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Baffinland Iron Mines Corporation

Exploration Closure and Reclamation Plan

BAF-PH1-830-P16-0038


Rev 1

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Date: July 02, 2014
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Item No.	Description of Change	Relevant Section
1	Title change from 'Mary River Exploration Project Abandonment and Reclamation Plan' to 'Exploration Closure and Reclamation Plan'	Title
2	Updated to include reference to all relevant authorization received since previous revision and approved scope or work.	Executive Summary
3	Updated to include conditions of Type 'B' Water Licence Part J, Item 2 and revisions to reflect revised scope of work.	Section 2 to 7
4	Removed.	Section 13 (formerly)
5	Updated to demonstrate concordance with conditions of Type 'B' Water Licence Part J, Item 2	Section 9
6	Addition of Appendix D. Property Map of Northern Baffin Island showing locations of potential future temporary satellite camps.	Appendix D

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1 EXECUTIVE SUMMARY

The Mary River Project (the Project) is an approved Project (Project Certificate No 005) located on north Baffin Island, in the Qikiqtani Region of Nunavut. The Project is wholly owned by Baffinland Iron Mines Corporation (Baffinland). This Project represents a significant investment and therefore Baffinland will continue exploration work on its mineral leases.


Exploration activities and associated infrastructure are licenced under Type “B” Water Licence No. 2BE-MRY1421 (the Licence). The work conducted under the Licence is termed by Baffinland the “Mary River Exploration Project”. The scope of Type “B” Water Licence No. 2BE-MRY1421 “allows for the use of Waters and the deposit of Waste for a Mining undertaking, classified as per Schedule 1 of the *Regulations* at the Mary River Exploration Project” and includes the following activities:

- Land-based and on-ice mineral drilling.
- Mapping.
- Sampling.
- Drill core storage.
- Disposal of drilling mud.
- Geophysical and geochemical surveys.
- Mechanical trenching and stripping of surficial overburden.
- Activities to support of scientific and engineering studies to advance the Mary River Project including geotechnical investigation and geotechnical drilling.
- Progressive reclamation programs of drilling sites.
- Fuel storage.
- Camp operation.
- Equipment, personnel and supply transport.

These tasks will either be supported from the facilities and infrastructure constructed at the Mary River Mine Site, Milne Port, and eventually from the future Steensby Port facilities (once constructed) or the existing Mid-Rail Camp, Steensby Port Camp and potential satellite exploration camps on Baffinland’s mineral leases. The facilities at Mary River Mine Site and Milne Port are approved under Project Certificate No. 005 and Type ‘A’ Water Licence 2AM-MRY-1325 and reclamation activities for these permanent facilities are detailed in the Mary River Project Interim Mine Closure and Reclamation Plan (BAF-PH1-830-P16-0012). The remaining facilities are covered under this Plan which includes the operation of up to seven (7) satellite camps which may be established in support of exploration activities at locations shown in Appendix D. Each satellite camp will be temporary in nature and will be limited to a maximum capacity of 49 persons.

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All of the activities conducted as part of the Mary River Exploration Project (Licence 2BE-MRY1421) have been permitted in the past and are common to exploration properties throughout Nunavut. Any required regulatory approvals, including modification or amendment of the Licence would be obtained before such development proceeds as needed. Closure and reclamation of any additional infrastructure required for the Mary River Exploration Project will abide by the Project commitments relating to closure and reclamation stated above and will align where appropriate with the current Mary River Project Interim Closure and Reclamation Plan (BAF-PH1-830-P16-0012). This includes ensuring facilities are designed and constructed to minimize the footprint and where possible and practical, to be temporary in nature.


Exploration activities are seasonal and temporary in nature (from June to September). Annually, on a seasonal basis, the exploration camps are shut down for the winter period. This seasonal shut down represents temporary closure. At the completion of the drilling season, only the exploration camp and its associated infrastructure remain as reclamation measures are implemented for each drill site after completion of drilling activity. During seasonal closure there will be removal of all animal attracting waste, securing and de-energizing of all equipment and infrastructure, consolidation of all fuel and hazardous waste into engineered secondary containment structures and periodic visual inspection during periods of inactivity. It should be noted by definition, exploration is of short duration and temporary in nature. Camps are mobile and focused on areas of high prospectively. Camps may be moved during or after the drilling the season to minimise mobilisation and travel distances for more advanced exploration activities, primarily exploration drilling.

Final closure and reclamation consists of removing the exploration camp(s) and their associated infrastructure (sewage treatment, fuel cache) and site materials (drums, barrels, buildings and contents, docks, water pumps and lines, material and other equipment at the specific exploration camp site). All disturbed surfaces will be prepared by ripping, grading, or scarifying the surface to conform to the natural topography. All material will be transported to the Mary River Mine Site or Milne Port for disposal in accordance with the approved Mary River project Waste Management Plan or will be shipped off-site to an approved facility.

As progressive reclamation is being conducted throughout the life of the Mary River Exploration Project, final closure and reclamation activities are expected to last a period of no more than two (2) years. The financial cost of the Mary River Exploration Project closure and reclamation has been estimated using the Mining RECLAIM spreadsheet provided by Aboriginal Affairs and Northern Development Canada (AANDC) (formerly Department of Indian Affairs and Northern Development). The Mary River Exploration Project closure and reclamation is estimated to cost \$1,247,000.

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2 INTRODUCTION

Closure and reclamation for the Mary River Exploration Project will be regulated under Baffinland's Type "B" Water Licence No. 2BE-MRY142. In the cases where Mary River Exploration activities occur on Inuit Owned Lands, Baffinland's IOL Commercial Lease (No. Q13C301) conditions will also apply.

The Exploration Closure and Reclamation Plan (ECRP) contains and describes the plans related to closure and reclamation of Mary River Exploration Project activities and related facilities. In accordance with Part I, Item 1, of Type "B" Water Licence No. 2BE-MRY1421, the ECRP has been updated from a previous revision following the issuance of the renewal-amendment Type "B" Water Licence No. 2BE-MRY142 to better reflect the reduced scope of activities associated with the Mary River Exploration Project.

The ECRP has been developed in accordance with applicable requirements of:

- The Project Certificate No. 005 conditions
- The Qikiqtani Inuit Association (QIA) Abandonment and Reclamation Policy for Inuit Owned Lands (applicable to only activities and potential future satellite camps on Inuit Owned Land)
- Aboriginal Affairs and Northern Development Canada (AANDC) Closure and Reclamation of Advanced Mineral Exploration and Mine Sites in the Northwest Territories (2013).

In addition, the ECRP abides by all commitments set forth in previous licensing conditions and commitments made during associated licensing process related to the Project. These include:

- Commitments made by Baffinland during the FEIS¹ and Type 'A' Water Licence review processes.
- Baffinland Type 'B' Water Licence No. 2BE-MRY1421 requirements.

In all cases, reclamation will be consistent with locally valued ecosystem components and regional planning objectives. All closure work will be carried out in accordance with permit requirements as stated in the Territorial Land Use Regulations.


Baffinland is committed to, and will be responsible for, carrying out the closure and rehabilitation measures in a phased, on-going (progressive) manner as reviewed and agreed with the regulatory agencies and implicated communities.

2.1 CLOSURE AND RECLAMATION OF EXPLORATION SITES - GOALS AND OBJECTIVES

Baffinland will conduct its exploration activities in a manner that minimizes disturbance to the natural environment. This will be achieved by:

¹ Mary River Project Final Environmental Impact Statement and any relevant addendums, Baffinland Iron Mines, 2012

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1. To the extent possible, conducting and supporting exploration activities from existing infrastructure at the Mine Site, Mine Port and Steensby Port (facilities approved under Project Certificate Nos. 005 and subject to Type A water Licence 2AM-MRY1325).
2. Where exploration activities necessitate the construction of a satellite camp, such camp will rely on the Mary River project facilities for its material and fuel supply and solid waste disposal.
3. Systematic reclamation of drill site will be undertaken after completion of drilling activity.

In this context, closure and reclamation of an exploration site will consist of:

1. Removal of the exploration camp and its associated infrastructure (mainly power supply and fuel cache and accessory building(s)).
2. Removal and disposal of drill core.
3. Rehabilitation of the land (footprint of the camp, laydown areas, and, road(s)).

The main goals/objectives of the Mary River Exploration Project Closure and Reclamation Plan are to:

- Provide for the long term physical, biological and chemical stability of the Exploration Project areas so as to protect the public health and safety and ecosystem integrity.
- Allow for productive use of the land where exploration activities are undertaken and ensures all disturbed areas are restored to a pre-disturbed state upon completion of work.
- Ensure that the land is reclaimed in a manner that minimize or prevents erosion, and negates the requirement for long term maintenance and monitoring.

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3 TECHNICAL CERTIFICATES

This Exploration Closure and Reclamation Plan were prepared by professionals of Hatch Ltd and other members of the Baffinland Mary River Project team.


3.1 CERTIFICATION

John Binns, M.Sc., P.Eng. – Environment Manager

Mr. Binns is a senior environmental engineer in Hatch's mining practice. He started his long career originally as an underground Mining Engineer with experience in gold and copper mines. He has broad experience in mineral exploration including mining geophysics, as well as extensive international experience in environmental management including mine closure, mine water management, Acid Rock Drainage, Environmental Management Systems (EMS), and EMS auditing.

Adam Grzegorzczuk, B.Sc (Env.) - Mine Closure and Reclamation Planning

Mr. Grzegorzczuk is an environmental analyst in Hatch's mining practice. He has broad experience in Environmental Management Systems (EMS), Lifecycle Assessment, project planning and due diligence. He has worked closely with clients throughout his career to identify environmental impacts and mitigation strategies during the project planning and implementation phases for large scale mining, metal, infrastructure, and energy projects with a particular emphasis on project closure and reclamation.

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4 PROJECT INFORMATION

4.1 PROPONENT NAME AND ADDRESS

The proponent of the Mary River Exploration Project Closure and Reclamation Plan is:

Baffinland Iron Mines Corporation
 2275 Upper Middle Road East, Suite 300
 Oakville, ON L6H 0C3
 Tel: (416) 364-8820 Fax: (416) 364-0193

4.2 PROJECT DESCRIPTION

A summary of activities associated with the Mary River Exploration Project is provided below along with a location drawing, Figure 4-1, for the primary project sites associated with the Mary River Project. In addition to these primary sites, up to seven (7) satellite camps may be established in support of exploration activities at locations shown in Appendix D. Each satellite camp will be temporary in nature and will be limited to a maximum capacity of 49 persons. The Mary River Exploration Project is limited to exploration-related activities and associated camp operation. Exploration-related activities specifically include the following tasks:

- Land-based and on-ice mineral drilling.
- Mapping.
- Sampling.
- Drill core storage.
- Disposal of drilling mud.
- Geophysical and geochemical surveys.
- Mechanical trenching and stripping of surficial overburden.
- Activities to support of scientific and engineering studies to advance the Mary River Project including geotechnical investigation and geotechnical drilling.
- Progressive reclamation programs.
- Fuel storage.
- Camp operation.
- Equipment, personnel and supply transport.

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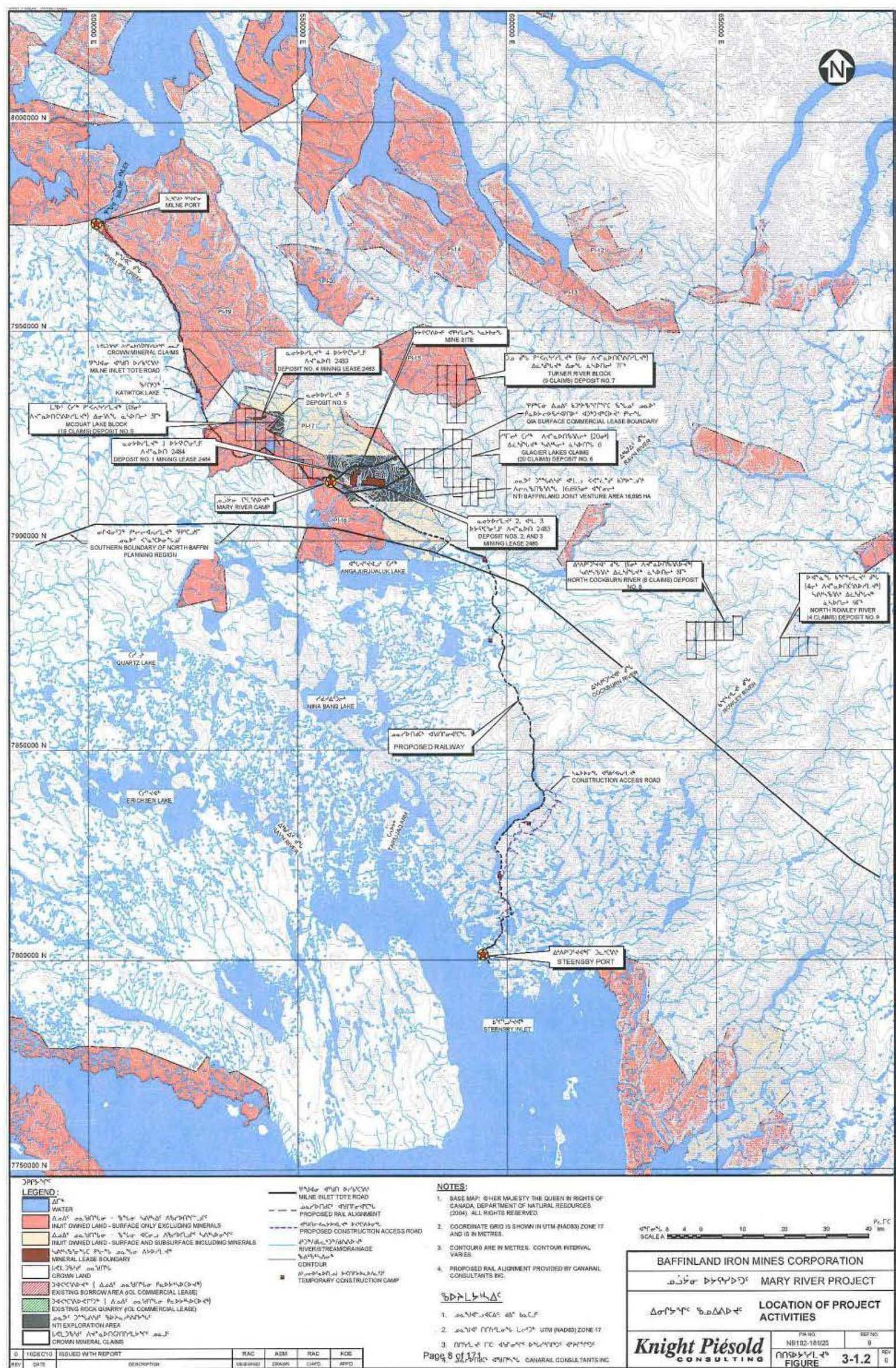



FIGURE 4-1: LOCATION MAP


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4.2.1 INUIT OWNED LANDS


The Inuit Owned Lands (IOL) surrounding the Mary River Exploration Project area is provided in Figure 4-1 and in Appendix D. The commercial lease to the Project (Q13C301) is held by Baffinland and is leased from the Qikiqtani Inuit Association (QIA). In accordance with this and future surface leases held with the QIA, the closure and reclamation of Mary River Exploration sites and activities occurring on IOL will abide by the guidelines developed for the Qikiqtani lands entitled the Closure and Reclamation Policy for Inuit Owned Lands (Version 3.0). The guiding principles of the Closure and Reclamation Policy require that all disturbed IOL be returned to a safe and stable condition capable of supporting human and wildlife needs consistent to social and cultural needs of the Inuit for the undisturbed lands within that area.

