Baffinland
Iron Mines Corporation

APPENDIX F

REVISED ENVIRONMENTAL MANAGEMENT PLANS

Appendix F1	Abandonment and Reclamation Plan
Appendix F2	Spill Contingency Plan
Appendix F3	Site Water Management Plan and QA/QC Plan
Appendix F4	Wastewater Management Plan
Appendix F5	Comprehensive Environmental Monitoring Plan

APPENDIX F1

ABANDONMENT AND RECLAMATION PLAN

(Pages F1-1 to F1-230)

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2012 ABANDONMENT AND RECLAMATION PLAN FOR ADVANCED EXPLORATION ACTIVITIES

MARCH 2012

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BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2012 ABANDONMENT AND RECLAMATION PLAN

EXECUTIVE SUMMARY

The Mary River Project is an advanced iron ore exploration Project (the Project) located on north Baffin Island, in the Qikiqtani Region of Nunavut. The Project is wholly owned by Canadian mining company Baffinland Iron Mines Corporation (BIM). BIM has released a Definitive Feasibility Study demonstrating the robust potential of full-scale development and has initiated the regulatory approval process for full-scale development. Programs and activities are designed to support exploration and advancing the Project to full-scale development.

This Abandonment and Reclamation Plan was prepared to address closure and reclamation as a condition of the surface lease held by BIM with the Qikiqtani Inuit Association. This Abandonment and Reclamation Plan applies to all infrastructures, equipment and material associated with advanced exploration activities for the Project, including facilities located at: the Mary River Camp, the Mid-Rail Camp, the Steensby Inlet Camp and the Milne Inlet Camp. The Abandonment and Reclamation Plan does not address any future activities contemplated by feasibility studies for full-scale development.

The 2012 Abandonment and Reclamation plan and financial security estimate has been updated in accordance with the requirements of the Qikiqtani Inuit Association (QIA) Abandonment and Reclamation Policy for Inuit Owned Lands and in accordance with the conditions of the Nunavut Water Board water license (License Number: 2BB-MRY1114) and addresses all Project-related activity areas and infrastructure related to the Mary River Project and reflects changes in reclamation requirements caused by operations and reclamation activities since the last version and continued improvement in cost estimation accuracy.

Abandonment Scenarios

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

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

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

As per the QIA Abandonment and Reclamation Policy, the security estimate assumes a hypothetical worst-case bankruptcy scenario where QIA assumes authority over Project components on Inuit Owned Land.

The closure costs assume a hypothetical closure date of October 10, 2012 to reflect the QIA selected date for abandonment.

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

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

Estimated Cost

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

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

Under a worst case abandonment scenario, the reclamation cost is estimated to be $24,760,204 including contingency, reserve and engineering design and execution planning.

