landfill in the most efficient manner possible;
    - a significant portion of the tasks fall in this category and the scope of work reflects the simplicity of the tasks of demolishing and moving bulk volumes of material to the landfill;
    - where access to the Mary River Landfill is not possible, all remaining material is demobilized by sealift;
    - general technical specifications have been provided for numerous tasks that require a more technical scope;
    - a small number of tasks require additional site assessment and/or design engineering to determine reclamation criteria and the full scope of the reclamation activity. These tasks have estimates for this work; and
    - a more detailed summary of the general execution strategy, including schedule is summarized in Section 8.14 and further in Appendix H.
- Reclamation is carried out by a fully independent third party contractor that provides the best overall value to the QIA. This includes the cost of mobilization and demobilization of the contractor.
- The site contractor 2011 contract rates for labour and equipment have been applied for heavy equipment operation and general labour. The labour and equipment rates are summarized in the 2013 A&R Plan Schedule of Labour & Equipment Rates included in Appendix G-3. All supporting

quotes and contracts for labour, heavy equipment and charter fixed and rotary wing aircraft can be found in Appendix G-4 (in subdirectory Labour equipment charter rates).

- Mobilization and demobilization sealifts have been quoted based on the A&R Plan requirements.
- Both direct and indirect costs have been included.
- Direct and indirect cost estimates are based upon surveyed volumes, detailed material and sealift volume balances, actual site condition productivities and consumption rates experienced by BIM during 2008-2012 operations and progressive reclamation activities; existing contracts and quotations. The majority of 3rd party contractor work consists of simple demolition, civil works and transportation of material. It is assumed that any 3rd party contractor selected shall be capable of achieving these productivities with Project management support.
- A fully detailed six year A&R Plan fuel balance has been completed to determine annual fuel requirements to execute the entire A&R Plan. The balance identifies the quantity of fuel that must be purchased and mobilized in Year 2 by airlift and by sealift and a complete cost for all fuel was developed. The fuel balance and supporting vendor quotes can be found in Appendix G-4 (in subdirectory Fuel Storage Facilities).
- Numerous sealifts are required for mobilization and demobilization to support execution of the A&R plan. A summary of the sealifts is detailed in Section 8.13 of this report. Unit cost from vendor quotes for sealifts at Steensby and Milne Inlets are provided in Appendix G-4 (in subdirectory Sealift).
- Detailed sealift and material balances have been developed based on current site inventories for the purpose of determined volumes required for estimating decommissioning and freight costs and for estimating volumes and defining their final reclamation destination including burning, landfill and sealift. The detailed balances form part of Appendix G-3. All of the annual sealift manifests used in the development of the balance can be found in Appendix G-4 (in subdirectory Sealift).
- The 2011 - Hazardous and Non-Hazardous Material Requiring Disposal Inventory worksheet was updated to reflect current waste inventory at site and is used in support of the detailed sealift and material balances. This inventory is provided as part of Appendix G-4 and was generated by a physical inventory count in August 2012.
- Under a hypothetical bankruptcy scenario, BIM corporate costs during abandonment, reclamation and post-closure monitoring are excluded from the cost estimate.
- Contingency has been applied to the cost estimate on a detailed task-by-task basis.
- Salvage value has not been included in this estimate. A salvage list of BIM owned equipment has been provided to support the scope for the purpose of estimating demobilization costs and is included in Appendix G-3.

- All significant work is assumed to be completed in Year 3 and Year 4 with land farming and post-closure environmental monitoring taking place in Years 5 and 6.

Details of the cost estimate are appended as Appendix G-3. A comparison to the cost estimate for the 2012 A&R Plan is also included in Appendix G-2 with a detailed variance analysis. Under a worst case abandonment scenario, the reclamation cost is estimated to be $24,879,000.

11.0 ESTIMATED FINANCIAL SECURITY

A financial security estimate has been included based upon the requirements of the QIA Abandonment and Reclamation Policy for Inuit Owned Lands (QIA A&R Policy). As per the QIA A&R Policy, the security estimate assumes a worst case scenario where QIA assumes authority over the entire Project and reclamation is completed by a third party contractor. Under these worst case conditions, the security amount is estimated to be $24,879,000 as summarized in Table 11.1 and in Appendix G-1.

12.0 CONSULTATION WITH CLARC AND APPLICATION OF INUIT QAUJIMAJATUQANGIT

BIM recognizes the QIA policy requirement to consult with Community Land and Resources Committees (CLARC) and to integrate Inuit Qaujimajatuqangit (IQ) in the development of the A&R plan.

As mentioned in Section 3.9, BIM has engaged local communities to understand local land uses, and to understand community concerns both regarding current operations and BIM's proposed mine development.

Annually since April 2009, BIM has worked with the QIA to engage local Community Land and Resource Committees (CLARCs) and Hunter and Trapper Organizations (HTOs) on the Project, including providing updates on current company activities and the mine development Project proposal. IQ has been incorporated into the mine development environmental impact assessment.

The information and results provided by the IQ studies has been integrated in to the development of the A&R Plan.

BIM was not successful in completing consultations with the QIA CLARC committees prior to the submission of the 2013 A&R Plan. Reference documentation is available in Appendix G-4 (in subdirectory CLARC Consultation). Consultation efforts in 2012 were focused on full scale development related issues as the A&R Plan for the bulk sample will potentially be replaced by the full scale development A&R Plan in 2013.

BIM is committed to consulting with the local CLARC committees and will continue to work with the QIA to schedule these meetings for inclusion in the development of future plans.

Concordance Table

The following table has been prepared to comply with QIA's requirement that A&R Plans be submitted with a completed concordance table. The concordance table is consistent with the principals of QIA's Abandonment and Reclamation Policy for Inuit Owned Lands.

Item	QIA Policy	BIM Response
1	Have all reports and plans including addendums and responses been submitted?	Yes. The 2013 A&R plan and cost estimate, along with all addendums and supporting documentation has been submitted.
2	Are the submitted reports and plans executable standalone documents with adequate rationale and detail?	The majority of tasks are stand alone with adequate scope or criteria. There are a number of tasks that require additional assessment and engineering to develop a detailed scope suitable for achieving the task reclamation criteria. BIM can provide stand alone documents upon request by QIA, if required. Allowances have been made for engineering design and execution planning through the life of the reclamation Project.
3	Do all reports and plans contain appropriate referencing (document name, author, section, and page number) to all supporting information?	Yes. The plan and cost estimate contains a large number of supporting documentation. References to all supporting documents have been made.
4	Do the reports and plans demonstrate a firm understanding, of QIA's *Guiding Principles on Reclamation* and provide rationale on how these principles have been satisfied?	Yes. BIM has incorporated the guiding principles on reclamation in the development of the 2013 A&R Plan.
5	Has Inuit Qaujimajatuqangit and consultation with Community Land and Resources Committee(s) been applied?	Yes. BIM has completed an IQ study and has incorporated it in to the development of the A&R Plan. As described in Section 12 of the A&R plan, several attempts by BIM to schedule local CLARC meetings with QIA could not be completed.
6	Are all the components that are considered in the abandonment and reclamation plan listed?	Yes. Components considered in the A&R Plan have been included in the Table of Contents and are listed as either a report, table, figure or appendix.
7	Does each component of the project have an abandonment and reclamation objective(s) and criteria?	Yes. A set of general objectives for the reclamation of the Mary River Project have been developed. Reclamation criteria have been established for each reclamation task or

		like group of tasks.
8	Has an A&R plan been provided with a financial security estimate?	Yes. A financial security estimate has been included as part of the plan.
9	Have Table 1, 2, 3 and 4 of Appendix B been used in completing the financial security estimate?	Yes. BIM has developed a spreadsheet cost model that is materially the same as or contains the required information to satisfy the QIA Policy.
10	Has evidence been provided to support the Policy assumptions for all reports and plans?	Yes. The evidence required to support the cost estimate and plans has been provided.

13.0 REFERENCES

1. AMEC. 2010. 2006 - 2008 Marine Birds Environmental Baseline Study Summary Report - Mary River Project. Ref. No. TC101507, December, 2010.

2. Committee on the Status of Endangered Wildlife in Canada (COSEWIC). 2010. COSEWIC Species Status Reports. Environment Canada, Ottawa, Ontario (cosewic.gc.ca).

3. EBA. 2009. Borrow Site Reclamation Overview. Ref No. E14101074, dated December 2009.

4. Environment Canada, SARA. 2010. Species at Risk Act (SARA) (www.sararegistry.gc.ca).

5. Forbes, G., Robertson, K., Ogilvie, C. and L. Seddon. 1992. Breeding densities, biogeography, and nest predation of birds on Igloolik Island, Northwest Territories. Arctic 45:295-303.

6. Gartner Lee Ltd. 2003. Phase II Environmental Site Assessment Nanisivik Mine, Nunavut. Http://ftp.nunavut.ca/nwb/NWB1%20MININGNWB1NAN0208%20Nanisivik/ESA%20II/030130%20Nan%20ESA%20Report%20IEDE.pdf

7. Gauthier, Gilles. Personal Communication. Professor, University of Laval, and Avian Biologist on Bylot Island. Email communication with Cheryl Wray of Baffinland Iron Mines Corporation.

8. Geological Survey of Canada. Natural Resources Canada. Permafrost - Canadian Geothermal Data Collection. 6 Jan. 2006. 16 Nov. 2006. <http://gsc.nrcan.gc.ca/permafrost/geothermaldb/index_e.php>.

9. Indian and Northern Affairs Canada. 2002. Mine Site Reclamation Policy for Nunavut. Ottawa.

10. Indian and Northern Affairs Canada. 2007. Mine Site Reclamation Policy for Nunavut. Indian and Northern Affairs Canada.

11. Kevin Jones. Personal Communication. EBA Engineering Consultants Ltd., Edmonton, Alberta. September 30, 2008.

12. Knight Piésold Ltd. 2008. Bulk Sampling Program Abandonment and Reclamation Plan. Ref. No. NB102-00181/6-7, Rev. 2, dated March 31, 2008.

13. Knight Piésold Ltd. 2009. 2009 Abandonment and Reclamation Plan. Ref No. NB102-181/15-1, Rev 0, dated March 26, 2009.

14. Knight Piésold. 2009. Milne Inlet Tote Road - Summary of As-Built Water Crossing Installations and Borrow Area Locations for 2009, Ref. No. NB102-00181/15 - NB09-00618, dated December 2009.

15. Knight Piésold. 2009. Environmental Assessment of Waste Materials Originating from the Bulk Sample Program from Deposit No.1, Baffinland Mary River Project. Ref No. NB09-00189, dated March 2009.

16. Knight Piésold Ltd. 2010a. Feasibility Design for Deposit No. 1 Open Pit. Ref. No. NB102-00181/8-4, Rev. 0., dated April 30, 2010.

17. Knight Piésold Ltd., 2010b. 2006-2008 Avian Surveys - Environmental Baseline Study Report. Ref. No.NB102-00181/25-1, Rev. 0, dated August 31, 2010.

18. Lepage, D., Nettleship, D.N. and A. Reed. 1998. Birds of Bylot Island and adjacent Baffin Island, Northwest Territories, Canada, 1979-1997. Arctic 51:121-141.

19. Martin van Rooy. 2008. Report of an Inspector of Mines - Mary River Project. Nunavut Workers' Safety and Compensation Commission, September 22/23, 2008.

20. Morrison, R.I.G., R.E. Gill, Jr., B.A. Harrington, S. Skagen, G.W. Page, C.L. Gratto-Trevor, and S.M. Haig. 2001. Estimates of shorebird populations in North America. Occasional Paper No. 104, Environment Canada, Canadian Wildlife Service. Ottawa, Ontario.

21. Northwest Territories Water Board. 1990. Guidelines for Abandonment and Restoration Planning for Mines in the Northwest Territories. September 1990.

22. Price W.A. 1997. Draft Guidelines and Recommended Methods for the Prediction of Metal Leaching and Acid Rock Drainage at Minesites in British Columbia. Smithers, B.C.: Ministry of Employment and Investment, Energy and Minerals Division.

23. QIA. Abandonment and Reclamation Policy for Inuit Owned Lands. Prepared by Qikiqtani Inuit Association - Department of Lands and Resources.

24. Steffen, Robertson and Kirsten (B.C.) Inc. 1992. Mine Reclamation in Northwest Territories and Yukon. Prepared under contract for the Northern Water Resource Studies Program, Water Resources Division, Natural Resources and Environment Branch, Department of Indian Affairs and Northern Development. April 1992.

25. Priest, Heather and Peter J. Usher. 2004. The Nunavut Wildlife Harvest Study. Prepared for the Nunavut Wildlife Management Board (NWMB).