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5 REHABILITATION OF DRILL SITES

In accordance with the objectives and guidelines presented in Section 2.1, progressive rehabilitation will be implemented to reduce the risk to the environment and land users. The following areas will be progressively reclaimed during the Mary River Exploration Project:

- Laydown areas – un-used areas or areas no longer needed during exploration will be re-graded and scarified.
- Sumps – All sumps will be backfilled to the pre-existing natural contours of the land.
- Drill holes - All drill holes will be restored to natural conditions immediately upon completion of drilling including the removal of any drill casing materials and, if having encountered artesian flow, the capping of holes with a permanent seal.
 - ♦ NOTE: all drill cores produced will be stored in an appropriate manner and location at least thirty (30) metres above the ordinary High Water Mark of any adjacent Water body, where any direct flow into a Water body is not possible and no additional impacts are created.
- Camps – Pioneer Camps, including Mid Rail and Steensby camps, will be decommissioned and removed or resized once deemed no longer required to support the Mary River Exploration Project. See section 7 for more information on what final decommissioning of camps would include.
- Other disturbed areas – will be will be scarified to encourage natural re-vegetation.

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6 TEMPORARY CLOSURE CARE AND MAINTENANCE

As exploration drilling is a seasonal activity, on an annual basis Baffinland will make a determination which Mary River Exploration Project sites will be required for the upcoming exploration season. If a camp or area is deemed required, it will be occupied/established as appropriate. At the end of the exploration season, the camp or area are subject to temporary (seasonal) closure and care and maintenance activities.

Temporary or seasonal closure care and maintenance activities include:

6.1 STRUCTURES

- All tents and camp facilities (i.e., kitchens, showers, eating areas, etc.) will be thoroughly cleaned and all wastes and open food will be incinerated (if available) or taken off-site. All remaining foodstuffs will be contained in sealed in secure containers to ensure wildlife attractants are not left over winter.
- Any overflow tents (prospector or dome-style) will be taken down and packed up.
- Oil stoves and propane systems will be shut off, and supply oil drums and propane cylinders closed.
- All doors and window will be secured shut to prevent animals and snow from entering the structures.

6.2 WATER SUPPLY

- The water supply system (tank and lines) will be drained.
- The water pump, intake and water lines will be stored away.

6.3 FUEL


- Drums of fuel will be left within the engineered containment structures.
- All drums and cylinders will be inspected and securely sealed.
- Empty fuel drums and cylinders will be returned to Mary River Project sites or other appropriate facility.

6.4 CHEMICALS

- Any calcium chloride at the drill sites will be returned to the calcium chloride storage area at Mary River Project sites.
- All other chemicals, such as lubricants and cleaning supplies, will be stored in sealed buildings.

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6.5 GENERATOR/MECHANICAL EQUIPMENT


- The diesel camp generator and other mechanical equipment will be shut-down and winterized according to manufacturer's procedures.
- All fuel hoses will be drained and stored away, and storage tanks will be sealed and inspected for leaks.

6.6 WASTES

- Suitable wood will be disposed of by open burning. All other remaining wastes are transported to Mary River Project sites for disposal or shipment off-site.
- The greywater sump(s) is buried and will not be disturbed. Kitchen and shower water holding tanks will be drained.

No additional closure and reclamation activities are required for other disturbed areas or drill holes as these are restored to natural conditions immediately upon completion of drilling.

Short-term temporary closure occurs on annual basis at all active Mary River Exploration Project sites as exploration work typically occurs seasonally and camps are de-occupied at the end of the season (roughly October). In the event Baffinland deems the camp not necessary for the subsequent or upcoming season, the camp would be classified in long-term temporary closure. Long-term temporary closure activities of camp and exploration locations mirror short-term temporary closure process described above. Long-Term temporary closure is defined as the state of inactivity resulting from economic or other considerations for a period greater than one year.

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7 FINAL MINE CLOSURE AND RECLAMATION MEASURES

Planned closure activities will involve dismantling of camps and transport of materials and equipment via helicopter or overland by cat train during the late winter period to Mary River Site, Milne Port or Steensby Port for appropriate disposal at a licensed facility. Equipment and materials located at Mary River Exploration Project sites may have residual value for either re-sale or relocation to another exploration site. If the camp were to be relocated to another exploration site, it is possible that some or all of the equipment could be airlifted from a site directly to the new site. Materials or equipment may also be donated to local communities as appropriate.

The following summarizes the final closure activities with respect to the various components:

7.1 BUILDINGS AND CAMP INFRASTRUCTURE


- All tents and camp facilities (i.e., kitchens, showers, eating areas, etc.) will be dismantled and removed from site.
- Most materials related to camp facilities will have residual value for either re-sale or relocation to another exploration site. If not relocated to another exploration site, tent facilities will be transported overland or via helicopter to Milne Port, Mary River Mine Site or Steensby Port for shipment off-site or appropriate disposal at a licensed facility on-site.
- Wood structures like the dining hall, outhouse, dry, tent wood floors, bunk beds and table will be dismantled and wherever possible the wood will be salvaged for re-use; otherwise it will be incinerated or open burned on-site if suitable. In the event that wood cannot be salvage or burned on-site, it will be sent to Milne Port, Mary Rive Mine Site or Steensby Port for disposal or shipment off-site.
- Fuel storage, hoses and filters associated with the diesel generator will be drained and managed as hazardous waste. The generator will be prepared for travel, transported to Milne Port or Steensby Port for disposal or shipment off-site.
- The water supply system (tank and lines) will be drained, and the water pump, intake and water lines will be removed from site.

7.2 EQUIPMENT

- Equipment such as the skid-steers and zoom boom will be used in closure and reclamation activities.
- Currently there is a sewage treatment system at Steensby Port that is still containerized and not in operation. In the event of final closure, this equipment will be transported off-site as per the manufacturer's specifications (as applicable) and within a manner that meets closure objectives. This sewage treatment system will be operated only under full development of the Mary River Project at Steensby Port and therefore its operation is subject to separate authorizations from the Mary River Exploration Project.

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7.3 FUEL

- Drums of fuel will be consolidated, inspected and securely sealed
- Any open drums of diesel, off-specification fuel as well as waste oil will be used in the camp incinerator (if available) or will be consolidated and transported off-site.
- Sealed fuel containers will be sold, relocated to another exploration site, provided to the Mary River Project, or provided to other users in the region, such as Pond Inlet.
- Any waste or contaminated fuel will be sent either to Milne Port or Steensby Port for disposal offsite at a licensed facility.
- Empty fuel drums and cylinders will be transported by sealift and returned to the vendor or disposed of at licensed disposal facilities.

7.4 FUEL STORAGE FACILITIES AND CONTAMINATED SOILS

- Fuel storage facilities consist of lined containment areas. The bedding inside the liner will be tested for petroleum hydrocarbons before being removed. Liners will be disposed of off-site at an approved facility. Soil beneath the lined areas and any other soils suspected of petroleum hydrocarbon contamination will be tested.
- Any contaminated soils will be excavated using the skid steers and will removed off-site in tote bags for disposal. It is expected contaminated soils will be bioremediated within the landfarm located at Milne Port or alternatively, sent via sealift to an approved facility for disposal².

7.5 CHEMICALS


- Any calcium chloride on-site will be transported off-site to the calcium chloride storage area at Mary River Project sites or southern facilities for salvage or disposal.
- All other chemicals, such as lubricants and cleaning supplies, will be placed in a sea container and will be transported off-site for either re-use or disposal.

7.6 WASTES

- The grey water sump will be abandoned in-place.
- Suitable wood will be open burned.
- All remaining wastes will be transported to Milne Port, the Mine Site or Steensby Port for disposal or shipment off-site.

² Soil shall be reclaimed to meet objectives as outlined in the Government of Nunavut's Environmental Guideline for Site Remediation (2010). The use of reclaimed soils for the purpose of backfill or general site grading may be carried out only upon consultation and approval by the Government of Nunavut, Department of Environment and an Inspector.

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7.7 RESTORATION OF OTHER DISTURBED AREAS AND DRILL HOLES

- All disturbed surfaces will be prepared by ripping, grading, or scarifying the surface to conform to the natural topography.
- No final closure and reclamation activities are required for drill holes as these are restored to natural conditions immediately upon completion of drilling.

7.8 SCHEDULE

As progressive reclamation is being conducted throughout the life of the Mary River Exploration Project, final closure and reclamation activities are expected to last a period of no more than two (2) years. All development areas will be subjected to a closure inspection by a company representative or contractor, and final conditions photographed. A brief A&R report or site visit by community or land owner representatives can be arranged if desired. A one-time follow-up inspection will be carried out the year following final closure, to ensure that conditions have not changed and remain stable.

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8 ESTIMATED CLOSURE AND RECLAMATION COSTS

The financial cost of the Mary River Exploration Project closure and reclamation has been estimated using the Mining RECLAIM spreadsheet provided by Aboriginal Affairs and Northern Development Canada (AANDC) (formerly Department of Indian Affairs and Northern Development).

The financial cost obtained is based on the information available at the time of publishing. Several assumptions and estimations have been made and are described in Appendix B. The spreadsheet may require to be updated as the Mary River Exploration Project progresses to take into consideration additional activities that have not been considered that may have associated closure liability. To make up for uncertainties, the highest prices of the range provided by the Mining RECLAIM unit costs spreadsheet were systematically chosen.

8.1 MARY RIVER EXPLORATION PROJECT CLOSURE COST

Mining RECLAIM calculates the total capital costs required for the Project closure and reclamation. This cost has been split into Inuit Owned Lands (IOL) Lands and Crown Lands with land and water reclamation liability attributed to each. Specifically, costs relating to the infrastructure, equipment and remediation actions on these sites were attributed to the corresponding categories outlined below.

The cost associated with IOL Lands includes the following decommissioning activities:

- Full cost of decommissioning mineral exploration areas on IOL
- 50% of the cost associated with remote sites.

The cost associated with Crown Lands includes the following decommissioning activities:

- 50% of the cost associated with remote sites.
- Full cost of decommissioning Mid - Rail Camp (14 days @ six (6) man camp)
- Full cost of decommissioning Steensby Inlet Camp (14 Days @ six (6) man camp)
- Full cost of operating Mid-Rail Camp: seven (7) person camp
- Full cost of operating Steensby Inlet Camp.

Full cost for demobilization of Freight Sealift from Steensby Port to Port of Valleyfield

Note: remotes sites have been split equally between IOL and Crown lands due to uncertain nature of the location of exploration activities.

The Mary River Exploration Project closure and reclamation is estimated to cost \$1,247,000. The break down between IOL and Crown Lands and land and water liability is presented in Table 8-1.



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TABLE 8-1: TOTAL COST AND BREAKDOWN FOR MARY RIVER PROJECT CLOSURE AND RECLAMATION

Liability Allocation	IOL			Crown Land			PROJECT TOTAL
	Land	Water	Total	Land	Water	Total	
SUBTOTAL	\$120,311	\$14,808	\$135,119	\$886,706	\$0	\$886,706	\$1,021,825
Project Management (5%)	\$6,016	\$740	\$6,756	\$44,335	\$0	\$44,335	\$51,091
Bonding (1%)	\$1,203	\$148	\$1,351	\$8,867	\$0	\$8,867	\$10,218
Insurance (1%)	\$1,203	\$148	\$1,351	\$ 8,867	\$0	\$8,867	\$10,218
Engineering (5%)	\$ 6,016	\$740	\$6,756	\$44,335	\$0	\$44,335	\$51,091
Contingency (10%)	\$12,031	\$1,481	\$13,512	\$88,671	\$0	\$88,671	\$102,183
GRAND TOTAL - CAPITAL COSTS	\$146,779	\$18,066	\$164,845	\$1,081,781	\$0	\$1,081,781	\$1,246,627

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9 CONCORDANCE TABLES

Table 9-1 has been prepared to characterize the content of the Mary River Exploration Project A&R Plan to demonstrate it is consistent with the principles of the Qikiqtani Inuit Association (QIA) Abandonment and Reclamation Policy for Inuit Owned Lands (Version 3.0, 2013) and is structured in accordance with Appendix C of said document.