Baffinland
Iron Mines Corporation

ᐸᕝᓇᓛᓐ ᓴᕕᒃᓯᓂᕐᓃᑦ ᐅᔭᕋᓐᓂᐊᖅᑏᑦ ᑯᐊᐳᕆᓴᓐ
ᓄᓈᔭᓐᓂ ᐅᔭᕋᒃᓯᐅᖅᑐᖅ

2012 ᓴᒃᑯᑦᑎᓂᖅ ᐊᒻᒪᓗ ᐱᐅᓯᕆᐊᖅᑎᑦᑎᓂᕐᒧᑦ ᐸᕐᓇᒃᓯᒪᔪᑦ

ᓇᐃᑦᑑᓪᓗᓂ ᐅᓂᒃᑲᖅᓯᒪᔪᖅ

ᓄᓈᔭᓐᓂ ᐅᔭᕋᓐᓂᐊᕐᓂᐅᓇᓱᒃᑐᖅ ᓯᕗᓕᐊᒃᓯᒪᕐᔪᐊᖅᐳᖅ ᓴᕕᒃᓴᒥᒃ ᕿᓂᖅᓗᑎᒃ ᑕᒫᓂ ᕿᑭᖅᑖᓗᑉ ᐅᐊᖕᓇᖓᓂ, ᕿᑭᖅᑕᓃᒃᑯ ᓄᓇᖁᑎᖓᓂ ᓄᓇᕘᒥ. ᐅᔭᕋᓐᓂᐊᕐᓂᐅᔪᖅ ᓇᖕᒥᓂᕆᔭᐅᕗᖅ ᐊᑦᖏᖅᓗᓂ ᑲᓇᑕᒥ ᐅᔭᕋᒃᓯᐅᖅᑎᓄᑦ ᑲᒻᐸᓂᐅᔪᑦ ᐹᕝᓇᓛᓐᑯᑦ ᓴᕕᒃᓯᓂᕐᓃᑦ ᐅᔭᕋᓐᓂᐊᖅᑎᑦ. ᐹᕝᓇᓛᓐᑯᑦ ᓴᖅᑭᑦᑎᓯᒪᔫᑦ ᓇᓗᓇᐃᔭᖅᓯᒪᔪᓂᒃ ᑮᓇᐅᔭᓕᐅᕈᓐᓇᕐᒪᖔᑦ ᖃᐅᔨᓴᐅᑎᓂᒃ ᓇᓗᓇᐃᓐᖑᖅᑎᑦᑎᔪᑦ ᐊᔪᖏᑦᑎᐊᕐᓂᕐᒥᖕᓂᒃ ᓴᓇᕙᓪᓕᐊᓇᓱᖕᓂᕐᒥᒃ ᐊᒻᒪᓗ ᐱᒋᐊᖅᑎᑦᑎᓯᒪᓪᓗᑎᒃ ᒪᓕᒐᑎᒍᑦ ᐊᖏᖅᑕᐅᓇᓱᖕᓂᕐᒥᒃ ᐃᓗᐃᑦᑐᓗᓂ ᓴᓇᔭᐅᓇᓱᖕᓂᖕᖓᓂᒃ. ᐱᓕᕆᐊᒃᓴᐅᔪᑦ ᐊᒻᒪᓗ ᓴᓇᔭᒃᓴᐅᔪᑦ ᓴᓇᓯᒪᕗᑦ ᐃᑲᔪᖅᑐᐃᓇᓱᒃᓗᑎᒃ ᓄᓇᒥᒃ ᖃᐅᔨᓴᕐᓂᕐᒥᒃ ᐊᒻᒪᓗ ᓯᕗᓕᐊᒃᑎᓐᓇᓱᒃᓗᒍ ᐅᔭᕋᓐᓂᐊᕐᓂᒃᓴᖅ ᓴᓇᔭᐅᓂᒃᓴᖓ.