26. Veldhuis Hugo. 2010. Mary River Project, Soils Report Part I, Soils, Landscapes and their Properties. Winnipeg Manitoba, 2010.

27. Weider, L.J., and A. Hobaek. 2000. Phylogeography and Arctic Biodiversity: A Review. Annual Zoological Fennici, 37:217-231.

14.0 CERTIFICATION

This report was approved for distribution by the undersigned.

Approved by: original signed by

Heather Lindsay, M.Sc. P.Eng.
Geoenvironmental Engineer

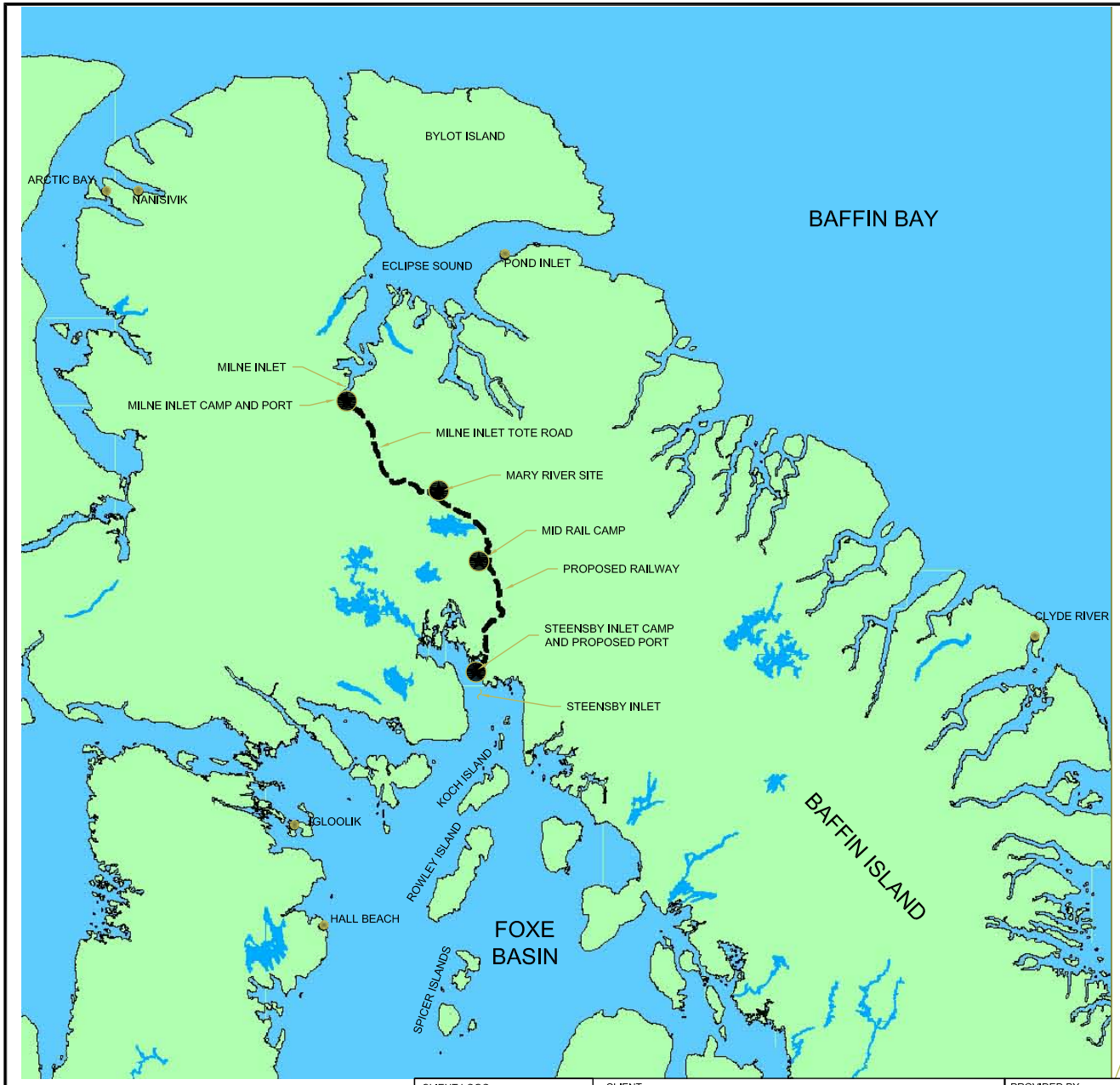
Reviewed by: original signed by

Stephan Theben, Dipl.-Ing.
Associate Environmental Consultant

Table 11.1
Baffinland Iron Mines Corporation
Mary River Project

2013 Abandonement and Reclamation Plan

				A&R Plan Annual Expenditures					Jan-13	
	Labor	Equipment	2013 Total	2013	2014	2015	2016	>2016	Contingency($)	Contingency (%)
Project Site Abandonment	$ 37,206	$ 11,900	$ 49,106	$ 49,106	$ -	$ -	$ -	$ -	$ 4,146	8%
Bulk Sample Pit	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	0%
Mineral Exploration Areas (Deposits No. 1, 2, 3)	$ 19,028	$ 64,695	$ 83,723	$ -	$ -	$ 83,723	$ -	$ -	$ 8,582	10%
Remote Sites	$ 15,024	$ 87,768	$ 102,792	$ -	$ -	$ 102,792	$ -	$ -	$ 9,402	9%
Stockpiles	$ 113,295	$ 156,112	$ 269,407	$ -	$ -	$ 269,407	$ -	$ -	$ 26,941	10%
Camps & Related Facilities	$ 916,281	$ 805,762	$ 1,722,043	$ -	$ 598,907	$ 1,119,732	$ 3,434	$ -	$ 248,247	14%
Roads & Airstrips	$ 2,074,341	$ 1,158,216	$ 3,232,557	$ -	$ 356,384	$ 604,091	$ 746,870	$ 1,525,212	$ 387,901	12%
Borrow Quarry Areas	$ 197,428	$ 284,158	$ 481,586	$ -	$ 55,000	$ 426,586	$ -	$ -	$ 104,873	22%
Fuel Storage Facilities (Bulk and Drums)	$ 428,583	$ 272,462	$ 701,045	$ -	$ 405,805	$ 295,240	$ -	$ -	$ 141,472	20%
Explosives	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	0%
Waste Management	$ 137,217	$ 422,076	$ 559,293	$ -	$ 203,142	$ 356,151	$ -	$ -	$ 108,265	19%
Hydrocarbon Impacted Soil	$ 558,000	$ 190,080	$ 748,080	$ -	$ 90,000	$ 658,080	$ -	$ -	$ 120,912	16%
General Site Area	$ 1,561,800	$ -	$ 1,561,800	$ -	$ 480,600	$ 600,600	$ 480,600	$ -	$ 156,180	10%
Sealift	$ 35,088	$ 4,470,434	$ 4,505,522	$ -	$ 3,225,680	$ 575,726	$ 629,916	$ 74,200	$ 469,912	10%
Camp Operation	$ 1,402,545	$ 5,627,091	$ 7,029,636	$ -	$ 4,252,211	$ 1,536,308	$ 1,241,117	$ -	$ 866,142	12%
Environmental Monitoring	$ 241,000	$ 64,500	$ 305,500	$ -	$ 21,100	$ 21,100	$ 21,100	$ 242,200	$ 73,950	24%
Subtotal - cash costs excluding Contingency	**$ 7,736,836**	**$ 13,615,254**	**$ 21,352,090**	**$ 49,106**	**$ 9,688,829**	**$ 6,649,536**	**$ 3,123,037**	**$ 1,841,612**		
Contingency			$ 2,726,924	$ -	$ -	$ -	$ -	$ -	$ 2,726,924	13%
Engineering Design & Execution Planning			$ 800,000	$ -	$ -	$ -	$ -	$ -		
Total Cash Cost Including Contingency & Engineering Design & Execution Planning	**$ 7,736,836**	**$ 13,615,254**	**$ 24,879,014**	**$ 49,106**	**$ 9,688,829**	**$ 6,649,536**	**$ 3,123,037**	**$ 1,841,612**		



LEGEND:

- WATER
- CAMP LOCATION
- COMMUNITY

SCALE (APPROX.) 40 20 0 40 80 120 160 200 km

CLIENT LOGO: Baffinland Iron Mines Corporation	CLIENT: BAFFINLAND IRON MINES CORPORATION	PROVIDED BY: BIM CHK'D BY: ST	PROJECT: MARY RIVER PROJECT	PROJECT NO: A REV. NO.: NOV 2011
AMEC Environment & Infrastructure 160 Traders Boulevard East Mississauga, Ontario, Canada L4Z 3K7	amec	DATE: SCALE: AS SHOWN	TITLE: PROJECT LOCATION MAP	FIGURE No. TC111520 1.1

\\MIS-FS1\ProjectF$\EM\Projects\2011\TC111520 Baffinland A&R Plan\4_Updates\Figures\CAD\FIG 1.1 (A01_r0).dwg – Layout1 – Oct. 26, 2011 12:45pm – svetlana.cronkhite

ᑖᓐᓇ 2013ᒥ ᐸᕐᓇᒃᑕᐅᓯᒪᔪᖅ ᓴᒃᑯᑦᑎᓂᕐᒧᑦ ᐱᐅᓯᕆᐊᖅᑎᑦᑎᓂᕐᒧᓪᓗ ᐊᒻᒪᓗ ᐊᒃᑐᐊᔪᑦ ᑮᓇᐅᔭᓄᑦ ᓇᐅᑦᑎᐅᒪᔪᑦ ᒥᒃᓵᐅᓴᒃᓯᒪᔪᑦ ᓄᑖᕈᓇᐊᖅᓯᒪᔪᑦ ᒪᓕᒃᓱᒋᑦ ᐊᑐᕐᑯᔭᐅᔪᑦ ᕿᑭᖅᑕᓂ ᐃᓄᐃᑦ ᑲᑐᔾᔨᖃᑎᒋᖕᒋᓐᓂᑦ (QIA) ᓴᒃᑯᑦᑎᓂᕐᒧᑦ ᐊᒻᒪᓗ ᐱᐅᓯᕆᐊᖅᑎᑦᑎᓂᕐᒧᑦ ᐊᑐᐊᒐᐅᔪᖅ ᑕᒪᒃᑯᓄᖓ ᐃᓄᐃᑦ ᓇᖕᒥᓂᖅ ᓄᓇᕐᑯᑎᖕᒋᓐᓄᑦ ᐊᒻᒪᓗ ᓄᓇᕘᒥ ᐃᒥᓕᓇᐹᒃᑯᑦ ᐃᒥᕐᒧᑦ ᓚᐃᓴᓐᓯ (ᓚᐃᓴᓐᓯᐅᑉ ᓈᓴᐅᓯᖓ: 2BB-MRY1114). ᑖᓐᓇ ᐸᕐᓇᒃᓯᒪᔪᖅ ᓴᒃᑯᖅᑎᓂᕐᒧᑦ ᐊᒻᒪᓗ ᐱᐅᓯᕆᐊᖅᑎᑦᑎᓂᕐᒧᑦ ᓇᓗᓇᐃᖅᓯᓯᒪᕗᖅ ᐅᔾᔨᕆᓂᐊᖅᑕᐅᓇᓱᒃᑐᒧᑦ ᑐᕌᖓᔪᑦ ᐱᓕᕆᐊᒃᓴᐃᑦ ᐃᓗᐊᓂ ᐊᒻᒪᓗ ᓴᓇᔾᔪᑎᒃᓴᓄᑦ ᐱᕐᑯᑎᕐᔪᐊᓄᑦ ᑐᕌᖓᔪᑦ ᓄᓘᔾᔪᓂ ᐅᔾᔨᕆᓂᐊᕐᓂᐅᓇᓱᒃᑐᒧᑦ ᐊᒻᒪᓗ ᐃᓗᓕᕐᑲᖅᓱᓂ ᐊᓯᔾᔨᖅᑕᐅᓯᒪᔪᓂᒃ ᑕᐃᒪᓐᓇ ᐱᐅᓯᕆᐊᖅᑎᑦᑎᓂᕐᒧᑦ ᐊᑐᓇᐊᕐᑲᖅᑐᓂᒃ ᓴᖅᑭᐸᐸᑦᓕᐊᔪᓂᒃ ᐊᐅᓚᓂᖓᓂ ᐊᒻᒪᓗ ᐱᐅᓯᕆᐊᖅᑕᐅᓂᖓᓂ ᐱᓕᕆᐊᖑᓂᖕᒋᓐᓄᑦ ᐱᒋᐊᖅᓱᓂ ᑐᓂᔭᐅᓚᐅᖅᑎᓪᓗᒋᑦ ᑭᖑᓪᓕᖅᐹᒥ ᓴᓇᔭᐅᓯᒪᔪᑦ ᑖᒃᑯᐊ ᓴᒃᑯᑦᑎᓂᕐᒧᑦ ᐊᒻᒪᓗ ᐱᐅᓯᕆᐊᖅᑎᑦᑎᓂᕐᒧᑦ ᐸᕐᓇᒃᑕᐅᓯᒪᔪᑦ (ᕕᕗᐊᕆ 2012).