TABLE 9-1: QIA ABANDONMENT AND RECLAMATION POLICY FOR INUIT OWNED LANDS CONCORDANCE TABLE

Item	QIA Abandonment and Reclamation Policy for Inuit Owned Lands (2013)	Baffinland Response
1	Have all reports and plans including addendums and responses been submitted?	Yes
2	Are the submitted reports and plans executable standalone documents with adequate rational and detail?	Yes
3	Do all reports and plans contain appropriate referencing (document name, author, section, and page number) to all supporting information?	Yes
4	Do the reports and plans demonstrate a firm understanding, of QIA's <i>Guiding Principles on Reclamation</i> and provide rationale on how these principles have been satisfied?	Yes
5	Has Inuit Qaujimajatuqangit and consultation with Community Land and Resources Committee(s) been applied?	Yes
6	Are all the components that are considered in the abandonment and reclamation plan listed?	Yes
7	Does each component of the Project have an abandonment and reclamation objectives and criteria?	Yes
8	Has an A&R plan been provided with a financial security estimate?	Yes
9	Have Table 1, 2, 3 and 4 of Appendix B been used in completing the financial security estimate?	No. See Appendix B for description of methodology
10	Has evidence been provided to support the Policy assumptions for all reports and plans?	Yes
11	Has the Tenant contacted QIA if uncertainty existed in how the Tenant was to determine an acceptable estimate?	Yes

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TABLE 9-2: BAFFINLAND TYPE 'B' WATER LICENCE NO. 2BE-MRY1421 REQUIREMENTS

Baffinland Type 'B' Water Licence No. 2BE-MRY1421 Requirements Applying to Closure and Restoration or Temporary Closing (Part I)	
Type 'B' Water Licence No. 2BE-MRY1421, Part I	Mary River Exploration Project A&R Plan Section
1. The Licensee shall submit to the Board for approval within sixty (60) days following the issuance of this Licence, a revised, stand-alone, Closure and Restoration Plan prepared in accordance with applicable sections of the "Guidelines for Abandonment and Restoration Planning for Mines in the Northwest Territories (1990) and that must reflect the reduced scope of activities under this licence.	N/A
2. Licensee shall complete all restoration work prior to the expiry of this Licence.	N/A
3. The Licensee shall carry out progressive reclamation of any components of the project no longer required for the Licensee's operations.	5
4. The Licensee shall backfill and restore, to the satisfaction of an Inspector, all Sumps to the pre-existing natural contours of the land.	5 and 7
5. The Licensee shall remove from the site, all infrastructure and site materials, including but not limited to, all fuel caches, drums, barrels, buildings and contents, docks, water pumps and lines, material and equipment prior to the expiry of this Licence.	5 and 7
6. The Licensee shall, unless otherwise identified within the approved Plan under Part H, Item 1, remove all culverts and open the natural drainage channels of all water crossings associated with the Project. In carrying out this activity, measures shall be implemented to minimize erosion and sedimentation.	5
7. In order to promote the growth of vegetation and the needed microclimate for seed deposition, all disturbed surfaces shall be prepared by ripping, grading, or scarifying the surface to conform to the natural topography.	5 and 7
8. Areas that have been contaminated by hydrocarbons from normal fuel transfer procedures shall be reclaimed to meet objectives as outlined in the Government of Nunavut's Environmental Guideline for Site Remediation (2010). The use of reclaimed soils for the purpose of backfill or general site grading may be carried out only upon consultation and approval by the Government of Nunavut, Department of Environment and an Inspector.	5 and 7
9. The Licensee shall restore all drill holes and disturbed areas to natural conditions immediately upon completion of drilling. The restoration of drill holes must include the removal of any drill casing materials and if having encountered artesian flow, the capping of holes with a permanent seal.	5 and 7
10. The Licensee may store drill core produced by the appurtenant undertaking in an appropriate manner and location at least thirty-one (31) metres above the ordinary High Water Mark of any adjacent Water body, where any direct flow into a Water body is not possible and no additional impacts are created.	5
11. The Licensee shall contour and stabilize all disturbed areas to a pre-disturbed state upon completion of work.	5 and 7

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10 GLOSSARY OF TERMS, ACRONYMS, OR ABBREVIATIONS

10.1 GLOSSARY OF TERMS

Term	Meaning
Abandonment	The permanent dismantlement of a facility so it is permanently incapable of its intended use. This includes the removal of associated equipment and structures.
Backfill	<p>Material excavated from a site and reused for filling the surface or underground void created by mining.</p> <p>Reinsertion of materials in extracted part(s) of the orebody. Materials used for backfilling can be waste-rock or overburden. In most cases backfill is used to refill mined-out areas in order to:</p> <ul style="list-style-type: none"> • Assure ground stability. • Prevent or reduce underground and surface subsidence. • Provide roof support so that further parts of the orebody can be extracted and to increase safety. • Provide an alternative to surface disposal. and • Improve ventilation.
Berm	A mound or wall, usually of earth, used to retain substances or to prevent substances from entering an area.
Best Management Practices	Any program, technology, process, operating method, measure, or device that controls, prevents, removes, or reduces pollution and impact on the environment.
Bioremediation	The use of microorganisms or vegetation to reduce contaminant levels in soil or water.
Care and Maintenance	A term to describe the status of a mine when it undergoes a temporary closure.
Closure	When a mine ceases operations without the intent to resume mining activities in the future.

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Term	Meaning
Closure Criteria	Detail to set precise measures of when the objective has been satisfied.
Contaminant	Any physical, chemical, biological or radiological substance in the air, soil or water that has an adverse effect. Any chemical substance with a concentration that exceeds background levels or which is not naturally occurring in the environment.
Contouring	The process of shaping the land surface to fit the form of the surrounding land.
Decommissioning	Process by which a mining operation is shut down i.e.: permanently closing a site, removing equipment, buildings and structures. Rehabilitation and plans for future maintenance of affected land and water are also included.
Dewatering	Process of removing water from an underground mine or open pit, or from the surrounding rock or non-lithified area. The term is also commonly used for the reduction of water content in concentrates, tailings and treatment sludge's.
Disposal	The relocation, containment, treatment or processing of unwanted materials or materials that are not reusable. This may involve the removal of contaminants or their conversion to less harmful forms.
Drainage	Manner in which the waters of an area exist and move, including surface streams and groundwater pathways. A collective term for all concentrated and diffuse water flow.
Effluent	Treated or untreated liquid waste material that is discharged into the environment from a structure such as a settling pond or a treatment plant.
End Land Use	The allowable use of disturbed land following reclamation. Municipal zoning and/or approval may be required for specific land uses.
Environment	Interrelated physical, chemical, biological, social, spiritual and cultural components that affect the growth and development of living organisms.
Erosion	The wearing away of rock, soil or other surface material by water, rain, waves, wind or ice. The process may be accelerated by human activities.

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Term	Meaning
Evaporation	Physical process by which a liquid is changed into a gas.
Existing Operation	An installation in operation or, in accordance with legislation existing before the date on which this Directive is brought into effect, an installation authorized or in the view of the competent authority the subject of a full request for authorization, provided that that installation is put into operation no later than one year after the date on which this Directive is brought into effect.
Geochemistry	Science of the chemistry of geological materials and the interaction between geological materials with the environment.
Geology	Study of the earth, its history and the changes that have occurred or are occurring, and the rocks and non-lithified materials of which it is composed and their mode of formation and transformation.
Grade	Dimensionless proportion of any constituent in an ore, expressed often as a percentage, grams per tonne (g/t) or parts per million (ppm).
Inert Waste	Material having insignificant leachability and pollution content which will not require laboratory analysis.
In Situ Treatment	A method of managing or treating contaminated soils, sludge's and waters "in place" in a manner that does not require the contaminated material to be physically removed or excavated from where it originated.
Landfill	An engineered waste management facility at which waste is disposed by placing it on or in land in a manner that minimizes adverse human health and environmental effects.
Mitigation	The process of rectifying an impact by repairing, rehabilitating or restoring the affected environment, or the process of compensating for the impact by replacing or providing substitute resources or environments.

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Term	Meaning
Monitoring	Observing the change in geophysical, hydrogeological or geochemical measurements over time. Process intended to assess or to determine the actual value and the variations of an emission or another parameter, based on procedures of systematic, periodic or spot surveillance, inspection, sampling and measurement or another assessment methods intended to provide information about emitted quantities and/or trends for emitted pollutants.
Naturally Re-vegetate or Natural Re-vegetation	For the purposes of the Mary River Project natural re-vegetation will include 26 ypersthenes and covering with overburden as required and allowing the surrounding natural vegetation to encroach and be re-established on the disturbed area.
Objectives	Objectives describe what the reclamation activities are aiming to achieve. The goal of mine closure is to achieve the long-term objectives that are selected for the site.
Open Pit Mining	Mining operation takes place on the surface. Mining operation and environment are in contact over an extended area.
Permafrost	Ground that remains at or below zero degrees Celsius for a minimum of two consecutive years.
Permafrost Aggradations	A naturally or artificially caused increase in the thickness and/or area extent of permafrost.
Permeability	The ease with which gases, liquids, or plant roots penetrate or pass through soil or a layer of soil. The rate of permeability depends upon the composition of the soil.
Phreatic Surface	The term phreatic is used in Earth sciences to refer to matters relating to ground water below the water table (the word originates from the Greek phrear, phreat- meaning “well” or “spring”). The term ‘phreatic surface’ indicates the location where the pore water pressure is under atmospheric conditions (i.e. the pressure head is zero). This surface normally coincides with the water table.

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Term	Meaning
Progressive Reclamation	Actions that can be taken during mining operations before permanent closure, to take advantage of cost and operating efficiencies by using the resources available from mine operations to reduce the overall reclamation costs incurred. It enhances environmental protection and shortens the timeframe for achieving the reclamation objectives and goals.
Reclamation	The process of returning a disturbed site to its natural state or one for other productive uses that prevents or minimizes any adverse effects on the environment or threats to human health and safety.
Rehabilitation	Activities to ensure that the land will be returned to a form and productivity in conformity with a prior land use plan, including a stable ecological state that does not contribute substantially to environmental deterioration and is consistent with surrounding aesthetic values.
Remediation	The removal, reduction, or neutralization of substances, wastes or hazardous material from a site in order to prevent or minimize any adverse effects on the environment and public safety now or in the future.
Restoration	The renewing, repairing, cleaning-up, remediation or other management of soil, groundwater or sediment so that its functions and qualities are comparable to those of its original, unaltered state.
Re-vegetation	Replacing original ground cover following a disturbance to the land.
Scarification	Seedbed preparation to make a site more amenable to plant growth.
Screening	Separating material into size fractions.
Security Deposit	Funds held by the Crown or designated owner of the land that can be used in the case of abandonment of an undertaking to reclaim the site, or carry out any ongoing measures that may remain to be taken after the abandonment of the undertaking.
Sediment	Solid material, both mineral and organic, that has been moved by air, water, gravity, or ice and has come to rest on the earth's surface either above or below sea level.

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Term	Meaning
Sump	An underground catch basin in a mine where water accumulates before being pumped to the surface.
Surface Water	Natural water bodies such as river, streams, brooks, ponds and lakes, as well as artificial watercourses, such as irrigation, industrial and navigational canals, in direct contact with the atmosphere.
Sustainable Development	Industrial development that does not detract from the potential of the natural environment to ensure benefits for future generations.
Temporary Closure	When a mine ceases operations with the intent to resume mining activities in the future. Temporary closures can last for a period of weeks, or for several years, based on economical, environmental, political, or social factors.
Topsoil	Natural huminous layer on top of the orebody, which has to be stripped prior to start-up of ore extraction.