ᑖᓐᓇ ᓴᒃᑯᐃᓂᒃᓴᖅ ᐊᒻᒪᓗ ᐱᐅᓯᕆᐊᖅᑎᑦᑎᓂᒃᓴᖅ ᐸᕐᓇᒃᓯᒪᔪᖅ ᐱᓕᕆᐊᕆᔭᐅᓯᒪᕗᖅ ᓴᖅᑭᑕᐅᕐᑯᓪᓗᒋᑦ ᒪᑐᔭᐅᓂᒃᓴᖓᑕ ᐊᒻᒪᓗ ᐱᐅᓯᕆᐊᖅᑎᑕᐅᓂᒃᓴᖓᑕ ᖃᓄᐃᓕᖓᓂᒃᓴᖏᑦ ᑕᒃᑯᐊ ᓄᓇᐅᑉ ᖃᖓᓄᑦ ᐱᔪᓐᓇᐅᑎᖏᑦ ᑎᒍᒥᐊᖅᑕᐅᔪᑦ ᐹᕝᓇᓛᓐᑯᓐᓄᑦ ᑕᒃᑯᓇᓐᖓᑦ ᕿᑭᖅᑖᓂ ᐃᓄᐃᑦ ᑲᑐᔾᔨᖃᑎᒌᖏᓐᓂᑦ. ᑖᓐᓇ ᓴᒃᑯᐃᓂᒃᓴᖅ ᐊᒻᒪᓗ ᐱᐅᓯᕆᐊᖅᑎᑦᑎᓂᒃᓴᖅ ᐸᕐᓇᒃᓯᒪᔪᖅ ᐱᔾᔪᑎᖃᖅᑐᖅ ᐅᕝᑯᓐᖓ ᐃᒡᓗᐃᑦ, ᓴᓇᔾᔪᑏᑦ ᐊᒻᒪᓗ ᐱᕝᑏᑦ ᐊᑐᖅᑕᐅᔪᒃᓴᐃᑦ ᖃᐅᔨᓴᖅᑎᓪᓗᒋᑦ ᓄᓇᒥᒃ ᐅᔭᕋᓐᓂᐊᕐᓂᐅᓇᓱᒃᑐᒧᑦ, ᐃᓚᒋᓪᓗᒋᑦ ᐱᕝᑎᖏᑦ ᐅᑯᓇᓂ: ᓄᓈᔭᓐᓂ, ᕿᑎᐊᓂ ᓄᓇᒃᑯᕈᑎᑯᑖᑉ ᐊᖅᑯᑎᒃᓴᖓᓂ, ᐃᒃᐱᑭᒃᑐᕐᔪᐊᕐᒥ ᐊᒻᒪᓗ ᕿᓐᖑᐊᓂ ᓄᓇᒋᔭᐅᔪᓂ. ᓴᒃᑯᐃᓂᒃᓴᖅ ᐊᒻᒪᓗ ᐱᐅᓯᕆᐊᖅᑎᑦᑎᓂᒃᓴᖅ ᐸᕐᓇᒃᓯᒪᔪᖅ ᐃᓚᖃᖅᑎᓯᒪᓐᖏᓚᖅ ᓯᕗᓂᒃᓴᒥ ᐱᓕᕆᐊᒃᓴᐅᔪᓂᒃ ᓂᕆᐅᒋᔭᐅᔪᓂᒃ ᑮᓇᐅᔭᓕᐅᕈᓐᓇᕐᒪᖔᑦ ᖃᐅᔨᓴᕐᓂᐅᔪᓂᒃ ᐅᔭᕋᓐᓂᐊᕐᓂᐅᓇᓱᒃᑐᑉ ᐃᓗᓕᓕᒫᖓᓂᒃ.