<u>ᓴᒃᑯᑦᑎᓂᒃᓴᒧᑦ ᖃᓄᐃᓕᐅᕈᑎᓴᐃᑦ</u>

ᐊᑦᑎᖅᓱᑎᒃ ᐅᔾᔨᕆᓂᐊᖅᑕᐅᓇᓱᒃᑐᒧᑦ ᑐᕌᖓᔪᑦ ᐱᕐᑯᑏᑦ ᐊᖅᑭᒃᓱᖅᓯᒪᕗᑦ ᐊᒻᒪᓗ ᓴᓇᓯᒪᓪᓗᑎᒃ ᒥᑭᓐᓂᖅᓴᐅᕐᑯᓪᓗᒍ ᐊᒃᑐᐃᓂᖃᔭᖓ ᐊᒻᒪᓗ ᕿᓚᒻᒥᐅᔪᒧᑦ ᐊᖅᑭᒃᓯᒪᓪᓗᑎᒃ. ᑕᒪᒃᑯᐊ ᐊᖅᑭᒃᓱᖅᑕᐅᓯᒪᔪᑦ ᐊᒻᒪᓗ ᓴᓇᔭᐅᓂᒃᓴᖓᓄᑦ ᐃᓱᒪᒋᔭᐅᔭᖃᐋᑦ ᐊᔪᕈᓐᓃᖅᑎᑦᑎᓯᒪᕗᑦ ᐱᐅᓯᕆᐊᖅᑎᑦᑎᓂᕐᒧᑦ ᐸᕐᓇᒃᓯᒪᔪᑦ ᐊᒻᒪᓗ ᒥᑭᓪᓕᕆᐊᕐᓗᒍ ᓴᓇᔭᐅᔭᓇᐊᖅᑲᕐᓂᖕᒋᑕ ᐊᑐᓇᐋᑦ ᐃᑲᔪᖅᑐᐃᔪᑦ ᐊᑦᑎᖕᓃᔪᒥᒃ ᐊᑐᕈᓐᓃᖅᑎᑦᑎᓂᕐᒥᒃ ᐊᒻᒪᓗ ᐱᐅᓯᕆᐊᖅᑕᐅᓂᖓ ᐱᓕᕆᕝᕕᐅᔪᑦ.

ᒪᕐᕉᒃ ᓴᒃᑯᑦᑎᓂᕐᒧᑦ ᖃᓄᐃᓕᐅᕈᑎᒃᓴᐅᔪᑦ ᓇᓗᓇᐃᔭᖅᓯᒪᔪᑦ ᑕᑯᓐᓇ ᓴᒃᑯᑦᑎᓂᕐᒧᑦ ᐊᒻᒪᓗ ᐱᐅᓯᕆᐊᖅᑎᑦᑎᓂᕐᒧᑦ ᐸᕐᓇᒃᓯᒪᔪᒥ: ᓴᒃᑯᐃᓚᐅᒃᓯᒪᓗᒍ ᐊᒻᒪᓗ ᑭᖑᓪᓕᖅᐹᒥ ᓴᒃᑯᑦᑎᓂᖅ.

ᓄᖅᑲᖓᓚᐅᒃᑎᑦᑎᓂᖅ ᐱᓕᕆᓂᐅᔪᓂᒃ – ᓴᓇᓂᐅᔪᓂᒃ ᑐᑭᖅᑲᖅᐳᖅ ᓄᖅᑲᖓᖅᑎᑦᑎᓚᐅᒃᑲᓂᖅ ᐱᓕᕆᐊᕆᔭᐅᔪᑦ – ᓴᓇᔭᐅᔪᓂᒃ ᐊᐅᓚᑕᐅᓂᖏᑦ, ᐸᕐᓇᒃᓯᒪᔭᐅᒍᑎᒃ ᐊᒻᒪᓘᓐᓂᑦ ᑕᒪᐅᓇᑐᐃᓐᓇᖅ, ᐃᒻᒪᑳ ᐱᓇᓯᐊᕈᓯᓚᖓᓄᑦ ᑕᖅᑭᓄᓪᓘᓐᓃᑦ ᕿᓯᐊᓂᓗ ᐊᑯᓂᐅᓂᖅᑐᐃᓐᓇᓇᐊᓕᒃ ᐊᕐᕌᒍᓕᒫᒧᑦ ᐅᖓᑖᓄᓪᓘᓐᓃᑦ. ᐊᑦᑎᕐᓗᑎᒃ ᐱᓕᕆᔾᔪᑏᑦ ᑐᖅᑯᖅᑐᖅᑕᐅᒐᔭᖅᑐᑦ ᐊᔾᔨᐸᓗᖕᒐᓂᒃ ᐅᑭᐅᒃᑯᑦ ᒪᑐᔭᐅᓯᒪᓚᐅᒃᑯᓯᖕᒐᒍᑦ ᒫᓐᓇᐅᔪᖅ ᓄᓘᔭᒃ ᓄᓇᓕᖕᒐᑐᑦ ᐊᑐᖅᑕᐅᖅᑲᖅᓯᒪᔪᖅ ᐊᒃᕿᒍᓂᒃ ᐊᓂᒍᖅᑐᓂ.

ᑖᒃᑯᐊ ᕿᑭᖅᑕᓂ ᐃᓄᐃᑦ ᑲᑐᔾᔨᖃᑎᒌᒃᑯᑦ ᓴᒃᑯᑦᑎᓂᕐᒧᑦ ᐊᒻᒪᓗ ᐱᐅᓯᕆᐊᖅᑎᑦᑎᓂᕐᒧᑦ ᐊᑐᐊᒐᖓ, ᑮᓇᐅᔭᑎᒍᑦ ᓇᑦᓕᐅᒃᑯᒫᖑᔪᖅ ᒥᒃᓵᐅᓴᒃᓯᒪᔪᖅ ᑕᐅᑐᙳᐊᕐᓗᑎᒃ ᒥᒃᓵᐅᓴᒃᓯᒪᓪᓗᓂ ᐱᐅᓐᖏᑖᒥᒃ ᑮᓇᐅᔭᖅᑲᕈᓂᖅᐸᑕ ᖃᓄᖅᑑᕈᑎᒃᓴᒥᒃ ᑖᒃᑯᐊᓗ ᕿᑭᖅᑕᓂ ᐃᓄᐃᑦ ᑲᑐᔾᔨᖃᑎᖏᑦ ᑎᒍᓯᓗᑎᒃ ᐊᐅᓚᓕᕐᓗᓂᔾᔪᒃ ᑕᒪᒃᑯᓂᖓ ᐃᓚᖕᒋᓐᓂᒃ ᐱᓕᕆᐊᖑᔪᓂᒃ ᐅᔾᔨᕆᓂᐊᕐᓂᕐᒧᑦ ᑕᒪᒃᑯᓇᓂ ᐃᓄᐃᑦ ᓇᖕᒥᓂᕐᑯᑎᕆᔭᖕᒋᓐᓂ ᓄᓇᓂ. ᒪᑐᔭᐅᓂᒃᓴᖓᑕ ᐊᑭᑎᒐᔭᖅᑕᖕᒋᑦ ᐃᓱᒪᒋᔭᐅᖑᐊᖅᓯᒪᔪᖅ ᒥᒃᓵᐅᓴᒃᓯᒪᔪᖅ ᒪᑐᔭᐅᓂᒃᓴᖓᑕ ᐅᓪᓗᖓ ᐅᑐᓇᓇ 10, 2013 ᐊᑐᖅᓯᓗᑎᒃ ᑕᒃᑯᐊ ᕿᑭᖅᑕᓂ ᐃᓄᐃᑦ ᑲᑐᔾᔨᖃᑎᒃᑯᑦ ᓂᕈᐊᖅᓯᒪᔭᖓᑦ ᐅᓪᓗᖅ ᓴᒃᑯᑦᑎᓂᕐᒧᑦ.

ᑭᖑᓪᓕᖅᐹᒥᒃ ᒪᑐᓯᓂᖅ ᐊᒻᒪᓗ ᐱᐅᓯᕆᐊᖅᑎᑦᑎᓂᖅ ᐃᓗᓕᕐᑲᖅᓂᐊᖅᐳᖅ ᐂᔭᐃᓗᑎᒃ ᐊᐅᓚᔾᔪᑎᓂᒃ ᓴᓇᔾᔪᑎᓂᒃ ᐊᒻᒪᓗ ᐱᖁᑎᓂᒃ ᐊᐅᓪᓚᖅᑎᑕᐅᓗᑎᒃ ᐊᒻᒪᓘᓐᓃᑦ ᐃᑎᖅᓴᓕᐅᖅᓯᒪᔪᒧᑦ ᐃᒋᑦᑎᕝᕕᖕᒧᑦ ᓄᓘᔾᔪᓂ (ᓱᕐᕈᕈᓐᓇᖅᑎᑦᑐᑦ, ᐊᑦᑕᕐᓇᖅᑎᑦᑐᑦ, ᐃᑭᔭᖅᑎᑦᑐᑦ), ᐊᒻᒪᓗ ᓄᓇ ᐅᑎᖅᑎᑎᕐᓗᒍ ᑕᐅᑦᑐᓇᓚᐅᖅᑕᖓᓄᑦ ᑕᑯᒃᓴᐅᔪᕐᓗ ᓄᓇᐅᑉ ᖃᓄᐃᓕᖓᓂᖓᓄᑦ ᐊᒻᒪᓗ ᑕᒪᒃᑯᐊ ᓴᐱᓯᕐᓯᒪᓚᐅᖅᑐᑦ ᑰᓕᖅᑎᓪᓗᒋᑦ ᑯᓪᕕᕆᓚᐅᖅᑕᖕᒋᑎᒍᑦ. ᐱᕐᑯᑏᑦ ᐊᒻᒪᓗ

ᐊᐅᓚᔾᔪᑏᑦ ᓴᓇᔾᔪᑏᑦ ᑕᐃᑲᓂ ᕿᑎᐊᓂ ᓄᓇᒃᑯᕈᑎᑯᑖᑉ ᐊᖅᑯᑎᖓᑕ ᖃᖓᑕᓲᒃᑯᑦ ᐅᓯᔭᐅᒐᔭᖅᑐᑦ ᐃᒃᐱᑭᑦᑐᕐᔪᐊᕐᒧᑦ ᐊᒻᒪᓘᓐᓃᑦ ᓄᓘᔭᖕᓄᑦ. ᐊᐅᓚᔾᔪᑏᑦ ᓴᓇᔾᔪᑏᑦ ᐊᒻᒪᓗ ᐱᕐᑯᑏᑦ ᐊᐅᓪᓚᕆᐊᓛᑦ ᐅᓯᔭᐅᖃᑦᑕᕐᓂᐊᖅᑐᑦ ᓄᓇᒃᑯᕐᓗᑎᒃ ᓄᓘᔭᖕᓂ ᒥᑦᑎᒪᑕᓕᐅᑉ ᕿᓐᖑᐊᓄᑦ. ᓇᒧᓐᖓᐅᓂᐊᕐᓂᖏᓪᓗ ᐅᒥᐊᕐᔪᐊᒃᑯᑦ ᑳᓐᑐᑖᒃᑎᓄᐊᖅᑕᐅᖃᕐᓂᐊᖅᑐᑦ ᑎᒍᓯᓗᑎᒃ ᐊᐅᓪᓚᖅᑎᑕᐅᓇᓱᒃᑐᓂᒃ ᐱᕐᑯᑎᓂᒃ ᐊᒻᒪᓗ ᐊᐅᓚᔾᔪᑎᓂᒃ ᓴᓇᔾᔪᑎᓂᒃ ᑕᐃᑲᓂ ᒥᑦᑎᒪᑕᓕᖕᒥ ᕿᓐᖑᐊᓄᑦ ᐊᒻᒪᓗ ᐃᒃᐱᑭᑦᑐᕐᔪᐊᕐᒥᑦ ᐊᒻᒪ ᐊᐅᓪᓚᖅᑎᑕᐅᓗᑎᒃ ᐱᕐᑯᑏᑦ ᑕᒫᓐᖓᑦ.