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11 REFERENCES

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Appendix A - Mining RECLAIM Cost Estimate Screenshots

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A.1 Summary of Type B Closure Cost Estimate

SUMMARY OF COSTS				
CAPITAL COSTS				
COMPONENT TYPE	COMPONENT NAME	TOTAL COST	LAND LIABILITY	WATER LIABILITY
OPEN PIT	Mary River Mine Pit	\$0	\$0	\$0
	Bulk Sample Pit	\$0	\$0	\$0
	Mineral Exploration Areas	\$59,589	\$59,589	\$0
UNDERGROUND MINE	-	\$0	\$0	\$0
TAILINGS	-	\$0	\$0	\$0
ROCK PILE	Mary River Stockpile	\$0	\$0	\$0
BUILDINGS AND EQUIPMENT	Milne Site	\$0	\$0	\$0
	Tote Road	\$0	\$0	\$0
	Mary River Mine	\$0	\$0	\$0
	Railway	\$0	\$0	\$0
	Steensby Port	\$0	\$0	\$0
	Mineral Exploration Areas	\$9,326	\$9,326	\$0
	Remote Sites	\$102,792	\$102,792	\$0
	Mid-Rail Camp	\$136,168	\$136,168	\$0
	Steensby Inlet Camp	\$699,141	\$699,141	\$0
CHEMICALS AND SOIL MANAGEMENT		\$0	\$0	\$0
WATER MANAGEMENT		\$14,808	\$0	\$14,808
POST-CLOSURE MONITORING AND MAINTENANCE		\$0	\$0	\$0
SUBTOTAL		\$1,021,824	\$1,007,016	\$14,808
		PERCENTAGES	99%	1%
MOBILIZATION/DEMOBILIZATION		\$0	0	0
PROJECT MANAGEMENT	5%	\$51,091	\$50,351	\$740
Bonding	1%	\$10,218	\$10,070	\$148
Taxes (GST on supplies) - est.	allowance	\$0	\$0	\$0
Insurance	1%	\$10,218	\$10,070	\$148
ENGINEERING	5%	\$51,091	\$50,351	\$740
CONTINGENCY	10%	\$102,182	\$100,702	\$1,481
Market Price Factor Adjustment	0%	\$0	\$0	\$0
GRAND TOTAL - CAPITAL COSTS		\$1,246,625	\$1,228,560	\$18,066

FIGURE A- 1: SUMMARY OF TYPE B CLOSURE COST ESTIMATE

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A.2 Open Pit

Open Pit Name: <u>Mineral Exploration Areas</u>						Pit # <u>3</u>				
ACTIVITY/MATERIAL	Units	Quantity	Cost Code	Unit Cost	% Cost Land	Land Cost	Water Cost	Refer to Section	Refer to Table B-2, Row #	
OBJECTIVE: CONTROL ACCESS										
Fence	m		#N/A	0.00	\$0		\$0	\$0		
Signs	each		#N/A	0.00	\$0		\$0	\$0		
Berm at crest	m		#N/A	0.00	\$0		\$0	\$0		
Block roads	m3		#N/A	0.00	\$0		\$0	\$0		
Other			#N/A		\$0		\$0	\$0		
OBJECTIVE: STABILIZE SLOPES										
Off-load crest, soil A	m3		#N/A	0	\$0		\$0	\$0		
Off-load crest, soil B	m3		#N/A	0	\$0		\$0	\$0		
Doze/trimoverburden at crest	m3		#N/A	0	\$0		\$0	\$0		
Drill & blast pit crest	m3		#N/A	0	\$0		\$0	\$0		
buttress slope	m3		#N/A	0	\$0		\$0	\$0		
Other			#N/A	0	\$0		\$0	\$0		
OBJECTIVE: COVER/CONTOUR SLOPES										
Dump demolition materials (pit or landfill or q	m3		#N/A	0	\$0		\$0	\$0		
Place overburden over demolition material	m3		#N/A	0	\$0		\$0	\$0		
Rip rap	m3		#N/A	0	\$0		\$0	\$0		
Vegetate slopes	ha		#N/A	0	\$0		\$0	\$0		
Vegetate pit floor	ha		#N/A	0	\$0		\$0	\$0		
Level Pads, backfill sumps and grade to natu	\$	18000 TBUS		1	\$18,000	100%	\$18,000	\$0	Section B.3.1.1 Row #5	
OBJECTIVE: SPILLWAY										
Excavate channel, soil A	m3		#N/A	0	\$0		\$0	\$0		
Excavate channel, soil B	m3		#N/A	0	\$0		\$0	\$0		
Concrete	m3		#N/A	0	\$0		\$0	\$0		
Rip rap	m3		#N/A	0	\$0		\$0	\$0		
Other	each		#N/A	0	\$0		\$0	\$0		
OBJECTIVE: FLOOD PIT										
remove stationary equipment (sump pump)	each		#N/A	0	\$0		\$0	\$0		
remove power lines	each		#N/A	0	\$0		\$0	\$0		
Embankment/dam - Soil A	m3		#N/A	0	\$0		\$0	\$0		
Embankment/dam - Soil B	m3		#N/A	0	\$0		\$0	\$0		
supply/install pump & piping system	each		#N/A	0	\$0		\$0	\$0		
operate pumps to flood pit	each		#N/A	0	\$0		\$0	\$0		
Lime addition, _____ kg/m3 of water	tonne		#N/A	0	\$0		\$0	\$0		
Lime, purchase and shipping	tonne		#N/A	0	\$0		\$0	\$0		
Other			#N/A	0	\$0		\$0	\$0		
RECLAIM QUARRIES										
Contour slopes	m3		#N/A	0	\$0		\$0	\$0		
Berm at crest	m3		#N/A	0	\$0		\$0	\$0		
Place overburder	m3		#N/A	0	\$0		\$0	\$0		
Vegetate	m3		#N/A	0	\$0		\$0	\$0		
OTHER ITEMS										
Stability inspection			#N/A	0	\$0		\$0	\$0		
Drill Holes filled and Residual Casings Cuts	\$	30376 TBUS		1	\$30,376	100%	\$30,376	\$0	Section B.3.1.2 Row #4	
Inspection and final reclamation of explorator	\$	11213 TBUS		1	\$11,213	100%	\$11,213	\$0	Section B.3.1.2 Row #7	
Subtotal					\$59,589	100%	\$59,589	\$0		
					Pct		Total			
					Land		Total Land		Water	

FIGURE A- 2: TYPE B OPEN PIT RECLAMATION COSTS

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A.3 Buildings and Equipments

Building / Equip Name: <i>Mineral Exploration Areas</i>					Bldg / Equip #: <i>6</i>				
ACTIVITY/MATERIAL	Units	Quantity	Cost Code	Unit Cost	Cost % Land	Land Cost	Water Cost	Refer to Section	Refer to Table B-2, Row #
OBJECTIVE: DISPOSE MOBILE EQUIPMENT									
Decontaminate and ship off-site	each		#N/A	0	\$0	\$0	\$0		
Decontaminate, dispose on-site	each		#N/A	0	\$0	\$0	\$0		
Other (sealift for equipmt)	each		#N/A	0	\$0	\$0	\$0		
OBJECTIVE: REMOVE CONTAMINATED BUILDINGS									
Decontaminate crushing plant	each		#N/A	0	\$0	\$0	\$0		
Decontaminate tanks & plumbing	each		#N/A	0	\$0	\$0	\$0		
Decontaminate thickeners	each		#N/A	0	\$0	\$0	\$0		
Decontaminate water treatment plant	each		#N/A	0	\$0	\$0	\$0		
Decontaminate maintenance shop	each		#N/A	0	\$0	\$0	\$0		
Decontaminate power plant	each		#N/A	0	\$0	\$0	\$0		
Decontaminate bulk fuel storage	each		#N/A	0	\$0	\$0	\$0		
Decontaminate ANFO plant	each		#N/A	0	\$0	\$0	\$0		
Decontaminate offices/warehouse/accom	each		#N/A	0	\$0	\$0	\$0		
Removal of asbestos siding on buildings	each		#N/A	0	\$0	\$0	\$0		
Removal of friable asbestos on equipment	each		#N/A	0	\$0	\$0	\$0		
Other			#N/A	0	\$0	\$0	\$0		
OBJECTIVE: REMOVE NON-CONTAMINATED BUILDINGS									
crushing plant	m2		#N/A	0	\$0	\$0	\$0		
conveyors & transfer towers	m2		#N/A	0	\$0	\$0	\$0		
tanks & plumbing	m2		#N/A	0	\$0	\$0	\$0		
thickeners	m2		#N/A	0	\$0	\$0	\$0		
water treatment plant	m2		#N/A	0	\$0	\$0	\$0		
maintenance shop	m2		#N/A	0	\$0	\$0	\$0		
power plant	m2		#N/A	0	\$0	\$0	\$0		
bulk fuel storage	m2		#N/A	0	\$0	\$0	\$0		
ANFO plant	m2		#N/A	0	\$0	\$0	\$0		
offices/warehouse/accom	m2		#N/A	0	\$0	\$0	\$0		
consolidate & dump boneyard debris	m3		#N/A	0	\$0	\$0	\$0		
other			#N/A	0	\$0	\$0	\$0		
OBJECTIVE: BREAK BASEMENT SLABS									
crushing plant	m2		#N/A	0	\$0	\$0	\$0		
conveyors & transfer towers	m2		#N/A	0	\$0	\$0	\$0		
tanks & plumbing	m2		#N/A	0	\$0	\$0	\$0		
thickeners	m2		#N/A	0	\$0	\$0	\$0		
water treatment plant	m2		#N/A	0	\$0	\$0	\$0		
maintenance shop	m2		#N/A	0	\$0	\$0	\$0		
power plant	m2		#N/A	0	\$0	\$0	\$0		
bulk fuel storage	m2		#N/A	0	\$0	\$0	\$0		
ANFO plant	m2		#N/A	0	\$0	\$0	\$0		
offices/warehouse/accom	m2		#N/A	0	\$0	\$0	\$0		
Other	m2		#N/A	0	\$0	\$0	\$0		
OBJECTIVE: LANDFILL FOR DEMOLITION WASTE									
Place soil cover	m3		#N/A	0	\$0	\$0	\$0		
Vegetate	ha		#N/A	0	\$0	\$0	\$0		
Landfill disposal fee	tonne		#N/A	0	\$0	\$0	\$0		
OBJECTIVE: GRADE AND CONTOUR MILL & PLANT SITE									
crushing plant	m2		#N/A	0	\$0	\$0	\$0		
conveyors & transfer towers	m2		#N/A	0	\$0	\$0	\$0		
tanks & plumbing	m2		#N/A	0	\$0	\$0	\$0		
thickeners	m2		#N/A	0	\$0	\$0	\$0		
water treatment plant	m2		#N/A	0	\$0	\$0	\$0		
maintenance shop	m2		#N/A	0	\$0	\$0	\$0		
power plant	m2		#N/A	0	\$0	\$0	\$0		
bulk fuel storage	m2		#N/A	0	\$0	\$0	\$0		
ANFO plant	m2		#N/A	0	\$0	\$0	\$0		
offices/warehouse/accom	m2		#N/A	0	\$0	\$0	\$0		
other	m2		#N/A	0	\$0	\$0	\$0		
OBJECTIVE: RECLAIM ROADS									
Remove culverts	each		#N/A	0	\$0	\$0	\$0		
Remove bridges	each		#N/A	0	\$0	\$0	\$0		
Scarify and install water breaks	ha		#N/A	0	\$0	\$0	\$0		
remove/doze down berms	m3		#N/A	0	\$0	\$0	\$0		
create wildlife passage ramps	m3		#N/A	0	\$0	\$0	\$0		
Vegetate	ha		#N/A	0	\$0	\$0	\$0		
other			#N/A	0	\$0	\$0	\$0		
SPECIALIZED ITEMS									
Prepare core for Long-term site storage	\$	1756 TBUS		1	\$1,756	100%	\$1,756	\$0	Section B.3.5.1.1 Row # 6
Salt mixing stations	\$	7570 TBUS		1	\$7,570	100%	\$7,570	\$0	Section B.3.5.1.1 Row # 8
Subtotal					\$9,326	100%	\$9,326	\$0	
					Pct Land	Total Land	Total Water		

FIGURE A- 3: TYPE B BUILDINGS AND EQUIPMENT RECLAMATION COSTS MINERAL EXPLORATION AREAS

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Building / Equip Name: <u>Remote Sites</u>					Bldg / Equip #: <u>7</u>				
ACTIVITY/MATERIAL	Units	Quantity	Cost Code	Unit Cost	Cost % Land	Land Cost	Water Cost	Refer to Section	Refer to Table B-2, Row #
OBJECTIVE: DISPOSE MOBILE EQUIPMENT									
Decontaminate and ship off-site	each		#N/A	0	\$0	\$0	\$0		
Decontaminate, dispose on-site	each		#N/A	0	\$0	\$0	\$0		
Other (sealift for equipmt)	each		#N/A	0	\$0	\$0	\$0		
OBJECTIVE: REMOVE CONTAMINATED BUILDINGS									
Decontaminate crushing plant	each		#N/A	0	\$0	\$0	\$0		
Decontaminate tanks & plumbing	each		#N/A	0	\$0	\$0	\$0		
Decontaminate thickeners	each		#N/A	0	\$0	\$0	\$0		
Decontaminate water treatment plant	each		#N/A	0	\$0	\$0	\$0		
Decontaminate maintenance shop	each		#N/A	0	\$0	\$0	\$0		
Decontaminate power plant	each		#N/A	0	\$0	\$0	\$0		
Decontaminate bulk fuel storage	each		#N/A	0	\$0	\$0	\$0		
Decontaminate ANFO plant	each		#N/A	0	\$0	\$0	\$0		
Deontaminate offices/warehouse/accum	each		#N/A	0	\$0	\$0	\$0		
Removal of asbestos siding on buildings	each		#N/A	0	\$0	\$0	\$0		
Removal of friable asbestos on equipment	each		#N/A	0	\$0	\$0	\$0		
Other			#N/A	0	\$0	\$0	\$0		
OBJECTIVE: REMOVE NON-CONTAMINATED BUILDINGS									
crushing plant	m2		#N/A	0	\$0	\$0	\$0		
conveyors & transfer towers	m2		#N/A	0	\$0	\$0	\$0		
tanks & plumbing	m2		#N/A	0	\$0	\$0	\$0		
thickeners	m2		#N/A	0	\$0	\$0	\$0		
water treatment plant	m2		#N/A	0	\$0	\$0	\$0		
maintenance shop	m2		#N/A	0	\$0	\$0	\$0		
power plant	m2		#N/A	0	\$0	\$0	\$0		
bulk fuel storage	m2		#N/A	0	\$0	\$0	\$0		
ANFO plant	m2		#N/A	0	\$0	\$0	\$0		
offices/warehouse/accum	m2		#N/A	0	\$0	\$0	\$0		
consolidate & dump boneyard debris	m3		#N/A	0	\$0	\$0	\$0		
other			#N/A	0	\$0	\$0	\$0		
OBJECTIVE: BREAK BASEMENT SLABS									
crushing plant	m2		#N/A	0	\$0	\$0	\$0		
conveyors & transfer towers	m2		#N/A	0	\$0	\$0	\$0		
tanks & plumbing	m2		#N/A	0	\$0	\$0	\$0		
thickeners	m2		#N/A	0	\$0	\$0	\$0		
water treatment plant	m2		#N/A	0	\$0	\$0	\$0		
maintenance shop	m2		#N/A	0	\$0	\$0	\$0		
power plant	m2		#N/A	0	\$0	\$0	\$0		
bulk fuel storage	m2		#N/A	0	\$0	\$0	\$0		
ANFO plant	m2		#N/A	0	\$0	\$0	\$0		
offices/warehouse/accum	m2		#N/A	0	\$0	\$0	\$0		
Other	m2		#N/A	0	\$0	\$0	\$0		
OBJECTIVE: LANDFILL FOR DEMOLITION WASTE									
Place soil cover	m3		#N/A	0	\$0	\$0	\$0		
Vegetate	ha		#N/A	0	\$0	\$0	\$0		
Landfill disposal fee	tonne		#N/A	0	\$0	\$0	\$0		
OBJECTIVE: GRADE AND CONTOUR MILL & PLANT SITE									
crushing plant	m2		#N/A	0	\$0	\$0	\$0		
conveyors & transfer towers	m2		#N/A	0	\$0	\$0	\$0		
tanks & plumbing	m2		#N/A	0	\$0	\$0	\$0		
thickeners	m2		#N/A	0	\$0	\$0	\$0		
water treatment plant	m2		#N/A	0	\$0	\$0	\$0		
maintenance shop	m2		#N/A	0	\$0	\$0	\$0		
power plant	m2		#N/A	0	\$0	\$0	\$0		
bulk fuel storage	m2		#N/A	0	\$0	\$0	\$0		
ANFO plant	m2		#N/A	0	\$0	\$0	\$0		
offices/warehouse/accum	m2		#N/A	0	\$0	\$0	\$0		
other (Construction and use of airstrips and icestrip)	m2		#N/A	0	\$0	\$0	\$0		\$0 Section B.3.5.2.1 NA
OBJECTIVE: RECLAIM ROADS									
Remove culverts	each		#N/A	0	\$0	\$0	\$0	\$0 Section B.3.5.2.2	NA
Remove bridges	each		#N/A	0	\$0	\$0	\$0	\$0 Section B.3.5.2.2	NA
Scarify and install water breaks	ha		#N/A	0	\$0	\$0	\$0	\$0 Section B.3.5.2.2	NA
remove/doze down berms	m3		#N/A	0	\$0	\$0	\$0	\$0 Section B.3.5.2.2	NA
create wildlife passage ramps	m3		#N/A	0	\$0	\$0	\$0	\$0 Section B.3.5.2.2	NA
Vegetate	ha		#N/A	0	\$0	\$0	\$0	\$0 Section B.3.5.2.2	NA
other			#N/A	0	\$0	\$0	\$0	\$0 Section B.3.5.2.2	NA
SPECIALIZED ITEMS									
Decommission remote sites	\$	102792	TBUS	1	\$102,792	100%	\$102,792	\$0	Section B.3.5.2.3 Row #9
Subtotal					\$102,792	100%	\$102,792	\$0	
						Pct Land	Total Land	Total Water	