2012ᒥ ᓴᒃᑯᑦᑎᓂᕐᒧᑦ ᐊᒻᒪᓗ ᐱᐅᓯᕆᐊᖅᑎᑦᑎᓂᕐᒧᑦ ᐸᕐᓇᐅᑏᑦ ᐊᒻᒪ ᑮᓇᐅᔭᖅᑐᕐᓂᕆᓂᐊᖅᑕᖓᑕ ᓴᐳᒻᒥᔾᔪᑎᒃᓴᐃᑦ ᒥᒃᓴᐅᓴᒃᓯᒪᓂᖏᑦ ᓄᑖᕆᐊᖅᑕᐅᓯᒪᔪᑦ ᒪᓕᒃᓗᒋᑦ ᐊᑐᓕᕐᑯᔭᐅᓯᒪᔪᑦ ᕿᑭᑦᑕᓃᒃᑯ ᐃᓄᐃᑦ ᑲᑐᔾᔨᖃᑎᒌᖏᓐᓂᒃ ᓴᒃᑯᑦᑎᓂᕐᒧᑦ ᐊᒻᒪ ᐱᐅᓯᕆᐊᖅᑎᑦᑎᓂᕐᒧᑦ ᐊᑐᐊᒐᐃᑦ ᑕᒪᒃᑯᓄᖓ ᐃᓄᐃᑦ ᓄᓇᖁᑎᖏᓐᓄᑦ ᐊᒻᒪ ᒪᓕᒃᓯᒪᓪᓗᑎᒃ ᐊᑐᕐᑯᔭᐅᓯᒪᔪᓂᒃ ᓄᓇᕗᒥ ᐃᒥᓕᕆᔩᒃᑯᑦ ᑎᒥᖁᑎᖓᓐᓄᑦ ᓚᐃᓴᓯ (ᓚᐃᓴᓯ ᓈᓴᐅᑎᖓ: 2BB-MRY1114) ᐊᒻᒪᓗ ᑭᑭᑦᑎᓯᒪᖏᓪᓗᑎᒃ ᐅᔭᕋᓐᓂᐊᕐᓂᐅᓇᓱᒃᑐᑉ ᐃᓗᓕᖏᓐᓂᒃ ᐱᓕᕆᐊᒃᓴᐅᔪᓂᒃ ᐊᒻᒪᓗ ᐃᓪᓗᑦᑎᒃᓴᖏᓐᓄᑦ ᐊᒃᑐᐊᔪᓂᒃ ᐅᔭᕋᓐᓂᐊᕐᓂᐅᓇᓱᒃᑐᒧᑦ ᓄᓈᔭᓐᓂ ᐊᒻᒪ ᑕᒃᑯᓴᐅᓪᓗᑎᒃ ᐊᓯᔾᔨᖅᓯᒪᔪᑦ ᐱᐅᓯᕆᐊᖅᑎᑦᑎᔾᔪᑎᒃᓴᓂᒃ ᓴᖅᑭᑕᐅᔪᓂᒃ ᐱᓕᕆᐊᖅᑎᓪᓗᒋᑦ ᐊᒻᒪᓗ ᐱᐅᓯᕆᐊᖅᑎᑦᑎᓂᒃᓴᐅᔪᑦ ᑭᖑᓪᓕᐅᔪᑦ ᑐᓂᔭᐅᓂᑯᐃ ᐊᒻᒪᓗ ᐱᐅᓯᕆᐊᖅᑎᑦᑎᓂᒃᓴᐅᔪᓂᒃ ᑕᒪᐅᓇ ᑮᓇᐅᔭᖅᑐᕐᓂᕆᓚᔭᖅᑕᖓᓂᒃ ᒥᒃᓴᐅᓴᒃᓯᒪᓂᖓ ᓱᓕᓂᖅᓴᐅᕐᑯᓪᓗᒍ.

<u>ᓴᒃᑯᐃᓂᒃᓴᐃᑦ ᖃᓄᐃᓕᖓᓚᔭᕐᒪᖔᑕ</u>

ᐱᓕᕆᔾᔪᑎᒃᓴᐅᔪᓕᒫᑦ ᑭᓱᑐᐃᓐᓇᐃᑦ ᐊᖅᑭᑦᑕᐅᓯᒪᕗᑦ ᐊᒻᒪᓗ ᓴᓇᔭᐅᓯᒪᓪᓗᑎᒃ ᒥᑭᓐᓂᖅᓴᐅᑎᑦᑎᓇᓱᒃᓗᑎᒃ ᐊᒃᑐᐃᓂᕆᓚᔭᖅᑕᖏᓐᓂᒃ ᐊᒻᒪᓗ ᐊᖅᑭᒃᓯᒪᓚᐅᑲᐃᓐᓇᖅᓗᑎᒃ ᓴᓇᓯᒪᕗᑦ. ᑕᒪᒃᑯᐊ ᖃᓄᐃᓕᖓᓂᒃᓴᖏᑦ ᐊᒻᒪᓗ ᓴᓇᔭᐅᓂᒃᓴᖏᑦ ᐃᓱᒪᒋᔭᐅᓯᒪᔪᑦ ᐃᑲᔪᖅᓯᒪᕗᑦ ᐱᐅᓯᕆᐊᖅᑎᑦᑎᓂᒃᓴᐅᑉ ᐸᕐᓇᒍᑎᖏᓐᓂᒃ ᐊᒻᒪᓗ ᒥᑭᓐᓂᖅᓴᐅᑕᖅᑎᑦᑎᓯᒪᓪᓗᑎᒃ ᓴᓇᔭᐅᓂᒃᓴᖏᑦ ᐃᑲᔫᑕᐅᓇᓱᒃᑐᖅ ᐊᑦᖏᖅᔪᒥᒃ ᓴᒃᑯᑦᑎᓂᕐᒥᒃ ᐊᒻᒪᓗ ᐱᐅᓯᕆᐊᖅᑎᑦᑎᓂᕐᒥᒃ ᐱᓕᕆᕝᕕᐅᔪᓂ.