ᐱᐅᓯᒋᐊᖅᑎᑦᑎᓂᕐᒧᑦ ᐊᑐᓇᐊᓂᖕᒥᒃ ᐊᖅᑭᒃᓯᒪᔪᖃᖅᐳᖅ ᑕᐅᑐᓐᖑᐊᕐᖢᒋᑦ ᐊᑑᑎᖃᑦᑎᐊᖅᑐᒥᒃ ᐊᑐᖅᑕᐅᓂᖏᑦ ᐊᑐᖅᑕᐅᔪᒃᓴᐃᑦ ᐃᖏᕐᕋᑎᑕᐅᓗᑎᒃ ᓇᒻᒪᓈᑦᑎᐊᖅᑐᒃᑯᑦ ᐃᓱᒪᒋᔭᐅᔭᕆᐊᖃᕐᓗᓂ ᐊᔾᔨᐅᖏᑦᑐᒥᒃ ᐊᒃᓱᕈᕐᓇᕐᓂᖏᑦ ᓴᓇᓇᓯᒋᐊᒃᓴᖅ ᐅᑭᐅᖅᑕᖅᑐᒥ ᐱᔾᔪᑎᒋᓪᓗᒍ ᑕᒪᓐᓇ ᐱᐅᓯᒋᐊᖅᑎᑦᑎᓂᖅ ᐱᔭᕆᖅᑕᐅᔪᓐᓇᕐᑯᓪᓗᒍ ᕿᓚᒻᒥᐅᔪᒃᑯᑦ ᐊᒻᒪᓗ ᐊᑐᕐᓗᒋᑦ ᑕᒃᑯᐊ ᐸᕐᓇᒃᓯᒪᔪᑦ ᓴᒃᑯᑦᑎᓂᕐᒧᑦ ᐊᒻᒪᓗ ᐱᐅᓯᒋᐊᖅᑎᑦᑎᓂᕐᒧᑦ ᐊᒻᒪ ᐱᕐᑯᔭᑎᒍᓇᐊᖃᕐᓂᖓ ᐊᖅᑭᒃᑕᐅᓯᒪᔪᖅ ᐃᓄᖕᓂᒃ, ᒐᕙᒪᑐᖃᑯᓐᓂᑦ ᐊᒻᒪ ᓄᓇᕘᒥ–ᓄᓇᔅᓯᐊᒥ ᒐᕙᒪᐅᔪᑦ. ᐱᓕᕆᐊᖑᒋᐊᖃᖅᑐᓕᒫᑦ ᓴᓇᔭᐅᔭᕆᐊᓖᑦ ᒪᓕᒋᐊᖃᖅᑎᓯᒪᕗᑦ ᐱᔭᕆᖅᑕᐅᔭᕆᐊᖃᖅᖢᓂ ᐊᕐᕋᒍᖓᓂ ᐱᖓᓱᐊᓐᓂ (3) ᐊᒻᒪᓗ ᑎᓴᒪᖓᓐᓂ (4) ᑲᔪᓰᓐᓇᕐᓗᑎᒃ ᓄᓇᖓᓂᒃ ᐱᐅᓯᒋᐊᖅᑎᑦᑎᓇᓱᓪᓗᑎᒃ ᐊᒻᒪᓗ ᒪᑐᓚᐅᖏᓐᓂᖓᓂ ᐊᕙᑎᒥᒃ ᓄᓇᒥᒃ ᖃᐅᔨᓴᕐᓂᖅ ᐱᓕᕆᐊᖑᓗᓂ ᐊᕐᕋᒍᒧᑦ 6 ᓯᓄᑦ. ᑭᓯᑐᐃᓐᓇᕐᓂᒃ ᓂᕆᐅᒋᔭᖅᖏᑦᑐᑦ ᕿᒪᒃᑕᐅᓂᐊᖅᑐᒥᒃ ᓴᖅᑭᑦᑐᓂᒃ ᐅᔭᕋᖕᓂᐊᕐᓂᐅᓇᓱᒃᑐᒧᑦ ᖃᐅᔨᓴᖅᑕᐅᖃᑦᑕᕆᐊᖃᕐᓗᓂ ᐊᒻᒪᓘᓐᓃᑦ ᐊᐅᓚᑕᐅᔭᕆᐊᖃᐃᓐᓇᖅᑐᒥᒃ ᐊᑯᓚᐃᑦᑐᒥᒃ.

<u>ᒥᒃᓴᐅᓴᒃᓯᒪᔪᑦ ᐊᑭᒋᒐᔭᖅᑕᖏᑦ</u>

ᑲᑎᑎᕆᕙᓪᓕᐊᔪᓐᓇᖅᑐᒥᒃ ᑮᓇᐅᔭᖅᑐᒃᓂᕆᒐᔭᖅᑕᖏᑦ ᖃᓄᐃᓕᖓᒐᔭᕐᓂᖏᑦ ᐊᑐᕐᖢᑎᒃ ᑖᒃᑯᐊ ᕿᑭᖅᑕᓃ ᐃᓄᐃᑦ ᑲᑐᔾᔨᖃᑎᒌᑦ ᓴᒃᑯᐃᓂᕐᒧᑦ ᐊᒻᒪᓗ ᐱᐅᓯᒋᐊᖅᑎᑦᑎᓂᕐᒧᑦ ᐊᑐᐊᒐᖅ ᐊᖅᑭᒃᓯᒪᓂᖓ ᐊᑐᖅᖢᒍ ᐊᖅᑭᒃᓱᖅᑕᐅᓯᒪᓪᓗᓂ ᐅᓄᖅᑐᓂᒃ ᓴᓇᓴᕆᐊᖅᑲᖅᓯᒪᓪᓗᓂ ᑎᑎᕋᖅᓯᒪᔪᑦ ᑭᐅᓯᒪᐅᑦᑎᐊᖅᑐᓂ ᐊᑕᖏᖅᑐᓄᑦ ᐅᔭᕋᖕᓂᐊᕐᓂᐅᓇᓱᒃᑐᒧᑦ ᐊᒃᑐᐊᔪᑦ ᐱᓕᕆᐊᒃᓴᖅᑲᕆᐅᔪᑦ ᐃᓗᖏᑦ ᐊᒻᒪᓗ ᓴᓇᔾᔪᑎᒃᓴᓂᑦ ᐱᓯᑏᑦ ᓱᕐᑎᓇᓂᖅ ᐊᒻᒪᓗ ᓈᑕᐅᑲᑕᖕᓂᖏᑦ ᑭᓯᓚᐃᑦ ᐊᑦᑕᕐᓇᖏᑦᑐᒃᑯᑦ ᐊᑐᐃᓐᓇᕐᓂᐊᖅᑐᓂ ᐱᐅᓯᒋᐊᖅᑎᑦᑎᓂᕐᒧᑦ.

ᐊᑭᒋᒐᔭᖅᑕᖓ ᐊᖅᑭᒃᓯᓐᖑᐊᖅᓯᒪᔪᖅ ᓴᓇᓯᒪᕗᖅ ᓇᓗᓇᐃᔭᖅᓯᒪᑦᑎᐊᖅᖢᑎᒃ ᐊᑐᓂ ᐊᑭᒋᒐᔭᖅᑕᖓ ᒥᒃᓴᐅᓴᒃᓯᒪᔪᑦ ᑖᒃᑯᓄᖓ ᐊᑐᓂ ᐃᒻᒪᖄ 220 ᑎᐅᔪᑦ ᐊᑐᓂ ᐱᓕᕆᐊᒃᓴᐅᔪᑦ ᑎᑎᕋᖅᓯᒪᔪᑦ ᑕᕝᕙᓂ ᓴᒃᑯᑦᑎᓂᕐᒧᑦ ᐊᒻᒪᓗ ᐱᐅᓯᒋᐊᖅᑎᑦᑎᓂᕐᒧᑦ ᐸᕐᓇᐅᑎᒥ ᐃᑲᔪᖅᑐᖅᑕᐅᔪᖅ ᓇᓗᓇᐃᔭᖅᓯᒪᑦᑎᐊᖅᑐᑦ ᐱᕐᑯᑎᓄᑦ ᐊᒻᒪᓗ ᐅᒃᓱᒃᓴᒧᑦ ᐊᒻᒪᓗ ᓇᓗᓇᐃᔭᖅᓯᒪᑦᑎᐊᖅᖢᑎᒃ ᒥᒃᓴᐅᓴᒃᓯᒪᔪᑦ ᓇᓗᓇᖅᖢᓂ ᐊᑭᖏᑦ ᓱᕐᓗ ᖁᓂᒥᒍᑦ ᐊᒻᒪᓗ ᐃᓴᕈᑏᑦ, ᓄᓇᓕᐅᕐᒥ ᐊᐅᓚᑦᑎᓂᖅ, ᐅᒥᐊᕐᔪᐊᒃᑯᑦ ᑎᑭᑉᐸᒃᑐᑦ, ᐅᔭᕋᖕᓂᐊᖅᑐᒃᑯᑦ ᐅᓯᔭᖅᑕᐅᓂᖏᑦ, ᑲᒪᒋᔭᐅᓂᖏᑦ ᐊᒻᒪᓗ ᒪᑐᓚᐅᖏᓐᓂᖓᓂ ᐊᕙᑎᒥᒃ ᖃᐅᔨᓴᕐᓂᖅ. ᖃᐅᔨᓴᕐᓂᖏᓐᓂᒃ ᓇᒻᒪᒃᑐᒥᒃ ᓄᓇᐃᔭᖅᓯᒪᓪᓗᑎᒃ ᐊᖅᑭᒃᓯᒪᔾᔪᑎᓂᒃ ᑲᒪᒋᓂᖅ ᐱᕆᐊᖅᑎᑕᐅᔭᕆᐊᖃᕐᓗᓂ ᐊᑐᕈᓐᓇᖅᑎᑦᑎᓂᖅ, ᓯᕗᓂᖓᓂ ᐊᒻᒪᓗ ᓈᑕᐅᑲᑕᖕᓂᖏᑦ ᑭᓯᓚᐃᑦ ᐊᑦᑕᕐᓇᖏᑦᑐᒃᑯᑦ ᐊᑐᐃᓐᓇᕐᓂᐊᖅᑐᓂ ᐱᐅᓯᑎᒋᐊᖅᑎᑦᑎᓂᕐᒧᑦ ᐸᕐᓇᒃᓯᒪᔪᑦ ᑐᕌᒐᖅᓯᒪᔪᑦ.

ᐊᑭᖓ ᒥᒃᓴᐅᓴᒃᓯᒪᔪᖅ ᐊᑐᖅᓯᒪᔪᖅ ᕿᑭᖅᑕᓃᒃᑯᑦ ᓴᒃᑯᑦᑎᓂᕐᒧᑦ ᐊᒻᒪᓗ ᐱᐅᓯᒋᐊᖅᑎᑦᑎᓂᕐᒧᑦ ᐊᑐᐊᒐᖏᓐᓂᒃ ᐱᒻᒪᕆᐅᑉᓗᑎᒃ ᐊᒻᒪᓗ ᐅᖃᖅᑕᐅᓯᒪᔪᑦ ᐱᔭᒪᔪᓯᒪᔪᑦ.

ᐊᑖᒍᑦ ᐱᐅᓐᖏᓛᑉ ᐊᑐᕆᐊᖅᑲᕐᓂᕈᓂ ᓴᒃᑯᑦᑎᓂᕐᒧᑦ ᖃᓄᐃᓕᐅᕈᑎᒃᓴᐅᒐᔭᖅᑐᑦ, ᐱᐅᓯᑎᐊᖅᑎᑦᑎᓂᕐᒧᑦ ᐊᑭᒋᒐᔭᖅᑕᖓ ᒥᒃᓴᐅᓴᒃᓯᒪᕗᖅ $24,879,000 ᐃᓚᖅᑲᖅᓱᓂ ᓂᕆᐅᓇᖏᑦᑐᓂᒃ, ᓇᓪᓕᐅᒃᑯᒫᑦ ᐊᒻᒪᓗ ᓴᓇᔭᐅᔭᕆᐊᖃᕐᓂᖕᒐᑕ ᖃᓄᐃᓕᖕᒐᓂᒃᓴᖕᒐ ᐊᒻᒪᓗ ᐊᑐᓕᖅᑎᑦᑎᓂᕐᒧᑦ ᐸᕐᓇᒋᐊᓖᑦ..