FIGURE A- 4: TYPE B BUILDINGS AND EQUIPMENT RECLAMATION COSTS - REMOTE SITES

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Building / Equip Name: <i>Mid-Rail Camp</i>					Bldg / Equip #: <i>8</i>				
ACTIVITY/MATERIAL	Units	Quantity	Cost Code	Unit Cost	Cost % Land	Land Cost	Water Cost	Refer to Section	Refer to Table B-2, Row #
OBJECTIVE: DISPOSE MOBILE EQUIPMENT									
Decontaminate and ship off-site	each		#N/A	0	\$0	\$0	\$0		
Decontaminate, dispose on-site	each		#N/A	0	\$0	\$0	\$0		
Other (sealift for equipmt)	each		#N/A	0	\$0	\$0	\$0		
OBJECTIVE: REMOVE CONTAMINATED BUILDINGS									
Decontaminate crushing plant	each		#N/A	0	\$0	\$0	\$0		
Decontaminate tanks & plumbing	each		#N/A	0	\$0	\$0	\$0		
Decontaminate thickeners	each		#N/A	0	\$0	\$0	\$0		
Decontaminate water treatment plant	each		#N/A	0	\$0	\$0	\$0	\$0 Section B.3.5.3.1	NA
Decontaminate maintenance shop	each		#N/A	0	\$0	\$0	\$0		
Decontaminate power plant	each		#N/A	0	\$0	\$0	\$0		
Decontaminate bulk fuel storage	each		#N/A	0	\$0	\$0	\$0	\$0 Section B.3.5.3.1	NA
Decontaminate ANFO plant	each		#N/A	0	\$0	\$0	\$0		
Decontaminate offices/warehouse/accom	each		#N/A	0	\$0	\$0	\$0		
Removal of asbestos siding on buildings	each		#N/A	0	\$0	\$0	\$0		
Removal of friable asbestos on equipment	each		#N/A	0	\$0	\$0	\$0		
Other			#N/A	0	\$0	\$0	\$0		
OBJECTIVE: REMOVE NON-CONTAMINATED BUILDINGS									
crushing plant	m2		#N/A	0	\$0	\$0	\$0		
conveyors & transfer towers	m2		#N/A	0	\$0	\$0	\$0		
tanks & plumbing	m2		#N/A	0	\$0	\$0	\$0		
thickeners	m2		#N/A	0	\$0	\$0	\$0		
water treatment plant	m2		#N/A	0	\$0	\$0	\$0		
maintenance shop	m2		#N/A	0	\$0	\$0	\$0		
power plant	\$	1756	TBUS	1	\$1,756	100%	\$1,756	\$0 Section B.3.5.3.2	Row# 19
bulk fuel storage	m2		#N/A	0	\$0	\$0	\$0		
ANFO plant	m2		#N/A	0	\$0	\$0	\$0		
offices/warehouse/accom	\$	15804	TBUS	1	\$15,804	100%	\$15,804	\$0 Section B.3.5.3.2	Row# 18
consolidate & dump boneyard debris	m3		#N/A	0	\$0	\$0	\$0		
Related Infrastructure	\$	3512	TBUS	1	\$3,512	100%	\$3,512	\$0 Section B.3.5.3.2	Row# 20
OBJECTIVE: BREAK BASEMENT SLABS									
crushing plant	m2		#N/A	0	\$0	\$0	\$0		
conveyors & transfer towers	m2		#N/A	0	\$0	\$0	\$0		
tanks & plumbing	m2		#N/A	0	\$0	\$0	\$0		
thickeners	m2		#N/A	0	\$0	\$0	\$0		
water treatment plant	m2		#N/A	0	\$0	\$0	\$0		
maintenance shop	m2		#N/A	0	\$0	\$0	\$0		
power plant	m2		#N/A	0	\$0	\$0	\$0		
bulk fuel storage	m2		#N/A	0	\$0	\$0	\$0		
ANFO plant	m2		#N/A	0	\$0	\$0	\$0		
offices/warehouse/accom	m2		#N/A	0	\$0	\$0	\$0		
Other	m2		#N/A	0	\$0	\$0	\$0		
OBJECTIVE: LANDFILL FOR DEMOLITION WASTE									
Place soil cover	m3		#N/A	0	\$0	\$0	\$0		
Vegetate	ha		#N/A	0	\$0	\$0	\$0		
Landfill disposal fee	tonne		#N/A	0	\$0	\$0	\$0		
OBJECTIVE: GRADE AND CONTOUR MILL & PLANT SITE									
crushing plant	m2		#N/A	0	\$0	\$0	\$0		
conveyors & transfer towers	m2		#N/A	0	\$0	\$0	\$0		
tanks & plumbing	m2		#N/A	0	\$0	\$0	\$0		
thickeners	m2		#N/A	0	\$0	\$0	\$0		
water treatment plant	m2		#N/A	0	\$0	\$0	\$0		
maintenance shop	m2		#N/A	0	\$0	\$0	\$0		
power plant	m2		#N/A	0	\$0	\$0	\$0		
bulk fuel storage	m2		#N/A	0	\$0	\$0	\$0		
ANFO plant	m2		#N/A	0	\$0	\$0	\$0		
offices/warehouse/accom	m2		#N/A	0	\$0	\$0	\$0		
other	m2		#N/A	0	\$0	\$0	\$0		
OBJECTIVE: RECLAIM ROADS									
Remove culverts	each		#N/A	0	\$0	\$0	\$0	\$0 Section B.3.5.3.3	NA
Remove bridges	each		#N/A	0	\$0	\$0	\$0	\$0 Section B.3.5.3.3	NA
Scarify and install water breaks	ha		#N/A	0	\$0	\$0	\$0	\$0 Section B.3.5.3.3	NA
remove/doze down berms	m3		#N/A	0	\$0	\$0	\$0	\$0 Section B.3.5.3.3	NA
create wildlife passage ramps	m3		#N/A	0	\$0	\$0	\$0	\$0 Section B.3.5.3.3	NA
Vegetate	ha		#N/A	0	\$0	\$0	\$0	\$0 Section B.3.5.3.3	NA
other			#N/A	0	\$0	\$0	\$0	\$0 Section B.3.5.3.3	NA
SPECIALIZED ITEMS									
Decommission Decommission Laydown Areas	\$	878	TBUS	1	\$878	100%	\$878	\$0 Section B.3.5.3.4	Row# 21
General site Clean up	\$	2634	TBUS	1	\$2,634	100%	\$2,634	\$0 Section B.3.5.3.4	Row# 22
Camp Operation	\$	7404	TBUS	1	\$7,404	100%	\$7,404	\$0 Section B.3.5.3.4	Row# 35 to Row #38
Fly waste from Mid Rail Camp to Mary River Camp for landfill	\$	104180	TBUS	1	\$104,180	100%	\$104,180	\$0 Section B.3.5.3.4	Row# 23
Subtotal					\$136,168	100%	\$136,168	\$0	
					Pct Land		Total Land	Total Water	

FIGURE A- 5: TYPE B BUILDINGS AND EQUIPMENT RECLAMATION COSTS - MID-RAIL CAMP

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Building / Equip Name: <i>Steensby Inlet Camp</i>				Bldg / Equip #: <i>9</i>					
ACTIVITY/MATERIAL	Units	Quantity	Cost Code	Unit Cost	Cost % Land	Land Cost	Water Cost	Refer to Section	Refer to Table B-2, Row #
OBJECTIVE: DISPOSE MOBILE EQUIPMENT									
Decontaminate and ship off-site	\$	4218 TBUS	✓	1	\$4,218	100%	\$4,218	\$0 Section B.3.5.4.1	Row #32
Decontaminate, dispose on-site	each	#N/A	✓	0	\$0		\$0	\$0	
Other (sealift for equipmt)	\$	2020 TBUS	✓	1	\$2,020	100%	\$2,020	\$0 Section B.3.5.4.1	Row #31
OBJECTIVE: REMOVE CONTAMINATED BUILDINGS									
Decontaminate crushing plant	each	#N/A	✓	0	\$0		\$0	\$0	
Decontaminate tanks & plumbing	each	#N/A	✓	0	\$0		\$0	\$0	
Decontaminate thickeners	each	#N/A	✓	0	\$0		\$0	\$0	
Decontaminate water treatment plant	each	#N/A	✓	0	\$0		\$0	\$0 Section B.3.5.4.2	NA
Decontaminate maintenance shop	each	#N/A	✓	0	\$0		\$0	\$0	
Decontaminate power plant	each	#N/A	✓	0	\$0		\$0	\$0	
Decontaminate bulk fuel storage	each	#N/A	✓	0	\$0		\$0	\$0	
Decontaminate ANFO plant	each	#N/A	✓	0	\$0		\$0	\$0	
Decontaminate offices/warehouse/accom	each	#N/A	✓	0	\$0		\$0	\$0	
Removal of asbestos siding on buildings	each	#N/A	✓	0	\$0		\$0	\$0	
Removal of friable asbestos on equipment	each	#N/A	✓	0	\$0		\$0	\$0	
Other		#N/A	✓	0	\$0		\$0	\$0	
OBJECTIVE: REMOVE NON-CONTAMINATED BUILDINGS									
crushing plant	m2	#N/A	✓	0	\$0		\$0	\$0	
conveyors & transfer towers	m2	#N/A	✓	0	\$0		\$0	\$0	
tanks & plumbing	m2	#N/A	✓	0	\$0		\$0	\$0	
thickeners	m2	#N/A	✓	0	\$0		\$0	\$0	
water treatment plant	m2	#N/A	✓	0	\$0		\$0	\$0	
maintenance shop	m2	#N/A	✓	0	\$0		\$0	\$0	
power plant	\$	2020 TBUS	✓	1	\$2,020	100%	\$2,020	\$0 Section B.3.5.4.3	Row #26
bulk fuel storage	\$	1670 TBUS	✓	1	\$1,670	100%	\$1,670	\$0 Section B.3.5.4.3	Row #29
ANFO plant	m2	#N/A	✓	0	\$0		\$0	\$0	
offices/warehouse/accom	\$	23448 TBUS	✓	1	\$23,448	100%	\$23,448	\$0 Section B.3.5.4.3	Row #25
consolidate & dump boneyard debris	m3	#N/A	✓	0	\$0		\$0	\$0	
Related Infrastructure	\$	2634 TBUS	✓	1	\$2,634	100%	\$2,634	\$0 Section B.3.5.4.3	Row #27
OBJECTIVE: BREAK BASEMENT SLABS									
crushing plant	m2	#N/A	✓	0	\$0		\$0	\$0	
conveyors & transfer towers	m2	#N/A	✓	0	\$0		\$0	\$0	
tanks & plumbing	m2	#N/A	✓	0	\$0		\$0	\$0	
thickeners	m2	#N/A	✓	0	\$0		\$0	\$0	
water treatment plant	m2	#N/A	✓	0	\$0		\$0	\$0	
maintenance shop	m2	#N/A	✓	0	\$0		\$0	\$0	
power plant	m2	#N/A	✓	0	\$0		\$0	\$0	
bulk fuel storage	m2	#N/A	✓	0	\$0		\$0	\$0	
ANFO plant	m2	#N/A	✓	0	\$0		\$0	\$0	
offices/warehouse/accom	m2	#N/A	✓	0	\$0		\$0	\$0	
Other	m2	#N/A	✓	0	\$0		\$0	\$0	
OBJECTIVE: LANDFILL FOR DEMOLITION WASTE									
Place soil cover	m3	#N/A	✓	0	\$0		\$0	\$0	
Vegetate	ha	#N/A	✓	0	\$0		\$0	\$0	
Landfill disposal fee	tonne	#N/A	✓	0	\$0		\$0	\$0	
OBJECTIVE: GRADE AND CONTOUR MILL & PLANT SITE									
crushing plant	m2	#N/A	✓	0	\$0		\$0	\$0	
conveyors & transfer towers	m2	#N/A	✓	0	\$0		\$0	\$0	
tanks & plumbing	m2	#N/A	✓	0	\$0		\$0	\$0	
thickeners	m2	#N/A	✓	0	\$0		\$0	\$0	
water treatment plant	m2	#N/A	✓	0	\$0		\$0	\$0	
maintenance shop	m2	#N/A	✓	0	\$0		\$0	\$0	
power plant	m2	#N/A	✓	0	\$0		\$0	\$0	
bulk fuel storage	m2	#N/A	✓	0	\$0		\$0	\$0	
ANFO plant	m2	#N/A	✓	0	\$0		\$0	\$0	
offices/warehouse/accom	m2	#N/A	✓	0	\$0		\$0	\$0	
other	m2	#N/A	✓	0	\$0		\$0	\$0	
OBJECTIVE: RECLAIM ROADS									
Remove culverts	each	#N/A	✓	0	\$0		\$0	\$0 Section B.3.5.4.4	NA
Remove bridges	each	#N/A	✓	0	\$0		\$0	\$0 Section B.3.5.4.4	NA
Scarify and install water breaks	ha	#N/A	✓	0	\$0		\$0	\$0 Section B.3.5.4.4	NA
remove/doze down berms	m3	#N/A	✓	0	\$0		\$0	\$0 Section B.3.5.4.4	NA
create wildlife passage ramps	m3	#N/A	✓	0	\$0		\$0	\$0 Section B.3.5.4.4	NA
Vegetate	ha	#N/A	✓	0	\$0		\$0	\$0 Section B.3.5.4.4	NA
other		#N/A	✓	0	\$0		\$0	\$0 Section B.3.5.4.4	NA
SPECIALIZED ITEMS									
Decommission Decommission Laydown Areas	\$	7644 TBUS	✓	1	\$7,644	100%	\$7,644	\$0 Section B.3.5.4.5	Row #28
General site Clean up	\$	4218 TBUS	✓	1	\$4,218	100%	\$4,218	\$0 Section B.3.5.4.5	Row #30
Camp Operation	\$	18304 TBUS	✓	1	\$18,304	100%	\$18,304	\$0 Section B.3.5.4.5	Row #39
Resupply by Helicopter	\$	57239 TBUS	✓	1	\$57,239	100%	\$57,239	\$0 Section B.3.5.4.5	Row #33
Demobilize Freight Sealift Steensby Port to Port of Valleyfield	\$	575726 TBUS	✓	1	\$575,726	100%	\$575,726	\$0 Section B.3.5.4.5	Row #40 to Row #42
Subtotal					\$699,141	100%	\$699,141	\$0	
					Pct Land	Total Land	Total Water		