ᒪᕐᕈᖕᓂᒃ ᓴᒃᑯᑦᑎᓂᕐᒧᑦ ᐱᓕᕆᐊᒃᓴᐅᔪᖕᓂᒃ ᓇᓗᓇᐃᖅᓯᓯᒪᕗᑦ ᑕᕝᕙᓂ ᓴᒃᑯᑦᑎᓂᕐᒧᑦ ᐊᒻᒪ ᐱᐅᓯᕆᐊᖅᑎᑦᑎᓂᕐᒧᑦ ᐸᕐᓇᒃᓯᒪᔪᓂ: ᓄᖅᑲᖓᖅᑎᑐᐃᓐᓇᓚᐅᑲᓪᓗᒍ ᐊᒻᒪᐃᓛᒃ ᑭᖑᓪᓕᖅᐹᒥ ᓴᒃᑯᓪᓗᒍ.

ᓄᖅᑲᖓᖅᑎᑐᐃᓐᓇᓚᐅᑲᖕᓂᖅ ᐱᓕᕆᐊᒃᓴᐅᔪᓂᒃ ᑐᑭᖃᖅᐳᖅ ᓄᖅᑲᖓᑎᑦᑎᓚᐅᑲᖕᓂᖅ ᐅᔭᕋᓐᓂᐊᕐᓂᐅᔫᑉ ᐊᐅᓚᓕᖕᓂᒃ, ᐸᕐᓇᒃᑕᐅᓯᒪᔫᒃᑯᑦ ᐊᒻᒪᓘᓐᓃᑦ ᓴᖅᑭᑲᓪᓚᒃᑐᖃᖅᐸᑦ ᐱᔾᔪᑎᒃᓴᒥ, ᖃᓄᑎᒋᐅᓂᒃᓴᖓ ᐃᒪᓐᓇᐸᓘᓴᖅᑐᖅ ᐱᓇᓱᐊᕈᓯᕐᓄᑦ, ᑕᖅᑭᓄᑦᑐᓐᓃᑦ ᑭᓯᐊᓂᓗ ᐃᓱᒪᓇᖅᐳᖅ ᐊᕐᕋᒍᓕᒫᖅ ᐅᖓᑕᓄᑦᑐᓐᓃᑦ.

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ᑖᒃᑯᐊ ᕿᑭᖅᑕᓂᒃᑯᑦ ᓴᒃᑯᑦᑎᓂᕐᒧᑦ ᐊᒻᒪ ᐱᐅᓯᕆᐊᖅᑎᑦᑎᓂᕐᒧᑦ ᐊᑐᐊᒐᖓᑦ, ᑮᓇᐅᔭᑎᒍᑦ ᓇᓪᓕᐅᒃᑯᒫᑦ ᑕᐅᑐᓐᖑᐊᖅᓯᒪᕗᑦ ᓇᓚᐅᑦᑖᖅᑕᐅᓯᒪᔪᖅ ᐱᐅᖏᓐᓂᖅᐹᑎᒍᑦ ᑮᓇᐅᔭᕐᑯᑎᖃᕈᓐᓃᕈᑎᒃ ᖃᓄᐃᓕᐅᒐᒃᓴᐅᔪᓂᒃ ᓱᕐᓗ ᕿᑭᖅᑕᓂᒃᑯᑦ ᐊᐅᓚᑦᑎᓪᓕᕐᓗᑎᒃ ᐅᔭᕋᖕᓂᐊᕐᓂᐅᔫᑉ ᐱᓕᕆᐊᕆᔭᐅᔪᑦ ᐃᓚᖏᓐᓂᒃ ᐃᓄᐃᑦ ᓄᓇᕐᑯᑎᖏᓐᓂᑦᑐᓂᒃ.