BAFFINLAND IRON MINES CORPORATION

MARY RIVER PROJECT

2013 ABANDONMENT AND RECLAMATION PLAN

KEY UPDATES TO THE 2013 A&R PLAN

Section #	Page #	Summary of Change
2.4	5	Updated document to include current regulatory authorizations and permits
4.3	16-18	Updated document for current camp and related facility infrastructure
4.4	18-19	Updated equipment list
4.5 & Appendix B	19	Included additional culvert crossings from 2011 and 2012
4.7	20	Updated site fuel inventory and storage facilities
6.0	24-26	Included the progressive reclamation activities performed during 2012
8.5	33	Updated Figures 8.4 and 8.5 for 5 ML Tank Farm in Milne Inlet
8.8 & Appendix B	37	Updated fuel storage closure description and included as-built drawings for 5 ML Tank Farm in Milne Inlet
8.12 & Appendix B	39	Included EBA Design Brief for a Milne Inlet Landfarm
10.0 & Appendix G	46	Updated closure cost estimate
11.0 & Appendix G	47	Updated financial security estimate
Appendix H	—	Updated closure schedule

BAFFINLAND IRON MINES CORPORATION

MARY RIVER PROJECT

2013 ABANDONMENT AND RECLAMATION PLAN

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BAFFINLAND IRON MINES CORPORATION

MARY RIVER PROJECT

2013 ABANDONMENT AND RECLAMATION PLAN

1.0 INTRODUCTION

The Mary River Project is an advanced iron ore exploration project (the Project) located on the north end of Baffin Island, in the Qikiqtani Region of Nunavut (Figure 1.1). The Project is wholly owned and operated by Canadian mining company Baffinland Iron Mines Corporation (BIM) which is jointly owned by ArcelorMittal and Iron Ore Holdings L.P. BIM released a Definitive Feasibility Study in 2008 demonstrating the robust potential of full-scale development and first entered into the environmental assessment process at that time. Up to the present time, site programs and activities are designed to support surface exploration, bulk sample reclamation activities, and undertaking various studies and work that support the advancement of the Project to full-scale development.

This Abandonment and Reclamation Plan (A&R Plan) was prepared to address closure and reclamation in accordance with best corporate governance practices and as a condition of the surface lease held by BIM with the Qikiqtani Inuit Association (QIA) and Type B Water Licence issued by the Nunavut Water Board (NWB). This A&R Plan applies to all infrastructure, equipment and material associated with advanced exploration activities for the Project, including facilities located at, and between: the Mary River Camp, the Mid Rail Camp, the Steensby Inlet Camp and the Milne Inlet Camp. The A&R Plan does not address or include any future mine development activities as described in the Final Environmental Impact Statement for the Project. (Submitted February 2012). Once a Type A Water Licence and a new QIA Land Lease is issued for the Project (estimated April 2013), there will be a requirement to update the A&R Plan based on an expanded work scope that will include mine development.

The purpose of this A&R Plan and financial security estimate is to provide a reclamation plan for the Project in accordance with the requirements of the Qikiqtani Inuit Association Abandonment and Reclamation Policy for Inuit Owned Lands (QIA A&R Policy) and in accordance with the conditions of the NWB Water License (License Number: 2BB-MRY1114) that addresses all Project-related activity areas and infrastructure related to the Mary River Project as applicable to the 2013 site condition.

1.1 APPLICABLE GUIDELINES AND POLICIES

The purpose of this document is to provide a restoration plan for the Project in accordance with the regulatory framework established by the Inuit, Federal and Territorial governments as applicable to the current Project. The guidelines, policies and regulations applicable to the Project are summarized below.

- *Abandonment and Reclamation Policy for Inuit Owned Lands*, Qikiqtani Inuit Association - Department of Lands and Resources

- *Guidelines for Abandonment and Restoration Planning for Mines in the Northwest Territories*, by the Northwest Territories Water Board and Department of Indian Affairs and Northern Development, September 1990

- *Mine Site Reclamation Policy for Nunavut,* by Indian and Northern Affairs Canada, 2002

- Mine Site Reclamation Guidelines for the Northwest Territories, by Indian and Northern Affairs Canada, January 2007

- *Mine Reclamation in Northwest Territories and Yukon*, Prepared by Steffen, Robertson and Kirsten (B.C.) Inc. for the Northern Affairs Program of the Department of Indian Affairs and Northern Development, April 1992

The Mary River Project is not a mine site but rather an advanced exploration project. Programs and activities are designed to support advancing the Project to full-scale development. Although most of the above listed policies and guidelines do not apply to exploration or advanced exploration stages of the development of a mineral property, and only apply to new and developed mines and their mining-related activities, they have been considered when preparing this A&R Plan.

2.0 PROJECT INFORMATION

2.1 PROPONENT NAME AND ADDRESS

Baffinland Iron Mines Corporation (BIM) is the proponent for the Mary River Project. The following is BIM's address:

Proponent Address
Baffinland Iron Mines Corporation
120 Adelaide St. West, Suite 1016
Toronto, Ontario
M5H 1T1

c/o Richard Matthews
Tel: (416) 364-8820
Fax: (416) 364-0193

2.2 PROJECT LOCATION

The Mary River Project advanced iron ore exploration Project is located approximately 160 kilometres (km) south of Pond Inlet (Mittimatalik) and approximately 1,000 km northwest of Iqaluit in the Qikiqtani Region of Nunavut, as shown on Figure 1.1.

In summary, areas and infrastructure related to the existing Mary River Project include: camps and related facilities at Mary River, Milne Inlet, Steensby Inlet and a camp between Mary River and Steensby Inlet called Mid Rail Camp, a Bulk Sample Pit and stockpiles, roads (namely the Milne Inlet Tote Road), borrow sources and fuel storage. Figure 2.1 shows the location of areas related to the Mary River Project.

2.3 SITE PLANS

The existing site layouts at Mary River, Milne Inlet, Mid Rail Camp and Steensby Inlet are shown on Figures 2.2 to 2.5, respectively.

2.4 LAND TENURE AND REQUIRED PERMIT, LICENCES AND AUTHORIZATIONS

The Mary River Site, Milne Inlet Site and Camp and the majority of Milne Inlet Tote Road are located on Inuit Owned Lands that are important to local communities for both cultural and heritage purposes. The Inuit Owned Lands surrounding the Project area are shown on Figure 2.1.

Land tenure through long-term leases and shorter-term land use permits are required from the QIA to access Inuit-owned lands that surround the Mary River Site, Milne Inlet and the majority of Milne Inlet Tote Road. Leases and permits are also required from Aboriginal Affairs and Northern Development Canada (AANDC) at Steensby Inlet and for most of the proposed railway.

BIM is the sole owner of the three mining leases at Mary River, the locations of which are shown on Figure 2.1. Lease 2484 covers the iron ore deposit referred to as Deposit No. 1; Lease 2485 covers

Deposit Nos. 2, 3, and 3B; and Lease 2483 covers Deposit No. 4. The leases cover a total area of 1,593 ha and are renewable beyond the current 21-year period expiring on August 27, 2013.

The Nunavut Land Claims Agreement (NLCA) establishes the requirements and expectations for development activities occurring in Nunavut. The mining leases at Mary River predate the May 25, 1993 NLCA, but are surrounded by Inuit-owned surface and mineral (sub-surface) rights. Inuit owned surface rights in the area are administered by the QIA while Inuit owned mineral rights are administered by the Inuit birthright corporation Nunavut Tunngavik Incorporated (NTI). The Mary River mineral leases are administered by AANDC under the Canadian Mining Regulations of the *Territorial Lands Act* on federal (Crown) land. Access to the surrounding surface lands is provided through land use permits and leases issued by QIA or AANDC.

In addition to the three original mining leases described above, BIM holds the following mineral exploration instruments:

- NTI Exploration Agreement - signed on May 1, 2008, identifies an NTI Exploration Area that includes an initial area of 16,695 ha in the vicinity of Deposit No. 1 and the original Lease 2484, and an additional area of 1,425 ha covering a portion of Deposit No. 5. The NTI Exploration Agreement will become a Joint Venture between BIM and NTI, only if and when a feasibility study is completed on the NTI Exploration Area;

- McOuat Lake Claim Block - 18 mineral claims registered with AANDC covering lands covering and surrounding both Deposit Nos. 4 and 5;

- Glacier Lakes Claim Block - 20 mineral claims surrounding Deposit No. 6;

- Turner River Claim Block - 9 mineral claims covering Deposit No. 7;

- North Cockburn River Claim Block - 8 mineral claims covering Deposit No. 8; and

- North Rowley River Claim Block - 4 mineral claims covering Deposit No. 9.

Deposit Nos. 6 through 9 are all recent discoveries identified during BIM's 2010 regional exploration program.

Figure 2.1 shows the location of BIM's original leases and mineral exploration claim blocks in the region.

Through a commercial surface land lease, land use permits, an exploration agreement and the mineral claims, BIM is able to access the land on which the deposits are situated.

The exploration and geotechnical activities, the bulk sample program and any future closure and reclamation activities that may be undertaken, are subject to the terms and conditions of the following core authorizations issued to BIM:

Type of Authorization	Permit No.	Authorizing Agency	Period Valid
Water License (Type B)	2BB-MRY1114	NWB	April 5, 2011 to April 5, 2014
Letter of Advice (July 25, 2007)	File No. NU-06-0084	DFO	N/A
Authorization under S.35(2) of Fisheries Act and four amendments.	File No NU-06-0084	DFO	No expiry; reporting required through 2012
Approvals under S.5(1) of Navigable Waters Protection Act	8200-09-10415 8200-09-10425 8200-09-10414 8200-09-10424	Transport Canada	June 22, 2009 to June 30, 2015
Inuit Land Use Lease and Quarry Concession (Inuit Owned Lands)	Q10C3001	QIA	December 31, 2012
Land Use Permit - Mining (Crown Land)	N2007F0004	AANDC	July 4, 2012 to July 4, 2013
Land Use Permit - Roads (Crown Land)	N2006C0036	AANDC	April 3, 2012 to April 3, 2013
Quarry Permit (Crown Land)	2012QP0065	AANDC	July 4, 2012 to July 4, 2013

2.5 BRIEF OVERVIEW OF PAST PROJECT ACTIVITIES

The Mary River iron ore deposits were originally discovered in 1962 by Murray Watts of British Ungava Explorations Limited (Brunex). Brunex staked ten claim groups in the Project area including the: Flo (Deposit No. 1), Donna (Deposit Nos. 2, 3 and 3b) and Mary (Deposit No. 4). In 1963, Baffinland Iron Mines Ltd. was established and continued exploration and prospecting of the Mary River Project claims. Exploration was continued by Baffinland Iron Mines Ltd. until 1966.

After approximately a 40-year hiatus in activity at Mary River, Baffinland Iron Mines Corporation acquired the exclusive rights to the Mary River Project in 2002 and resumed exploration activities in 2004. BIM has since continued to undertake programs and activities in support of advancing its Mary River Project.

Initially, a camp and support facilities were established at Mary River, adjacent to an existing airstrip, temporary facilities were constructed at Milne Inlet for receiving materials and supplies, equipment was off-loaded at Milne Inlet by sealift and moved into the site over winter road, and drilling on Deposit No. 1 recommenced. Investigatory geotechnical drilling programs at potential infrastructure sites associated with a full-scale mining development also commenced.

Additional exploration drilling and resource evaluation on Deposit Nos. 1, 2 and 3, geotechnical drilling in Project development areas, environmental baseline and monitoring studies, a Bulk Sample Program with the addition of a new camp along the proposed rail alignment and upgrades and expansions to the existing camps, related infrastructure and the Milne Inlet Tote Road to support the different programs has followed.

In March 2008, BIM initiated the NIRB regulatory review of the full-scale development of the Mary River Project by the submission of the Development Proposal for the Mary River Project and associated applications. On February 11, 2009, the Minister of Indian and Northern Affairs Canada referred the Project to a Part 5 review under Article 12 of the NLCA. This referral was made in response to the recommendations of the NIRB Screening Report. In January 2011, BIM submitted a draft Environmental Impact Statement, and following a preliminary hearing in November 2011 submitted a final Environmental Impact Statement in February 2012. Currently, the Project has received federal approval based on the recommendation of the NIRB and the NIRB is anticipated to soon release a Project Certificate which will allow the Project to enter the regulatory permitting phase in early 2013.

3.0 CURRENT PROJECT SITE CONDITIONS

3.1 GENERAL

The following sections describe the environmental conditions located at the Project. This text is based on the studies completed for the Environmental Impact Statement.

3.2 TOPOGRAPHY

The raised Canadian Shield forms a discontinuous longitudinal mountain range termed the Arctic Cordillera, part of which occurs along the northeast coast of Baffin Island. The Penny ice cap in the southeast and the Barnes Ice Cap on the central part of Baffin Island are the largest ice fields on Baffin Island.