FIGURE A- 6: TYPE B BUILDINGS AND EQUIPMENT RECLAMATION - STEENSBY INLET

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A.4 Water


1 Water Management :

ACTIVITY/MATERIAL	Units	Quantity	Cost Code	Unit Cost	Cost %	Land Cost	Water Cost	Refer to Section	Refer to Table B-2, Row #
A OBJECTIVE: WATER SUPPLY EMBANKMENT									
Toe buttress, drain mat'l	m3		#N/A	0	\$0		\$0	\$0	
, fill mat'l A	m3		#N/A	0	\$0		\$0	\$0	
, fill mat'l B	m3		#N/A	0	\$0		\$0	\$0	
Rip rap	m3		#N/A	0	\$0		\$0	\$0	
Vegetate	ha		#N/A	0	\$0		\$0	\$0	
Breach dam	m3		#N/A	0	\$0		\$0	\$0	
Other			#N/A	0	\$0		\$0	\$0	
B OBJECTIVE: UPGRADE SPILLWAY									
Excavate channel, mat'l A	m3		#N/A	0	\$0		\$0	\$0	
, mat'l B	m3		#N/A	0	\$0		\$0	\$0	
Concrete	m3		#N/A	0	\$0		\$0	\$0	
Rip rap	m3		#N/A	0	\$0		\$0	\$0	
Other			#N/A	0	\$0		\$0	\$0	
E OBJECTIVE: STABILIZE &/OR UPGRADE DIVERSION DITCHES									
Excavate channel	m3		#N/A	0	\$0		\$0	\$0	
doze & spread excavated material	m3		#N/A	0	\$0		\$0	\$0	
Vegetate, spread material	ha		#N/A	0	\$0		\$0	\$0	
Rip rap in channel base	each		#N/A		\$0		\$0	\$0	
F OBJECTIVE: BREACH DITCHES									
Excavate breaches	m3		#N/A	0	\$0		\$0	\$0	
install rip rap	m3		#N/A	0	\$0		\$0	\$0	
install flow dissipation	m3		#N/A	0	\$0		\$0	\$0	
vegetate remainder of ditch	m2		#N/A	0	\$0		\$0	\$0	
G OBJECTIVE: REMOVE PIPELINES									
Remove pipes	\$	14808	TBUS	1	\$14,808		\$0	\$14,808	Section B.3.7.1 Row #3
Concrete plug deep pipes	m3		#N/A	0	\$0		\$0	\$0	
Other			#N/A	0	\$0		\$0	\$0	
H Groundwater Collection - Long-term Collection System									
excavate/install sumps	m2		#N/A	0	\$0		\$0	\$0	
install pumping wells	m3		#N/A	0	\$0		\$0	\$0	
install pumps/pipelines/power supply			#N/A	0	\$0		\$0	\$0	
I OBJECTIVE: COLLECT DRAINAGE FOR TREATMENT									
Excavate channel	m3		#N/A	0	\$0		\$0	\$0	
doze & spread excavated material	m3		#N/A	0	\$0		\$0	\$0	
Vegetate, spread material	ha		#N/A	0	\$0		\$0	\$0	
Rip rap in channel base	each		#N/A	0	\$0		\$0	\$0	
Construct contaminated water storage pond									
Excavation	m3		#N/A	0	\$0		\$0	\$0	
supply geomembrane, HDPE, ES3, GCL	m2		#N/A	0	\$0		\$0	\$0	
upper and lower bedding layers	m3		#N/A	0	\$0		\$0	\$0	
install geomembrane, HDPE, ES3, GCL	m2		#N/A	0	\$0		\$0	\$0	
erosion protection layer	m3		#N/A	0	\$0		\$0	\$0	
J OBJECTIVE: TREAT DRAINAGE (see "ONGOING TREATMENT" for operating costs)									
Build treatment plant	LS		#N/A	0	\$0		\$0	\$0	
build sludge containment facility	LS		#N/A	0	\$0		\$0	\$0	
Subtotal					\$14,808	0%	\$0	\$14,808	
						Pct	Total	Total	
						Land	Land	Water	

FIGURE A- 7: TYPE B WATER MANAGEMENT RECLAMATION COSTS

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Appendix B - Cost Estimate Assumptions for Mining RECLAIM

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B.1 Introduction

The costs for the Type B Closure Cost Estimate were determined using the costs presented in Baffinland Iron Mines Corporation, Mary River Project, 2013 Abandonment and Reclamation Plan For Advanced Exploration Activities, January 2013 (hereon referred to as: 2013 A&R Plan (AMEC, January 2013))³. Appendix G3, Cost Estimation Details for Closure of the 2013 A&R Plan (AMEC, January 2013) For Advanced Exploration Activities was used for detailed cost analysis. All capital costs described in 2013 A&R Plan (AMEC, January 2013) relating to the scope of work described in the renewal and amendment of Baffinland Iron Mines Corporation (BIMC) Type “B” Water Licence No. 2BE-MRY1421 are captured in the supporting RECLAIM model unless noted otherwise.

RECLAIM makes use of separate worksheets to organize the information, and calculate the closure and reclamation costs based on Unit Costs predefined for several activities (a list of the unit costs defined by RECLAIM can be found in the ‘Unit_Costs’ tab of each RECLAIM model). Components addressed include:

- Open pit.
- Waste Rock pile.
- Buildings and Equipments.
- Chemicals.
- Water.
- Mobilization.
- Post Closure.
- Ongoing water monitoring.


Several reclamation strategies (“Objectives”) are listed for each component, and broken down into lists of actions that can be priced separately. A unit cost spreadsheet (part of the generic RECLAIM model) provides a range of prices for most actions; it has been completed where possible with the most accurate available or Project specific costs.

Based on the level of information and the type of activities to be performed during Closure and Reclamation, the following percentages were applied to the indirect costs into the RECLAIM model. These percentages are calculated based on the subtotal of capital costs:

- Project Management – 5%.
- Bonding – 1%.
- Insurance – 1%.

³ This document has been distributed and made available to all relevant stakeholder and any additional evidence required to support unit costs and quantities can be found within the 2013 A&R Plan (AMEC, January 2013).

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- Engineering – 5%.
- Contingency – 10%.

The cost estimate in the 2013 A&R Plan (AMEC, January 2013) Appendix G3 was developed based on all the closure and reclamation costs unit rates and quantities defined as person day and equipment hours. The dollar value of these calculations was carried over to the RECLAIM model to account for them.

To reflect the cost presented in Appendix G3 of the 2013 A&R Plan (AMEC, January 2013) into RECLAIM a hybrid system was developed. With this system the total cost for each item (man hour cost + equipment cost) was input as the quantity assuming a Unit Cost of \$1 without contingency. For example, if the cost of the reclamation activities for a certain item was estimated as \$20,000 in the 2013 A&R Plan (AMEC, January 2013), then it was assigned 20,000 units at \$1 in the RECLAIM model.

Note: RECLAIM spreadsheet calculates Project Management fee as a percentage of the subtotal of capital costs (for the purpose of this estimate, a 5% of the subtotal of capital costs was assigned to the Project Management). Appendix G3 of 2012 A&R Plan has a breakdown for Project Management & Supervision costs (General Site Area, cells 1 to 9, Appendix G3 of 2013 A&R Plan (AMEC, January 2013)) which works out as 3% of the total capital cost. This AMEC cost was therefore excluded from the RECLAIM model to avoid double counting.

Note: All contingency values assigned in 2013 A&R Plan (AMEC, January 2013) - Appendix G3 have not been included to allow for RECLAIM's contingency methodology as a percentage of the subtotal of capital costs. For the purpose of this estimate, a 10% contingency was assigned. A 10% contingency was determined based on review of the Qikiqtani Inuit Association (QIA) Abandonment and Reclamation Policy for Inuit Owned Lands (2013) , Appendix D and BIMC experience in North Baffin Island supported by contributions from its consultants, Hatch, which have extensive Canadian and international closure experience in Arctic and other environments. Reclamation activities for the Mary River Exploration Project are predominantly an earthworks exercise with simple demolition. High allowances for contingency are not required as the construction program will be relatively simple.

In order to keep track the source of the costs and quantities and what activities drive them, a reference was inserted in each line item of RECLAIM that cross references the costing source to Appendix G3 of the 2013 A&R Plan (AMEC, January 2013). Therefore the RECLAIM Model presented and Appendix G3 of the 2013 A&R Plan (AMEC, January 2013) should be read as complementary documents. Based on calculations of the RECLAIM Model, the cost of reclamation for the scope of work described in the renewal and amendment of Baffinland Iron Mines Corporation (BIMC) Type "B" Water Licence No. 2BE-MRY1421 is as follows:


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TABLE B- 1: TYPE B CLOSURE COST ESTIMATE REALLOCATION SUMMARY

Liability Allocation	IOL			CROWN			PROJECT TOTAL
	Land	Water	Total	Land	Water	Total	
DIRECT COSTS	\$120,311	\$14,808	\$135,119	\$886,706	\$0	\$886,706	\$1,021,825
Project Management (5%)	\$6,016	\$740	\$6,756	\$44,335	\$0	\$44,335	\$51,091
Bonding (1%)	\$1,203	\$148	\$1,351	\$8,867	\$0	\$8,867	\$10,218
Insurance (1%)	\$1,203	\$148	\$1,351	\$ 8,867	\$0	\$8,867	\$10,218
Engineering (5%)	\$ 6,016	\$740	\$6,756	\$44,335	\$0	\$44,335	\$51,091
Contingency (10%)	\$12,031	\$1,481	\$13,512	\$88,671	\$0	\$88,671	\$102,183
GRAND TOTAL CAPITAL COSTS	\$146,779	\$18,066	\$164,845	\$1,081,781	\$0	\$1,081,781	\$1,246,627


B.2 Type B Closure Cost Estimate

Costs under Type B Water Licence include:

- All costs associated with Steensby Camp
 - ♦ Steensby Inlet Camp operation.
 - ♦ Decommission of Steensby Inlet Camp.
 - ♦ Demobilize freight Sealift Steensby Port to Port Valleyfield.
- All cost associated with Mid-Rail and any other rail camps
 - ♦ Mid-Rail Camp operation.
 - ♦ Decommission of Remotes Sites.
 - ♦ Decommission of Mid-Rail Camp.
- All Costs associated with drilling and drill holes;
 - ♦ Mineral Exploration Areas.
- All Costs associated with additional temporary in nature Pioneer/Satellite Camps, if any.