ᒪᑐᔭᐅᓂᒃᓴᖓᑕ ᐊᑭᓕᔭᖅᑕᖓ ᐊᖅᑭᖕᒍᐊᖅᓯᒪᕗᖅ ᒥᒃᓴᐅᓴᒃᓯᒪᓪᓗᓂ ᒪᑐᔭᐅᓂᒃᓴᖓᑕ ᐅᓪᓗᖓ ᑕᕝᕙᓂ ᐅᑐᐱᕆ 10, 2012ᒥ ᐊᔾᔨᒃᓴᕆᓪᓗᓂᐅᒃ ᕿᑭᖅᑕᓂᒃᑯᑦ ᓂᕈᐊᖅᓯᒪᔭᖓ ᐅᓪᓗᖅ ᓴᒃᑯᑦᑎᓂᒃᓴᖅ.

ᑭᖑᓪᓕᖅᐹᒥ ᒪᑐᔭᐅᓂᒃᓴᖓ ᐊᒻᒪᓗ ᐱᐅᓯᕆᐊᖅᑕᐅᓂᒃᓴᖓ ᐃᓗᓕᖅᑲᕐᓂᐊᖅᑐᖅ ᐊᐅᓪᓚᖅᑎᑦᑎᓂᕐᒥᒃ ᓴᓇᓕᕆᔾᔪᑎᓂᒃ ᐊᒻᒪᓗ ᐱᕐᑯᑎᓂᒃ ᐅᔭᕋᖕᓂᐊᕐᕕᐅᓇᓱᒃᑐᒥᑦ ᐊᒻᒪᓘᓐᓃᑦ ᓴᐅᓯᕝᕕᖕᒧᐊᖅᑕᐅᓗᑎᒃ ᓄᓘᔭᖕᓂ (ᑕᒪᒃᑯᓄᖓ ᐊᑦᑕᕐᓇᖏᑦᑐᓄᑦ, ᐆᑦᑕᕐᓇᖏᑦᑐᓄᑦ, ᐃᑭᔭᖏᑦᑐᓄᑦ), ᐊᒻᒪᓗ ᓄᓇ ᑕᒪᓐᓇ ᐊᔾᔨᓕᖅᑎᓪᓗᒍ ᖃᐃᒃᑲᒃᓴᕐᓗᒍ ᐃᓕᖅᑯᓯᑐᖃᖓᓄᑦ ᐊᔾᔨᐅᓕᖅᑎᓪᓗᒍ ᐊᒻᒪᓗ ᑯᒪᓛᖑᓂᑯᐃᑦ ᑰᓕᖅᑎᓪᓗᒋᑦ. ᐱᕐᑯᑏᓪᓗ ᓴᓇᔾᔪᑏᓪᓗ ᕿᑎᐊᓂ ᓄᓇᒃᑰᕈᑎᑯᑖᑉ ᐊᖅᑯᑎᖓᑕ ᐊᐅᓪᓚᖅᑎᑕᐅᑦᑕᕐᓗᑎᒃ ᐃᒃᐱᑭᑦᑐᕐᔪᐊᕐᒧᑦ, ᕿᓐᖑᐊᓄᓪᓗᓐᓃᑦ. ᓴᓇᔾᔪᑏᑦ ᐊᒻᒪᓗ ᐱᕐᑯᑏᑦ ᐲᔭᖅᑕᐅᓗᑎᒃ ᐊᖅᑯᑎᒃᑯᒃ ᐅᓯᔭᐅᕙᓪᓗᑎᒃ ᓄᓘᔭᖕᓂᑦ ᕿᓐᖑᐊᓄᑦ. ᐊᖅᑭᒃᓱᐃᓂᐊᖅᑐᑦ ᐅᒥᐊᕐᔪᐊᓂᒃ ᑲᓐᑐᓛᒃᑎᐅᔪᓂᒃ ᐅᓯᔭᐅᔪᓐᓇᕐᑯᓪᓗᒋᑦ ᐱᕐᑯᑏᑦ ᐊᒻᒪ ᓴᓇᔾᔪᑏᑦ ᑕᕝᕙᓐᖓᑦ ᕿᓐᖑᐊᓂᑦ ᐊᒻᒪᓗ ᐃᒃᐱᑭᑦᑐᕐᔪᐊᕐᒥ ᐊᐅᓪᓚᖅᑎᑕᐅᕙᓪᓗᑎᒃ.