Topography varies considerably across the Project area. Figure 3.1 shows the relief across North Baffin Island and the topography as it relates to Project features is described below, starting in the north at Milne Inlet and extending towards Steensby Inlet in the south.

The Milne Inlet Camp is situated on a relatively broad, deep and flat sand beach located south of Eclipse Sound. The Milne Inlet site area is characterized by small lakes, ponds and rivers. Milne Inlet topography is relatively flat, gently sloping from 25 metres above sea level (masl) to 18 masl. The general topography of the area surrounding Milne Inlet is characterised by a high elevation and rugged terrain. Milne Inlet itself is closed in by steep fiord walls measuring approximately 60 to 600 masl.

Moving inland, the Milne Inlet Tote Road follows the Phillips Creek valley, which starts near sea level at Milne Inlet and rises to an elevation of 188 masl at Mary River. The Phillip's Creek valley is confined by hills or mountains on both sides. Terrain to the west of the Phillips Creek valley in particular is mountainous with some occurrence of glaciers.

The Mary River area is surrounded by numerous small lakes and rivers. The topography generally slopes downwards in a westerly direction. The elevations in the Mary River area range from 679 masl to 150 masl. Sheardown Lake located to the south of Mary River has an elevation of 168 masl, while Camp Lake located west of Mary River has an elevation of 150 masl. Deposit No. 1 (Nulujaak) rises quickly to 679 masl from the fairly flat and sandy outwash plain at 188 masl where the Mary River Camp is currently located. Nulujaak is a major landmark for Inuit travelling on the land and is part of a ridge trending approximately north-south and the land to the west is equally mountainous with some minor coverage of glaciers. East of Nulujaak the land is somewhat rolling with several elevated plateaus formed by horizontal sedimentary deposits.

Moving south from Mary River, the undulating outwash plains end near the Ravn River and the area to the south is quite flat and poorly drained. The land begins to drop steeply approaching the Cockburn Lake valley, which has an elevation of approximately 1.5 masl on the lake and 359 masl (southern) to 379 masl (northern) on the adjacent cliffs. South of Cockburn Lake to Steensby Inlet, the land becomes more flat with mainly undulating bedrock and boulder expressions.

3.3 SURFICIAL GEOLOGY

The drainage features, landforms and surface deposits of the region all attest to the widespread and relatively recent glaciation of Baffin Island. Residual snowfields and vertical ice caps still present in the mountainous regions on the eastern part of the island support this. Thick, unconsolidated deposits of glacial till that lie relatively undisturbed on the slopes and hillsides despite the lack of vegetation, further reinforces this theory.

The surficial geology of the area generally consists of locally abundant Holocene glacio-lacustrine sediments, alluvial sediments (alluvial deposits), marine and glacio-marine deltaic sediments and end moraine till, with occasional outcrops of pre-Quaternary bedrock and sedimentary rock formations as shown on Figure 3.2. The Holocene glacio-lacustrine sediments are typically in the range of 1 to 10 m thick, consisting of proglacial sand and gravel outwash materials. The sediments commonly form braided floodplains, terraces and fans. The early Holocene and Wisconsinan tills are mainly veneers and blankets. Till veneers are 0.5 to 2 m thick and are discontinuous. Some veneer surfaces are reinforced with boulders, either due to washing by subglacial meltwater or permafrost processes, and restrict outcrop exposures. Till blankets are undulating and generally range from 2 to 10 m in thickness with drumlins and ribbed moraines in places.

Boulder tills are the dominant surface material, blanketing the majority of the region and restricting outcrop exposures to the high ridges, stream canyons and steep escarpments. In general, drainage in the region is poorly developed on the till plains as insufficient time has elapsed since glacial recession to allow more mature drainage systems to evolve. As a result, vast areas, particularly on the higher plateaux, are water saturated during the melt period.

Alluvial benches and kame terraces of sand and coarse gravel typically cling to the walls of the canyons and fill the stream valleys along the western flank of the Precambrian mountains. These localized valley deposits are typically well drained making land travel over these areas very good within a short period of time after the snow melts.

The following provides more specific observations associated with the surficial geology at some of the proposed Project infrastructure locations/sites.

Mary River

The Mary River Camp is located in a major glaciofluvial outwash deposit in what appears to be a classic ‘U’ shaped valley. In addition to the glaciofluvial deposits, there are some direct glacial deposits consisting of kames, moraines and eskers in and around the south-eastern portion of Sheardown Lake. The outwash valley is essentially a relatively flat plane with very little local relief, the major exceptions being along water bodies, esker deposits and adjacent to valley edges. Valley walls are generally steep and abrupt, often with distinct terraces. The surficial geology of the Mary River area is shown on Figure 3.3.

Milne Inlet Tote Road

The Milne Inlet Tote Road alignment generally follows a glacial valley oriented northwest-southeast to Mary River. The surficial deposits along this alignment include till veneer or blankets on the higher elevations with some drumlins and moraines. Glaciofluvial outwash sediments (gravel and sand) forming braided floodplains, terraces and fans or stratified glacial drift (gravel and sand) are typically found in the valley floors. Limited bedrock exposure is present along the Milne Inlet Tote Road.

Milne Inlet

The dominant landforms in the Milne Inlet area are typically a result of glacial activity, marine and mechanical forms in various degrees. Glacial activity is not overly apparent on the immediate site but is more pronounced in the higher elevations south of the site. Marine and mechanical features are most predominant with terraces and strand (beach) lines formed by marine action which have been cut by mechanical features, some of which may be attributed to permafrost. Wind appears to have been responsible for some drifting on the finer grained soils on the lower part of the site. Recently deposited colluvium is present on many of the slopes and side hills in the area. The action of surface water has produced numerous sharp gullies along waterways. Marine clays were also noted at some locations at the site.

Proposed Railway

The topography along the proposed railway alignment is generally quite hilly, with the exception of the Ravn River area which is relatively flat. Glaciated valleys are evident along a significant portion of the alignment. The surficial geology is also characterized by the relatively recent glacial activity of Baffin Island. Surficial geology consists of several types of deposits including glacio-lacustrine sediments, alluvial sediments (alluvial deposits), end moraine till, and till veneers and blankets. Occasional bedrock outcrops are also common along the southern portion of the Project area.

Steensby Inlet

Near surface bedrock is dominant in the Steensby Inlet area. Limited overburden occurs in the form of marine sediments and localized deposits of till. The majority of the overburden is located in depressions between the numerous bedrock outcrops and is typically overlain by a layer of vegetation and boulders.

3.4 SOILS

A soils evaluation program was carried out in 2007 and 2008 by an arctic soils specialist (Veldhuis, 2010). Regionally, soil formation is controlled and limited by year-round low soil temperatures, low precipitation rates and near-surface permafrost. Soil formation occurs in the thin layer overlying the permafrost that is subject to seasonal thawing, known as the active layer. The thickness of the active layer varies substantially across the region with topography, depth to bedrock, and vegetative or water cover but is typically between 1 to 2 m thick in the Project area depending on the local soil cover.

Project area soils were classified based on the Canadian System of Soil Classification (Soil Classification Working Group, 1998), and included primarily Cryosols (permanently frozen soils or soils with permafrost

within 100-200 cm of soil surface) and Brunisols (soils with weak B horizon development). In general, Project-area soils all showed weakly developed horizons, with a general lack of organic material accumulation. Fine to medium-textured soil materials were generally cryoturbated, and patterned ground phenomena related to permafrost and freeze-thaw cycling were also commonly observed throughout the Project area. Soils throughout the Project area were generally poor in nutrients. This factor, in combination with the depressed level of pedogenic development in the area and thinness of soils where present, generally make local soils unsuitable for stockpiling for revegetation purposes (Veldhuis, 2010).

3.5 PERMAFROST

The Project is located in a zone of continuous permafrost. The active layer through the Project area typically ranges from approximately 1 to 2 m but may be greater in areas where there is loose, sandy soil at the edges of lakes or ponds and less in areas with a substantial surface layer of wet organics. Unfrozen 'taliks' can exist within areas of continuous permafrost below and on the margins of lakes, under major rivers or near the coast. Taliks may exist under lakes within the Project area, particularly larger lakes such as Mary Lake, Angajurjualak Lake and Cockburn Lake; however, this was not fully investigated because the presence of taliks under these lakes is inconsequential to the Project. No taliks have been confirmed in any of the on-land drilling completed for the Project, including at Steensby Inlet.

Permafrost thickness in and around the Project area is considered to be deep, typically in the 400-700 m depth range (Knight Piésold, 2010a). In 2007, a 400 m thermistor installed into Deposit No. 1 showed that the depth to permafrost is predicted to extend to 610 m at this location (Figure 3.4) which is well below the planned depth of mining. The permafrost depth prediction is consistent with regional measurements at the former Nanisivik Mine, where permafrost was measured at depths greater than 430 m (Gartner Lee, 2003), and at drill holes located 450 km west and 450 km south of Pond Inlet, with measured permafrost depths of 500 m and 400 m, respectively (Geological Survey of Canada, 2006).

Over fifty ground temperature monitoring instruments (thermistor cables) were installed and sporadically monitored between 2006 and 2008 to determine typical ground temperatures in the overburden soils and bedrock across the Project area. Many were installed to depths sufficient to define the typical stable temperatures in the permafrost soils below the depth of zero annual amplitude. The depth of zero annual amplitude in temperature fluctuation appears to exist at depths of between 10 and 15 m in the valleys. At that depth, the "typical" permafrost temperature is roughly -10°C.

In general, permafrost greatly increases ground stability at depth but at surface it can affect the rates of soil erosion through the formation of ice wedges and patterned ground, pingos and palsas, massive ground ice, solifluction, etc. Changes to the thermal regime resulting from surface disturbance or climate warming can lead to thawing of the permafrost causing the formation of thermokarst topography and mass wasting. Thaw instabilities or soil weakening can also occur either naturally as part of the annual cycle within the active layer or as a result of increased thaw due to change.

3.6 SURFACE WATER

North Baffin Island is one of the coldest regions in Canada. The region experiences a mean annual temperature of approximately -15°C, with mean daily temperatures below -20°C from November through

April, and above 0°C during June through August. The long period of sub-zero temperatures results in a very short runoff season, typically occurring from June through September. Runoff may extend to late October in systems with large lake components. The frigid temperatures also result in very low precipitation values for North Baffin Island, from the combined effect of the low moisture carrying capacity of cold air and the scarcity of liquid water available for evaporation. According to Natural Resources Canada the region is classified as semi-arid with mean annual total precipitation ranging from 200 to 400 mm, although regional climate stations suggest that the true value is near the lower end of this range. The amount of water available for runoff is further reduced by the processes of evaporation, transpiration and sublimation. The frigid climate and subsequent lack of significant vegetative cover combine to minimize the volume of water evaporated and transpired to very low levels. Conversely sublimation, which is the process by which solid water changes phase directly to water vapour, frequently occurs during the winter months, largely as a result of blowing snow transport.

Stream flow regimes in the high Arctic are most strongly influenced by temperature. During the winter months, frigid temperatures cause most hydrologic systems to freeze solid. During these months, snow is frequently redistributed within and between watersheds by wind transport. As temperatures rise above 0°C, stream flow resumes. The majority of annual runoff typically occurs during the nival freshet in late June through July, with runoff decreasing through the late summer before freezing up again at the onset of winter, typically sometime in October. Peak instantaneous flows typically occur during the freshet, but in smaller watersheds peak flow may occur due to rainfall events in July or August. Mean annual discharge per unit area is typically on the order of 5 - 10 L/s/km^2. Differences in elevation, aspect, glacial cover and lake cover between watersheds result in regional variability in the timing and magnitude of runoff. Typically, the onset of the spring melt is delayed in higher elevation regions, as well as in north facing watersheds. Higher elevation areas may also receive greater volumes of precipitation as a result of orographic influences. In smaller watersheds aspect may help decide whether the watershed is a net sink or source for blowing snow transport and deposition. Finally, glacial cover tends to greatly increase the volume of runoff in a watershed, while lakes act to attenuate runoff events and prolong the runoff season. The presence of permafrost, coupled with the lack of vegetative cover, also has a profound effect on regional hydrologic systems. Permafrost typically restricts water from infiltrating the ground to any great depth, while the lack of surface vegetation results in little to no impedance or loss of runoff as it flows to the river channels. Therefore, July and August rainfall events tend to produce flashy stream flow conditions.

3.7 GROUNDWATER

Groundwater flow in the local study area consists of seepage through unconsolidated materials within the active layer, which typically ranges from 1 to 2 m (up to 3 m) below surface. This groundwater reports to local surface drainages and lakes.