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A summary of the Type B Closure Cost Estimate RECLAIM model is presented in FIGURE A- 1 of Appendix A. All subsequent figures FIGURE A- 3 to FIGURE A- 7 of Appendix A are screenshots from the respective tabs in the RECLAIM model that derives the summary cost table.

B.3 Assumptions

The screenshots of the RECLAIM Model presented in Figures A-2 to A-7 are based on the assumptions listed in Section B.3.1 to Section B.3.10. This assumption should be read in conjunction with TABLE B- 2, which represents the Basis for 2013 Estimate, based on AMEC, 2013. Baffinland Iron Mines Corporation, Mary River Project, 2013 Abandonment and Reclamation Plan for Advanced Exploration Activities, dated January 2013.

No cost associated with the mobilization and demobilization of fuel has been accounted for in the Type B Water License. However, cost associated with fuel related to Type B reclamation work as described in Appendix A has been accounted for in the Type 'A' Water License (\$2,900,091), including the following activities:

- Cash cost of fuel and barrel deposit (\$1,535,691);
- Hercules Aircraft mobilization from Yellowknife to Mary River (\$1,364,400).

B.3.1 Open Pit

There will be no Open Pit activities associated with the Type B Water Licence and therefore this component of RECLAIM was not considered. Geotechnical Drilling have been determined to have a negligible final reclamation cost as they are progressively reclaimed to meet to reclamation objectives during operations and this cost is captured in the drilling programs operations budget.

Mineral Exploration areas are included and accounted for in the Type B Reclamation Cost Estimate, as is presented in FIGURE A- 2. The basis of estimate is presented in TABLE B- 2 and includes the following reclamation activities:

B.3.1.1 OBJECTIVE: Cover/Contour Slopes

The activity "Level pads, backfill sumps and grade to natural contours" has been included in the Type B Reclamation Cost Estimate, as presented in FIGURE A- 2: Type B Open Pit Reclamation Costs. The Basis for 2013 Estimate, based on AMEC 2013, is presented in TABLE B- 2, Row #5.


B.3.1.2 OBJECTIVE: Other Items

The following activities have been included in the Type B Reclamation Cost Estimate, as presented in FIGURE A- 2. The basis of estimate is presented in TABLE B- 2 and includes the following items:

- Drill holes filled and residual casings cut (see TABLE B- 2, Row #4)
- Inspection and final reclamation of exploration drill hole locations (see TABLE B- 2, Row #7)

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B.3.2 Underground Mine

There will be no Underground Mine associated with the Mary River Exploration Project and therefore this component of RECLAIM was not considered.

B.3.3 Tailings

There will be no Tailings activities associated with the Type B Water Licence and therefore this component of RECLAIM was not considered.

B.3.4 Stockpile

There will be no Stockpiles associated with the Type B Water Licence and therefore this component of RECLAIM was not considered.

B.3.5 Buildings and Equipment Assumptions

B.3.5.1 Mineral Exploration Areas

Small mobile pioneer camps may be established under the authorization of Type “B” Water Licence No. 2BE-MRY1421. These camps will be temporary in nature, mobile, have a limited population (anticipated each camp would not exceed 49 persons) and only be used on a short term basis. Based on these characteristics small mobile pioneer camps have been determined to have a negligible final reclamation cost, as presented in FIGURE A- 4: Type B Buildings and Equipment Reclamation Costs Mineral Exploration Areas.

However, if larger and non-mobile pioneer camps are established under authorization of Type “B” Water Licence No. 2BE-MRY1421an amendment of security estimate cost will be required.

B.3.5.1.1 OBJECTIVE: Specialized Items

The following activities have been included in the Type B Reclamation Cost Estimate as presented in FIGURE A- 3, under the Objective Specialized Items. The basis of estimate is presented in TABLE B- 2 and includes the following items:

- Prepare core for long-term site storage (see TABLE B- 2, Row #6)
- Decommission Salt mixing stations (see TABLE B- 2, Row #8)


B.3.5.2 Remote Sites

FIGURE A- 4 presents the Reclamation Cost associated with Remote Camps. Thus the following Objectives have been considered:

- Reclaim Roads (See Section B.3.5.2.1)
- Specialized Items (See Section B.3.5.2.2)

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B.3.5.2.1 OBJECTIVE: Reclaim Roads

No permanent roads for remote sites have been considered.

B.3.5.2.2 OBJECTIVE: Specialized Items

The decommission of remotes sites have been included in the Type B Reclamation Cost Estimate as specialized items for mineral exploration areas, as presented in FIGURE A- 4. The basis of estimate is presented in TABLE B- 2 and includes the following specialized items:

- Inspection and final reclamation of geotechnical drill holes and test pit location (TABLE B- 2, Row #11)
- Removal of casing/thermistors (TABLE B- 2, Row #12)
- Decommissioning of meteorological stations (3) (TABLE B- 2, Row #13)
- Decommissioning of hydrology stations (4) (TABLE B- 2, Row #14)
- Removal of current meter in Steensby Inlet (TABLE B- 2, Row #15)


B.3.5.3 Mid-Rail Camp

FIGURE A- 5 presents the Reclamation Cost associated with Mid-Rail Camp. Thus the following Objectives have been considered:

- Remove Contaminated Buildings (See Section B.3.5.3.1)
- Remove Non-Contaminated Buildings (See Section B.3.5.3.2)
- Reclaim Roads (See Section B.3.5.3.3)
- Specialized Items (See Section B.3.5.3.4)

B.3.5.3.1 OBJECTIVE: Remove Contaminated Buildings

Mid-Rail Camp have associated a sewage treatment facility and a fuel storage facility. In the RECLAIM model (FIGURE A- 5), the cost associated to these items (i.e. Decontaminate water treatment plant and Decontaminate bulk fuel storage) is set to nil as these items have been accounted for in the Type B Reclamation Cost Estimate under the activity “Demobilize Freight Sealift Steensby Port to Port of Valleyfield - Year 3”. TABLE B- 2 row 45 to 48 present the basis for estimate for this activity.

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B.3.5.3.2 OBJECTIVE: Remove Non-Contaminated Buildings

As per FIGURE A- 5, the decommission of the Mid-Rail camp considers 18 wood structure tents and assumes six (6) man crew six (6) days to completely decommission the camp. It also assumes one (1) working supervisor and five (5) labourers. The basis of estimate is presented in TABLE B- 2 and includes the following items:

- Power plant (TABLE B- 2, Decommission/package gensets and incinerator, Row #19)
- Offices/warehouse/accom (TABLE B- 2 Decommission/Package stand alone accommodation/work tent camp, Row #18)
- Related Infrastructure (TABLE B- 2 Decommission tent camp and related infrastructure (lines, piping, associated buildings), Row #20)

B.3.5.3.3 OBJECTIVE: Reclaim Roads

See section B.3.5.2.1

B.3.5.3.4 OBJECTIVE: Specialized Items

The following activities have been included in the Type B Reclamation Cost Estimate as specialized items for Mid-Rail Camp (FIGURE A- 5). The basis of estimate is presented in TABLE B- 2 and includes the following specialized items:

- Decommission Laydown Areas TABLE B- 2, Row #21)
- General site Cleanup (TABLE B- 2, Row #22)
- Camp Operation (TABLE B- 2, Row #35 to Row #38)
- Fly waste from Mid Rail Camp to Mary River Camp for landfilling (TABLE B- 2 Row #23)

In the event of any expansion to Mid-rail Camp, not including the substitution of equivalent facilities, an amendment of security estimate cost would be required.


B.3.5.4 Steensby Inlet Camp

FIGURE A- 6 presents the Reclamation Cost associated with Steensby Inlet Camp. Thus, the following Objectives have been considered:

- Dispose Mobile Equipment (See Section B.3.5.4.1)
- Remove Contaminated Buildings (See Section B.3.5.4.2)
- Remove Non-Contaminated Buildings (See Section B.3.5.4.3)
- Reclaim Roads (See Section B.3.5.4.4)
- Specialized Items (See Section B.3.5.4.5)

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B.3.5.4.1 OBJECTIVE: Dispose Mobile Equipment

The following items have been included in the Type B Reclamation Cost Estimate for mobile equipment disposal at Steensby Inlet Camp, as presented in FIGURE A- 6. The basis of estimate is presented in TABLE B- 2 and includes the following items:

- Decontaminate and ship off-site (TABLE B- 2, Organize material for shipment and sealift support, Row #32)
- Other (sealift for equipment) (TABLE B- 2, Decommission remaining mobile equipment (4 pieces), Row #31)

B.3.5.4.2 OBJECTIVE: Remove Contaminated Buildings

Steensby Inlet Camp has associated a sewage treatment facility. In the RECLAIM model (FIGURE A- 6.); the cost associated to this item (i.e. Decontaminate water treatment plant) is set to nil as these items have been accounted for in the Type B Reclamation Cost Estimate under the activity “Demobilize Freight Sealift Steensby Port to Port of Valleyfield - Year 3”. TABLE B- 2, Row #45 to Row #48 presents the basis for estimate for this activity.

B.3.5.4.3 OBJECTIVE: Remove Non-Contaminated Buildings

The decommission of the Steensby Inlet camp have been included in the Type B Reclamation Cost Estimate, as presented in FIGURE A- 6. The basis of estimate is presented in TABLE B- 2 and includes the following items:

- Power Plant (TABLE B- 2, Decommission/package gensets and incinerator, Row #26)
- Bulk fuel storage (TABLE B- 2, Decommission fuel storage (200 drums of fuel), Row #29)
- Offices/warehouse/accom (TABLE B- 2, Decommission/Package stand alone accommodation/work tent camp (25 wood structure tents), Row #25)
- Related Infrastructure (TABLE B- 2, Decommission related infrastructure (lines, piping, associated buildings), Row #27)

B.3.5.4.4 OBJECTIVE: Reclaim Roads

See section B.3.5.2.1


B.3.5.4.5 SPECIALIZED ITEMS

The following activities have been included in the Type B Reclamation Cost Estimate as specialized items for Steensby Inlet Camp, as presented in FIGURE A- 6. The basis of estimate is presented TABLE B- 2 and includes the following specialized items:

- Decommission Laydown Areas TABLE B- 2, Row #28)

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- General site Cleanup (TABLE B- 2, Row #30)
- Camp Operation (TABLE B- 2, Row #40 to Row #43)
- Resupply by Helicopter (TABLE B- 2 Row #33)
- Demobilize Freight Sealift Steensby Port to Port of Valleyfield (TABLE B- 2, Row # 45 to Row #48)

In the event of any expansion to Steensby Inlet Camp, not including the substitution of equivalent facilities, an amendment of security estimate cost would be required.

B.3.6 Chemicals

There will be no foreseeable chemical reclamation activities required associated with the Type B Water Licence scope of work and therefore this component of RECLAIM was not considered.

B.3.7 Water Management

B.3.7.1 Objective: Remove Pipelines

The removal of pipelines for exploration areas has been included as part of the water management tab. The basis for estimate (based on AMEC, January 2013) considers four (4) person crew (general labour) during three (3) days. The estimate also considers six (6) hours helicopter time to sling down water lines from Deposit #1. The water lines have been packaged and moved numerous times. Refer to TABLE B- 2, Row #3, for Basis for 2013 Estimate.

B.3.8 Mobilization

Mobilization costs have been accounted for in the Buildings and Equipment tab of RECLAIM. No mobilization costs were included in the Mobilization tab, and therefore this component of RECLAIM was not considered.

B.3.9 Post Closure

Post Closure activities associated with the Type B Water Licence will be conducted in conjunction with the operation of the Mary River Project and during closure as described in the Mary River Interim Mine Closure and Reclamation Plan. Therefore no cost has been considered the Type B Reclamation Cost Estimate.

B.3.10 On Going Water

On-Going Water activities associated with the Type B Water Licence will be conducted in conjunction with the operation of the Mary River Project and during closure as described in the Mary River Interim Mine Closure and Reclamation Plan. Therefore no cost has been considered the Type B Reclamation Cost Estimate.


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TABLE B- 2: TYPE B ESTIMATE COST - BASIS FOR 2013 ESTIMATE⁴

Row #	Reclamation Activities	Labour				Equipment					
		Units	#Units	Unit Rate	Cost	Units	#Units	Unit Rate	Cost	Total cost	Basis for 2013 Estimate
	Mineral Exploration Areas (Dep. 1-3)										
1	Grand Total				\$19,028				\$64,695	\$83,723	
2	Decommission mineral exploration areas - Grand Total				\$19,028				\$64,695	\$83,723	
3	Remove water lines from exploration areas	Person Day	12	\$439	\$5,268	Hours	6	\$1,590	\$9,540	\$14,808	Four (4) person crew - three (3) days. Assume general labour used. Six (6) hours helicopter time to sling down water lines from Deposit #1. The water lines have been packaged and moved numerous times. Estimate based on historical productivity to package and move piping.

⁴ Source and additional supporting can be found in: AMEC, 2013. Baffinland Iron Mines Corporation, Mary River Project, 2013 Abandonment And Reclamation Plan For Advanced Exploration Activities, dated January 2013

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Row #	Reclamation Activities	Labour				Equipment				Total cost	Basis for 2013 Estimate
		Units	#Units	Unit Rate	Cost	Units	#Units	Unit Rate	Cost		
	Mineral Exploration Areas (Dep. 1-3)										
4	Drill holes filled and residual casings cut	Person Day	4	\$439	\$1,756	Hours	18	\$1,590	\$28,620	\$30,376	Geotech hole reclamation helicopter utilization in 2009 = 0.27 hours/hole with holes spread out across 130miles of railway. Assume the same drill hole reclamation productivity for exploration drills although the exploration holes are all located only kilometres from the main camp. There are 18 holes requiring reclamation at Deposit #1. Assume a very conservative (1) hour per hole, (2) man labour crew with helicopter support.
5	Level pads, backfill sumps and grade to natural contours	Person Day	5	\$996	\$4,980	Hours	60	\$217	\$13,020	\$18,000	Assume excavator used to backfill. 18 holes with sumps. Sumps are 3m x 10m x 1.5m = 45m3 each. Assume HEO and 3 hours dozer time/sump to backfill and reclaim each sump.