As described in Section 3.5, of this A&R Plan, the Project is located in a zone of continuous permafrost, which extends to a projected 610 m below ground surface at Deposit No. 1. As such, no groundwater flow is anticipated to exist below the active layer. This conclusion is supported by observations at other mine sites in northern latitudes, including the Polaris and Nanisivik underground mines, as well as the EKATI™ mine where open pits in moderately faulted granite did not generate groundwater until the pits extended

below the limit of permafrost at around 350 to 400 m depth below ground surface (Kevin Jones, pers. comm.).

3.8 ARCHAEOLOGY

BIM has conducted extensive archaeological surveys across the Project use area and in other areas in North Baffin Island producing detailed reports of all identified sites including location coordinates, identified features and detailed maps. Nunavut's regulatory statutes prevent the publication of known archaeological site information. BIM has filed all of its reports and information collected with the Nunavut Government Department of Culture, Language, Elders and Youth (CLEY). Under an abandonment scenario this information could be petitioned from CLEY as required to support execution of the reclamation activities. Any known archaeological site currently within the working perimeter of disturbed land at the Mary River Project is identified at site as an environmentally sensitive area and is staked and roped to prevent disturbance.

3.9 LOCAL LAND USES

Considerable effort has been expended by BIM to engage local communities and knowledge holders, through dialogue and participation from 2004 through 2012. Inuit knowledge studies were also undertaken in the five closest North Baffin communities over the period of 2006 through 2008, including interviews with 45 elders in three communities, and workshops in land use, caribou and marine mammals in five communities. This information, combined with feedback from stakeholder engagement activities and from operating in the area, has provided BIM with a good understanding of local land uses. BIM's understanding of local land uses, considering its Inuit knowledge study and existing information sources, is documented in a land use report that was appended to its final Environmental Impact Statement submitted to the Nunavut Impact Review Board in early 2012.

Connection to the land through the pursuit of cultural land base activities such as harvesting, travel, and camping continue to be of importance to Inuit. Harvesting in the land use study area includes varied resources such as caribou, marine mammals, fish, soapstone, berries, and sea resources.

Caribou harvesting is commonly pursued by Inuit in the land use study area. The Nunavut Wildlife Harvest Study (NWHS) (Priest and Usher, 2004) documented reported harvest locations for caribou. Caribou move around Baffin Island over the course of a number of years and during the NWHS were quite abundant in the North Baffin region. Recently, caribou abundance has declined in the land use study area. As such, Inuit must travel further to hunt caribou, and rely less on caribou overall.

Harvesting of other resources such as berries and soapstone are also pursued by Inuit. Berry picking is conducted as a secondary, opportunistic harvesting activity, while individuals are already out on the land. There is a soapstone deposit at Mary River that is an important resource commonly harvested by residents of North Baffin for carving purposes. The deposit (like all soapstone deposits) is protected under the Nunavut Land Claims Agreement (NLCA) giving Inuit inherent right to harvest the soapstone.

Travel and camping are activities that are largely pursued in combination with harvesting and visiting with other communities by following well established historical routes (in their ancestors' footsteps).

Travel routes exist on ice, in water, and over land. Ice travel is limited to the landfast ice, which in South Baffin extends only a few kilometres from the coast. Important travel routes in North Baffin include:

- a route across Steensby Inlet used by residents from Igloolik and Hall Beach to access inland harvesting locations and by Clyde River residents travelling to Igloolik and Hall Beach;
- a travel route from Pond Inlet through Eclipse Sound into Milne Inlet and through Navy Board Inlet; and
- the Phillips Creek valley which is used as a guide for inland travel from Milne Inlet.

Although these are travel routes with the greatest interaction with the Project, many other travel routes exist within North Baffin. In addition, hunters travel across the land, beyond the main travel routes, in search of caribou.

4.0 PROJECT DESCRIPTION

4.1 GENERAL

The Mary River Project is an advanced exploration Project. Programs and activities are designed to support mainly exploration and the Bulk Sample Program and to advance the Project to full-scale development. All Project-related facilities and infrastructure were designed and constructed to minimize the footprint and to be temporary in nature. These design and construction considerations have facilitated reclamation plans and minimized the engineering required to support the complete decommissioning and reclamation of the site.

4.2 BULK SAMPLE PIT AND STOCKPILES

Bulk Sample Pit

A single bulk sample side hill cut across the crest and east side of the North Limb of Deposit No. 1 was constructed in 2008. Two 5 m high benches were blasted using explosives and excavated down the east slope of the deposit (680 and 685 benches, respectively). The pit was designed and constructed to be free-draining (i.e. side hill cut) so that no water is impounded. Documented visual observations conducted during the 2009/2010 freshets confirmed that the pit is free draining during all stages of the freshet melt and through seasonal rainfall events. The bulk sample benches were assessed as stable in 2008 by the Nunavut Workplace Safety and Compensation Commission Mine Inspectors in his September 2008 inspection report (Appendix A-1). A photo of the Bulk Sample Pit can be seen in Appendix A-2. The approximate location of the bulk sample pit is shown on Figure 2.2.

Stockpiles

Stockpiles created during the bulk sampling program at Deposit No. 1, Mary River and Milne Inlet include:

Deposit No. 1 - Approximately 28,800 tonnes of surficial weathered ore excavated from the surface of Deposit No. 1 has been contoured and regraded into the surrounding landscape. The pad was left in a stable and free draining state at the end of the 2008 field season and has remained stable and free draining. The location of the weathered ore is shown on Figure 2.2. The roadbed between the stockpile and the pit was also constructed from weathered ore. Approximately 6,000 tonnes of representative (i.e. ore grade) material was left in the bulk sample pit.

Mary River - Stockpiles containing approximately 31,900 tonnes of non-representative ore (i.e. separate lump and fine stockpiles) remain at the Mary River crusher site. The approximate locations of the two stockpiles at the crusher are shown on Figure 2.2. As built drawings of the Mary River stockpiles are included in Appendix B-1.

Milne Inlet - The ore stockpile pad containing approximately 24,000 tonnes of non-representative ore remains at Milne Inlet. Approximately 12,000 tonnes of representative (i.e. ore grade) material is stockpiled on this pad at Milne Inlet. The approximate stockpile locations at Milne Inlet are shown on Figure 2.3. As built drawings of the Milne Inlet stockpiles are included in Appendix B-2.

Geochemistry

Bulk Sample Pit - The bulk sample was obtained by removal of ore from the top of the mountain leaving a bench with some residual ore exposed. The total area of the bench and exposed residual ore is in the order of 50 m x 180 m. The bench is free draining with no significant ponding. A seep (Sample MRY-9) was observed on the east slope of the mountain 80 to 100 m down-slope from the bench. The inference is that water infiltrates into bedrock fractures and flows through the bedrock fractures in the active zone with some of that water arriving at the seep location. The seepage develops rapidly after heavy rain events late in the open water season and then subsides. The seep has been sampled on two occasions (2008 and 2010).

A total of 23 samples of different types of ore from the Bulk Sample Pit were submitted for acid-base accounting (Knight Piésold, 2009) (Appendix C-1). The overall results suggest there is little potential for acid rock drainage in the residual ore and rock exposed by the bulk sampling program.

Water quality draining from the seep analyzed in 2008 and again in 2010 (Appendix C-2, Table 1) are similar for both dates with generally low concentrations of metals below Metal Mining Effluent Regulations (MMER). The water is pH neutral with low sulphate (ca. 50 mg/L). Where concentrations of elevated metals occur (e.g. Al and Fe) they are associated with suspended solids. Total suspended solids measured are generally low (ca. 20 mg/L).

Overall, there is little concern for mobilization of metals to the environment from the bulk sampling pit.

Waste and Weathered Ore Stockpile on Deposit No. 1 - This stockpile of an estimated 28,800 t has a footprint of some 80 m x 80 m and is located several hundred metres north of the bulk sample pit on relatively flat lying ground, in the upper reaches of the mountain. Surface drainage is westward toward an ephemeral stream that drains this area. Samples of runoff from this stream (Sample MRY-10), believed to contain a component of seepage, have been analyzed on a number of occasions since 2008. The water quality measured from this area generally contains very low metal contents (Appendix C-2, Table 2) below MMERs. Where more elevated metal concentrations are recorded (e.g. Fe and Al) they occur in unfiltered samples and are related to the presence of suspended solids.

Runoff pH is neutral and sulphate concentrations are low (< 5 mg/L) indicating little evidence of sulphide oxidation. Acid-base accounting analysis was completed on three samples of this material at the time of the bulk sampling program (Knight Piésold, 2009). Sulphide content in the three samples were all below detection limit (<0.01%) consistent with the generally low sulphide content of the ore in general and the weathered nature of this material in particular. These materials are expected to be non-potentially acid generating even if very low concentrations of sulphide are present. Based on the work completed to date, there is little concern regarding metal release from this stockpile.

Mary River Crusher Site Ore Stockpiles and Milne Inlet Ore Stockpile - The crusher site for the bulk sampling program located near the Mary River Camp contains a pad and several small stockpiles containing a total estimated tonnage of 31,900 t comprising non-representative (Mn-rich) and residual ore. The crusher site is located between (and within a hundred metres or less) of Sheardown Lake and a small tributary stream draining to Sheardown Lake. The soils at this location are very permeable with little

in the way of surface runoff and no observable seeps. The Milne Inlet ore pad storage facility contains residual ore are left over from the load-out of the bulk ore sample in 2008. The pad (on the order of 250 m x 250 m) sits immediately adjacent to Milne Inlet and is comprised of non-representative Mn-rich ore with residual ore grade material on top.

Acid-base accounting results of five samples of this material (Knight Piésold, 2009) were similar to the waste and weathered ore results discussed above. A single sample contained detectable sulphide which was potentially acid generating. Although the acid rock drainage potential of this material is low, localized areas of potentially acid generating material could be present.

Given the absence of surface water flow and visible seeps from these areas, additional work has been completed including the excavation of test pits (2009), installation of drive point piezometers (2010), and the construction of field gravity lysimeters (2010) for the purpose of collecting samples of seepage from the active zone. The results of this work have been presented in AMEC (2010) used to support geochemistry conditions and predictions made in the Environmental Impact Statement (submitted January 21, 2011). Although the potential for metal leaching is low, ongoing confirmation monitoring and testing of these areas will continue for the next several years.

4.3 CAMPS AND RELATED FACILITIES

Camp facilities are described below and locations are shown on Figure 2.1.

Mary River Camp

The Mary River camp generally consists of a 100-person winterized exploration tent camp and a 100-person all-season tent camp, with ancillary facilities. Specifically there are:

- 26 Weatherhaven tents;
- 11 Norseman tents;
- 3 Weatherhaven washroom/dry tents;
- 1 Weatherhaven firehall tent;
- 1 Weatherhaven kitchen (old) tent;
- 3 Weatherhaven workshop tents;
- 56 sea containers used for storage;
- 3 main camp generators;
- 2 incinerators;
- 1 sewage treatment plant;
- 3 sewage ponds;
- 1 landfill
- 13 fuel bladder tanks;
- fuel drums in secondary containment, including:
- Jet A, 41 barrels;
- Gasoline, 18 barrels; and
- mobile equipment along with laydown areas.

The existing all-season exploration camp, primary ancillary facilities and related infrastructure at Mary River are shown on Figure 2.2.

Milne Inlet Camp

The Milne Inlet camp is an all-season fully serviced trailer camp for approximately 60 people, associated facilities and related infrastructure. Specifically there are:

- 10 accommodation trailers;
- 9 work tents;
- 1 large Weatherhaven workshop tent;
- 2 main generators;
- incinerator;
- oil/water separator;
- 1 sewage treatment plant;
- 1 sewage pond;
- 1 five million litre diesel fuel tank in secondary containment;
- 73 fuel bladder tanks (55 usable for fuel storage);
- fuel drums in secondary containment, including:
- Gasoline, 56 barrels; and
- mobile equipment along with a laydown area.

The existing site layout at Milne Inlet is shown on Figure 2.3.

Mid Rail Camp

The Mid Rail Camp, used to support the geotechnical drill program between Mary River and Steensby Inlet, as well as environmental studies based in the area, is a temporary seasonally occupied tent camp for approximately 40 people part way along the potential future railway alignment north of Cockburn Lake. Specifically there are:

- 18 wooden structure accommodation/working tents (for the kitchen and dining, living quarters, washrooms, laundry and water storage);
- 1 main generator; and
- a small laydown area.

The camp has been unoccupied since 2008.

The existing site layout at Mid Rail Camp is shown on Figure 2.4.