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Row #	Reclamation Activities	Labour				Equipment					
		Units	#Units	Unit Rate	Cost	Units	#Units	Unit Rate	Cost	Total cost	Basis for 2013 Estimate
	Mineral Exploration Areas (Dep. 1-3)										
6	Prepare core for long-term site storage adjacent to airstrip at Mary River	Person Day	4	\$439	\$1,756	Hours		\$0	\$0	\$1,756	The entire exploration core was moved in to containers for permanent storage in 2010. An allowance has been made to containerize the working inventory of core not containerized under an abandonment scenario.
7	Inspection and final reclamation of exploration drill hole locations	Person Day	2	\$439	\$878	Hours	6.5	\$1,590	\$10,335	\$11,213	Deposit 1 - 45; Deposit 2&3 - 23 holes. Although the majority of the reclamation work was completed in 2010, final inspections were not completed and the estimate reflects the full scope of work as outstanding. Scope includes final inspection by helicopter with general labour support

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Row #	Reclamation Activities	Labour				Equipment					
		Units	#Units	Unit Rate	Cost	Units	#Units	Unit Rate	Cost	Total cost	Basis for 2013 Estimate
	Mineral Exploration Areas (Dep. 1-3)										
8	Decommission salt mixing stations	Person Day	10	\$439	\$4,390	Hours	2	\$1,590	\$3,180	\$7,570	Only one helicopter lift is required. Estimate a conservative 2 hours helicopter time to remove salt station from mineral exploration area. Scope to be completed by helicopter with general labour support.
9	Remote Sites										
10	Grand Total				\$ 15,024				\$ 87,768	\$ 102,792	
11	Inspection and final reclamation of geotechnical drill holes and test pit locations	Person Day	10	\$439	\$4,390	Hours	33	\$1,590	\$52,470	\$56,860	2012 Estimate based on actual labour and helicopter hours to complete exactly half of the holes in 2009. Assume Helicopter hours = 0.27 hours/hole. 10 additional helicopter hours added to the 23 hours required to cover additional mobilization time to the south end of the rail alignment.

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Row #	Reclamation Activities	Labour				Equipment				Total cost	Basis for 2013 Estimate
		Units	#Units	Unit Rate	Cost	Units	#Units	Unit Rate	Cost		
	Mineral Exploration Areas (Dep. 1-3)										
12	Removal of casing/thermistors	Person Day	6	\$439	\$2,634	Hours	16.2	\$1,590	\$25,758	\$28,392	2012 Estimate revised based on 2009 geotech hole actual reclamation productivity and costs. Helicopter hours = 0.27 hours/hole * 60 holes = 16.2 hours. Labour 1.08 Man hrs/hole* 60 = 65 hours = six (6) man days. Scope to be completed by helicopter with general labour support.
13	Decommissioning of meteorological stations (3)	Person Day	6	\$800	\$4,800	Hours	3	\$1,590	\$4,770	\$9,570	Assume two (2) persons /day/station and 1 hour helicopter time support for each. Scope includes demolition and disposal in Landfills. Scope to be completed by helicopter with general labour support.

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Row #	Reclamation Activities	Labour				Equipment					
		Units	#Units	Unit Rate	Cost	Units	#Units	Unit Rate	Cost	Total cost	Basis for 2013 Estimate
	Mineral Exploration Areas (Dep. 1-3)										
14	Decommissioning of hydrology stations (4)	Person Day	4	\$800	\$3,200	Hours	3	\$1,590	\$4,770	\$7,970	Labour budget two (2) persons for two (2) days to remove all the hydrology stations. Helicopter hour budget revised based on detailed analysis of flying distance from MR to meters back to MR. Estimated distance is 227knots. Avg Helicopter speed is 120 k/hr. Total flying time is 227 Kn/120kn/hr = 1.9 hrs, therefore assume 3 hours of helicopter time. Scope to be completed by helicopter with general labour support.
15	Removal of current meter in Steensby Inlet	Person Day			\$0	Hours			\$0	\$0	The battery for the buoy release mechanism on both units no longer has power. The units are no longer retrievable. No cost applied to task in 2012.

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Row #	Reclamation Activities	Labour				Equipment				Total cost	Basis for 2013 Estimate
		Units	#Units	Unit Rate	Cost	Units	#Units	Unit Rate	Cost		
	Mineral Exploration Areas (Dep. 1-3)										
16	Camp and Related Facilities										
17	Decommission Mid - Rail Camp (14 days @ 6 man camp)		76		\$33,364				\$95,400	\$128,764	
18	Decommission/Package stand alone accommodation/work tent camp	Person Day	36	\$439	\$15,804	Hours			\$0	\$15,804	(18 wood structure tents) Assumes 6 man crew 6 days to completely decommission the camp. Assume one (1) working supervisor and five (5) laborers. General labour & equipment rates.
19	Decommission/Package gensets and incinerator	Person Day	4	\$439	\$1,756	Hours			\$0	\$1,756	
20	Decommission tent camp and related infrastructure (lines, piping, associated buildings)	Person Day	8	\$439	\$3,512	Hours			\$0	\$3,512	
21	Decommission lay down areas	Person Day	2	\$439	\$878	Hours			\$0	\$878	
22	General site cleanup	Person Day	6	\$439	\$2,634	Hours			\$0	\$2,634	
23	Fly waste from Mid Rail Camp to Mary River Camp for landfilling	Person Day	20	\$439	\$8,780	Hours	60	\$1,590	\$95,400	\$104,180	

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Row #	Reclamation Activities	Labour				Equipment					
		Units	#Units	Unit Rate	Cost	Units	#Units	Unit Rate	Cost	Total cost	Basis for 2013 Estimate
	Mineral Exploration Areas (Dep. 1-3)										
24	Decommission Steensby Inlet Camp (14 Days @ 6 man camp)		86		\$38,500				\$66,612	\$105,112	
25	Decommission/Package stand alone accommodation/work tent camp (25 wood structure tents)	Person Day	48	\$439	\$21,072	Hours	36	\$66	\$2,376	\$23,448	Assume six (6) man operations for eight (8) days. Equipment costed at 3rd party contractor rate. Operator labour and equipment rates
26	Decommission/package gensets and incinerator	Person Day	4	\$439	\$1,756	Hours	4	\$66	\$264	\$2,020	Assume four (4) persons one (1) day, general labour and equipment cost. Equipment costed at 3rd party contractor rate. General labour and equipment rates.
27	Decommission related infrastructure (lines, piping, associated buildings)	Person Day	6	\$439	\$2,634	Hours	0	\$66	\$0	\$2,634	Assume three (3) persons for two (2) days. Equipment costed at 3rd party contractor rate. General labour and equipment rates.

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Row #	Reclamation Activities	Labour				Equipment				Total cost	Basis for 2013 Estimate
		Units	#Units	Unit Rate	Cost	Units	#Units	Unit Rate	Cost		
	Mineral Exploration Areas (Dep. 1-3)										
28	Decommission lay down areas	Person Day	12	\$439	\$5,268	Hours	36	\$66	\$2,376	\$7,644	Assume four (4) persons for three (3) days to clean up camp to decommission camp lay down area. Sealift lay down area requires no decommissioning - Material ready to ship. Equipment costed at 3rd party contractor rate. General labour and equipment rates.
29	Decommission fuel storage (200 drums of fuel)	Person Day	2	\$439	\$878	Hours	12	\$66	\$792	\$1,670	Only 180 drums remain at the camp. Assume two (2) man days' labour, and equipment to re-strap partial pallets Equipment costed at 3rd party contractor rate. Operator labour and equipment rates.
30	General site cleanup	Person Day	6	\$439	\$2,634	Hours	24	\$66	\$1,584	\$4,218	Assume three (3) persons two (2) days. Equipment costed at 3rd party contractor rate. Operator labour and equipment rates.

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Row #	Reclamation Activities	Labour				Equipment				Total cost	Basis for 2013 Estimate
		Units	#Units	Unit Rate	Cost	Units	#Units	Unit Rate	Cost		
	Mineral Exploration Areas (Dep. 1-3)										
31	Decommission remaining mobile equipment (4 pieces)	Person Day	2	\$812	\$1,624	Hours	6	\$66	\$396	\$2,020	Assume one (1) mechanic and one operator for one (1) day to drain fuel tanks - This is the only requirement for sealift. Equipment costed at 3rd party contractor rate. Operator labour and equipment rates.
32	Organize material for shipment and sealift support	Person Day	6	\$439	\$2,634	Hours	24	\$66	\$1,584	\$4,218	Assume two (2) person for sealift support for three (3) days. Assume Labour and equipment cost. Equipment costed at 3rd party contractor rate. Operator labour and equipment rates.
33	Steensby Port resupply by Helicopter	Person Day	0	\$0	\$0	Hours	36	\$1,590	\$57,240	\$57,240	Hours are for removal of the floating dock and water line (12) + 12 hours/week *2 week demob+sealift support.
34	Camp Operations										
35	MidRail Operate 7 person camp				\$7,204				\$200	\$7,404	

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Row #	Reclamation Activities	Labour				Equipment					
		Units	#Units	Unit Rate	Cost	Units	#Units	Unit Rate	Cost	Total cost	Basis for 2013 Estimate
	Mineral Exploration Areas (Dep. 1-3)										
36	6 person camp operation (Support Labour)	Person Day	9	\$621	\$5,589	Hours			\$0	\$5,589	2012 estimate basis - nine (9) days living at site requires one (1) cook. Last five (5) days are fly in.
37	Camp Operating Overhead	Person Day	0	\$0	\$0	Monthly Lot	1	\$200	\$200	\$200	2012 estimate basis (Monthly costs): - Telephone & communications = one (1) satellite phone (\$100) = \$100 - Office Supplies \$100/month - Total monthly lot cost = \$200
38	Food	Person Day	85	\$19	\$1,615				\$0	\$1,615	2012 estimated contains revised person days based on Mid-Rail reclamation work and camp operations support.
39	Steensby Inlet Camp Operation				\$18,104				\$200	\$18,304	

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Row #	Reclamation Activities	Labour				Equipment					
		Units	#Units	Unit Rate	Cost	Units	#Units	Unit Rate	Cost	Total cost	Basis for 2013 Estimate
	Mineral Exploration Areas (Dep. 1-3)										
40	6 person camp operation - Decommissioning	Person Day	24	\$530	\$12,720	Hours			\$0	\$12,720	Requires one (1) cook and a bear monitor/laborer. Last two days the camp is supported from Mary River by helicopter. See labour rates.
41	2 person camp operation - Sealift	Person Day	6	\$530	\$3,180	Hours			\$0	\$3,180	Estimate for three (3) day sealift. Three (3) Day temporary tent operation for sea lift support - Requires one (1) cook and one (1) bear monitors. Sealift labour budgeted at two (2) since all the material is packaged and the sealift company has the equipment. Additional labour as support only.

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Row #	Reclamation Activities	Labour				Equipment				Total cost	Basis for 2013 Estimate
		Units	#Units	Unit Rate	Cost	Units	#Units	Unit Rate	Cost		
	Mineral Exploration Areas (Dep. 1-3)										
42	Camp Operating Overhead	Person Day	0	\$0	\$0	Monthly Lot	1	\$200	\$200	\$200	Estimate based on (Monthly costs): - Telephone and communications = one (1) satellite phone (\$100) = \$100 - Office Supplies \$100/month - Total monthly lot cost = \$200
43	Food	Person Day	116	\$19	\$2,204				\$0	\$2,204	Estimate based on Total Steensby Man days @ \$19/person day food. See food estimate based on 2010 actual costs.
44	Sealift Materials										
45	Demobilize Freight Sealift Steensby Port to Port of Valleyfield -Year 3				\$0				\$575,726	\$575,726	
46	Shipment, loading and off loading	Person Day	0	\$600	\$0	Hours	0		\$0	\$0	

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Row #	Reclamation Activities	Labour				Equipment					
		Units	#Units	Unit Rate	Cost	Units	#Units	Unit Rate	Cost	Total cost	Basis for 2013 Estimate
	Mineral Exploration Areas (Dep. 1-3)										
47	Vessel Costs Steensby - 1 freight backhaul sealift in Year 3	Person Day		\$0	\$0	Rev Tonne	1965	\$198	\$389,070	\$389,070	Sealift volumes (m3). = 4912 cubes/2.5 = 1966 Revenue Tonnes. Rate is based Sealift vendor quote =\$198/rev Tonne.
48	Land Freight				\$0	Cubes	4912	\$38	\$186,656	\$186,656	Land freight based on quotes provide for hauling Nuna heavy equipment backhaul to Edmonton, Alberta. The exact demob location is not known. Assume a land freight rate at the high end of the scale. 4912 cubes backhauled at \$38/cubes. Land freight rate provided by vendor quote.

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Appendix C - Site Photos of Current Site Conditions

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FIGURE C- 1: STEENSBY CAMP PHOTO #1



FIGURE C- 2: STEENSBY CAMP PHOTO #2

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FIGURE C- 3: STEENSBY CAMP PHOTO #3



FIGURE C- 4: MID-RAIL CAMP PHOTO #1

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FIGURE C- 5: MID-RAIL CAMP PHOTO #2



FIGURE C- 6: MID-RAIL CAMP PHOTO #3

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Appendix D - Locations of Potential Satellite Camps (Property Map, Northern Baffin Island)

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