Steensby Inlet Camp

The Steensby Inlet camp is a seasonally occupied tent camp for approximately 40 people with associated facilities and related infrastructure used to support environmental studies, on-ice port site drilling and geotechnical drilling in the general southern area of the rail alignment. Specifically there are:

- 16 wooden structure accommodation/working tents (for the kitchen and dining, living quarters, washrooms, laundry and water storage, generator);
- 2 main generators;
- incinerator;
- fuel drums in secondary containment, including:
- Jet A, 1,664 barrels;
- P-50 Diesel, 752 barrels; and
- Gasoline, 67 barrels.
- mobile equipment (2 pieces) along with a laydown area; and
- a 12-trailer camp delivered to Steensby Inlet in 2008 to replace or supplement the tent camp for use in the future field programs remains in storage at the laydown area.

The existing site layout at Steensby Inlet is shown on Figure 2.5.

Other Sites

There are two temporary refuge stations consisting each of a small half size trailer with bottled water located at kilometre 33 and 68 of the Milne Inlet Tote Road.

An emergency survival trailer is parked at the crusher location near Deposit No. 1.

Communication towers and repeater stations are positioned at Milne Inlet, Mary River and two along the Milne Inlet Tote Road.

Weather stations are located at Mary River, Milne Inlet and Steensby Inlet.

4.4 EQUIPMENT

A portion of the equipment and materials used for the Bulk Sample Program and no longer required were backhauled to southern Canada in 2008. More equipment was included in subsequent backhauls as part of progressive reclamation.

A list of equipment on-site as of October 1, 2012 includes the following:

Item	No. of Units	Item	No. of Units
Snowmobile/ATV	11	Excavators	3
Camp	6	Fork Lifts (Zoom Booms)	4
Incinerator	5	Fuel Tanks (steel)	3
Airstrip Lights	1	Rescue Boat	1
Sewage Treatment Facilities	3	Emergency Trailers	2
Camp Generators	10	Radio Towers	4
Auxiliary Generators	10	Rigmats	48
Haul Road Trucks	5	Office Trailers	7
Haul Road Truck Pup Trailers	5	Graders	2
Bulldozers	5	Water Tanks	2
Loaders	5	Waste Tank	1
Supervisor Vehicles	4	Drills	1
Light Plants	2	Maintenance Vehicles	2
Fuel Truck	1	Emergency Vehicles	1
Manlifts	4	—	—

4.5 ROADS AND AIRSTRIPS

There are two existing gravel airstrips used for the Project at Mary River and at Milne Inlet. Temporary lighting is installed at the Mary River airstrip. No lighting is installed at the Milne Inlet airstrip.

The Milne Inlet Tote Road is an existing 105 km all-season gravel road between the Mary River Site and Milne Inlet. The existing road was upgraded in 2007 and 2008 and generally included excavating sand and gravel for the road bed from within the road alignment, and supplemented with material from large designated borrow/quarry areas, adding the fill to the roadbed where required and installing crossing structures of various sizes (mainly culverts) at watercourses and drainages.

In 2009 and 2010 the road was maintained and included significant culvert and road upgrades to stabilize and reduce future maintenance requirements. The Milne Inlet Tote road has generally been stable since it was upgraded in 2008 as part of the Bulk Sample Program. A few very small unstable areas were identified in a 2009 geotechnical assessment and repairs executed under the direction of a professional engineer. Otherwise, the road had been stable since its construction. Beyond the areas identified the year after construction (2009), the tote road embankment has been stable along the entire alignment. In 2011 the road was maintained by upgrading three culverts and installing a new culvert. In 2012 the Milne Inlet Tote Road was further maintained when six culvert water crossings were upgraded and four new round corrugated steel pipe culverts were installed. A fish ladder was also installed in 2012 to enhance fish passage. Removed culverts were backhauled to Mary River Camp, crushed, and deposited in the landfill. A summary of culverts along the Milne Inlet Tote Road is included in Appendix B-5.

Subject to future permitting, it is planned that the road will continue to be used to provide all-season access throughout construction of the mine. Figure 2.1 shows the existing road alignment and the borrow sources identified for quarrying. Other smaller access roads are located at the Project Site, such as roads to: Deposit No. 1, Mary River landfill, Mary River salt station, Mary River explosives storage area, borrow

areas and Mary River and Milne Inlet general camp roads. All of these roads have been stable since they were originally constructed.

4.6 BORROW SOURCES

Fill materials needed for upgrades to the Milne Inlet Tote Road, the haul road to Deposit No. 1 and other site civil works were obtained from within the Milne Inlet Tote Road alignment (Milne Inlet Tote Road upgrade only) and from three main borrow sources and two quarries, at locations shown on Figure 2.1. Approximately 1.13 Mm^3 of sand and gravel have been excavated from within the road alignment and these main borrow sources and quarries to support the Project.

Recontouring of borrow areas commenced in 2008 and continued in 2009. EBA Engineering (2009) completed a geotechnical assessment of the permitted and road side borrows areas and established criteria and a scope for their reclamation. The EBA Engineering report on borrow areas is attached in Appendix D.

4.7 FUEL STORAGE

Fuel storage facilities are located at Mary River, Milne Inlet, Refuge Stations, Mid Rail Camp and at Steensby Inlet Camp.

Bulk fuel storage facilities include:

- A 5 million litre capacity bulk fuel storage facility at Milne Inlet, consisting of a single 5 million litre diesel tank in a lined containment facility, as well as a lined refuelling station and resupply pipeline. As of August 1, 2012 the tank contained approximately 1.5 million litres of P-50.

- An 8.25 million litre capacity bulk fuel storage facility at Milne Inlet, consisting of seventy three 114,000 L fuel bladders in a lined containment facility, as well as a lined re-fuelling station and resupply pipeline. As of October 1, 2012 only 55 bladders were usable for fuel storage and the facility contained approximately 376,000 litres of P-50 and 436,000 litres of Jet A.

- Bulk fuel bladder tank farm near the Mary River Camp with a capacity of 1.5 million litres, consisting of eleven 114,000 L bladders in lined containment. A double walled 75,000 litre tank in lined containment also located near the Mary River Camp. As of October 1, 2012 the amount of fuel contained is approximately 0.99 million litres of P-50 and 174,000 litres of Jet A.

Refuelling stations at Milne Inlet and Mary River are equipped with a lined and bermed area to contain any spills or leaks during refuelling. The liner is protected by sand bedding. Vehicles and equipment drive onto the lined area to refuel.

In addition, barrelled fuel is stored in lined containment situated at Milne Inlet, Mary, River, Steensby Inlet and Mid Rail Camps. The total number of 200 L drums currently stored on-site as of October 1, 2012 is 2,532 drums; 2,417 barrels at Steensby Inlet Camp, 56 at Milne Inlet Camp, 59 at Mary River Camp and none at Mid Rail Camp

4.8 CHEMICALS

Some chemicals and potentially hazardous materials associated with Project operations include:

- oils, greases, lubricants, and drilling additives for mining and heavy equipment;
- calcium chloride flakes for drill water for exploration drilling;
- lead acid batteries and cleaning supplies at camp sites; and
- waste oils generated from mobile equipment and generators.

Lubricants and oils, as well as both new and used batteries, are stored in containers. Waste oils are stored in drums in lined containment areas, until transported to Milne Inlet and sent off site via sealift to a registered hazardous waste disposal facility or to recycling depots. Calcium chloride flakes are stored in designated locations remote from water at Milne Inlet and Mary River.

Hazardous and non-landfillable wastes generated from current and historic activities at Mary River were backhauled by sealift to licensed disposal and recycling facilities in southern Canada. Typically the only hazardous material remaining at the site is the annual working inventory because most wastes are backhauled to southern Canada on an annual basis. However, hazardous wastes were not backhauled during the 2012 sealift season and two years of hazardous waste are currently on-site.

4.9 EXPLOSIVES

None of the pre-packaged emulsion, high explosives (Class A) or detonators required for the Bulk Sample Program remain. All explosives, blasting cord and detonators were detonated and destroyed at site in August, 2010 by the manufacturer. Eight explosives magazines used for transport of the explosives to Mary River remain and all are empty. The self-contained explosives magazines are positioned in conformance with the *NWT/Nunavut Mine Health and Safety Act* and regulations. The explosives magazines are located away from other infrastructure in accordance with the British Table of Distances, and warning signs are prominently posted.

4.10 WASTE AND WATER MANAGEMENT

The water supply for each camp is described below.

- The water supply and treatment system (heated intake, ultra-violet disinfection) at Mary River Camp supplies water to the combined population at the camp site.

- Water supply at the Milne Inlet Camp site consists of holding tanks that are filled by truck from a nearby lake and treated using an ultra-violet (UV) disinfection system.

- Drinking water at the Mid Rail Camp comes from the adjacent unnamed lake, stored in holding tanks and treated using an ultra-violet (UV) light disinfection system.

Drinking water at Steensby Inlet Camp, is sourced from the unnamed in-land freshwater lake and treated using an ultra-violet (UV) disinfection system.

The sewage waters and greywater are treated and disposed the following way for each camp.

- Sewage and grey water at Mary River Camp is treated using a pre-engineered rotating biological contractor sewage treatment plant followed by ultraviolet disinfection. Three lined polishing waste storage ponds (PWSP) are in place to receive treated sewage not meeting criteria for direct discharge via a 2 km heat traced pipeline into Sheardown Lake.

- There is a rotating biological contractor sewage treatment plant followed by ultraviolet disinfection at Milne Inlet Camp to treat the sewage and grey water. A lined polishing waste stabilization pond is in place to receive treated sewage not meeting criteria for direct discharge to the receiving environment. Treated effluent is discharged by truck to a surface drainage channel discharging to Milne Inlet. Since 2009 the Milne Inlet Camp has operated at a low occupancy level and latrine toilets (commercially purchased “Pacto” systems) or outhouses feeding 205 litre barrels were used. Any toilet waste collected from the Pacto system was either incinerated in the Milne Inlet dual-stage, forced air incinerator or shipped south and disposed of in an approved treatment facility.

- Toilet wastes collected from the outhouses at Steensby Inlet Camp and Mid Rail Camp are incinerated in a dual-stage, forced air incinerator at each of the camps. Greywater is disposed of in a sump established at each camp. Since 2008 the Mid Rail Camp has been unoccupied.

Solid wastes are stored and disposed of as described below.

- Camp incinerators exist at each of the Mary River, Milne Inlet, Steensby Inlet and Mid Rail Camps for disposal of inert combustible non-hazardous solid wastes. Ash is collected in containers to help prevent wind distribution.

- Inert non-combustible wastes such as scrap metal, plastic, rubber, metals, wood that are not burned and ashes from the incinerator are collected and stored in preparation for disposal in the landfill at Mary River or hauled to Milne Inlet for disposal off site.

- Wastes generated at the refuge stations are stored in containers or ore sacks and backhauled to Mary River for disposal by incineration or eventual landfilling, as appropriate or to Milne Inlet for shipment off site.

- Waste oil and other hazardous and recyclable wastes are collected, temporarily stored on-site in a lined containment area and backhauled to Milne Inlet or Steensby Inlet in preparation for shipment off site. Used batteries are collected in sealed containers and transported off site. Empty fuel drums are crushed and packaged and temporarily stored on-site in preparation for transport off-site by sealift where they will be recycled.

- A landfill and associated access road at Mary River as approved by the Nunavut Water Board was constructed and began operations during 2010.

5.0 ABANDONMENT AND RECLAMATION PLAN OBJECTIVES AND CRITERIA

5.1 OBJECTIVES

In accordance with the objectives outlined in the cited guidelines and regulations (Section 1.1), the general closure and reclamation objectives of this A&R Plan are to:

- provide for the long-term physical, chemical and biological stability of the Project areas so as to protect the public's health and safety;
- reclaim disturbed areas to a state that is aesthetically and environmentally compatible with surrounding undisturbed landscape and to allow for future use by people and wildlife;
- implement reclamation designs that limit the need for long-term maintenance and monitoring closure and instituting progressive reclamation, as possible;
- return all altered water courses to their original alignment and cross-section;
- provide for closure using the current available proven technologies in a manner consistent with sustainable development; and
- provide sufficient detail such that adequate scopes of work can be developed for the execution of reclamation work. Where insufficient details exist, monetary allowances should be included in the cost estimate to account for additional engineering and planning.

This A&R Plan is written with a view to address all Project-related activity areas and infrastructure.

5.2 CRITERIA

Specific closure criteria for each A&R Plan component are detailed in Appendix E. The closure criteria are sufficiently detailed to provide a measure of success or failure of the closure objective.

6.0 PROGRESSIVE RECLAMATION

Progressive reclamation work on Project components has continued since operations began and focused on areas of current and past use in association with the exploration, geotechnical and bulk sample programs. A summary of the progressive reclamation work completed to date is shown in the following table.