ᐱᐅᓯᕆᐊᖅᑎᑦᑎᓂᕐᒧᑦ ᐸᕐᓇᒃᑕᐅᓯᒪᔪᑦ ᐊᖅᑭᒃᓱᖅᑕᐅᓯᒪᕗᑦ ᐊᑐᑦᑎᐊᕐᓗᒋᑦ ᐊᑑᑎᒃᓴᖏᓐᓄᑦ ᑕᒪᒃᑯᐊ ᐱᓇᓱᐊᕝᕕᐅᔪᓐᓇᖅᑐᑦ ᐊᑲᐅᔪᒃᑯᑦ ᐃᓱᒪᒋᓗᒋᑦ ᐊᔾᔨᐅᖏᓐᓂᖏᓐᓄᑦ ᐊᒃᓱᕉᑎᒃᓴᐅᔪᑦ ᐃᖅᑲᓇᐃᔭᕐᓗᓂ ᐅᑭᐅᖅᑕᖅᑐᒥ ᑕᒪᓐᓇ ᐱᐅᓯᕆᐊᖅᑎᑦᑎᓂᐅᓇᓱᒃᑐᖅ ᐱᔭᕆᖅᑕᐅᕐᑯᓪᓗᒍ ᑭᖑᓕᕆᒃᑎᐊᖅᑐᒥᒃ ᐊᒻᒪᓗ ᐊᑐᕐᓗᒋᑦ ᑖᒃᑯᐊ ᓴᒃᑯᐃᓂᕐᒧᑦ ᐊᒻᒪᓗ ᐱᐅᓯᕆᐊᖅᑎᑦᑎᓂᕐᒧᑦ ᐸᒃᓇᒃᑕᐅᓯᒪᔪᑦ ᐊᒻᒪᓗ ᒪᓕᒐᓕᐊᖑᓯᒪᔪᑦ ᖃᓄᐃᓕᖓᓂᖏᑦ ᐊᖅᑭᒃᓱᖅᑕᐅᓯᒪᓪᓗᑎᒃ ᐃᓄᖕᓂᑦ, ᒐᕙᒪᑐᖃᒃᑯᓐᓂᑦ ᐊᒻᒪᓗ ᒐᕙᒪᖏᑦ ᐅᑭᐅᖅᑕᖅᑐᐃᑉ ᐊᕕᒃᑐᖅᓯᒪᐅᖅᑐᓂ. ᑕᒪᒃᑯᐊ ᐱᓕᕆᐊᒃᓴᐅᔪᓕᒫᑦ ᐸᕐᓇᒃᓯᒪᕗᑦ ᐱᔭᕆᖅᑕᐅᓯᒪᔪᒪᓪᓗᑎᒃ ᐊᕐᕋᒍᖓᓐᓂ ᐱᖓᔪᐊᓐᓂ (3) ᐊᒻᒪᓗ ᐊᕐᕋᒍᖅᓐᓂ ᑎᓴᒪᖓᓐᓂ (4) ᑲᔪᓯᑏᓐᓇᕐᓗᒍ ᓄᓇ ᐊᖅᑭᒃᓱᕐᓗᒍ ᐊᒻᒪᓗ ᒪᑐᔭᐅᓯᒪᓕᕈᓂ ᖃᐅᔨᓴᖅᑕᐅᒃᑲᓐᓂᕐᓗᓂ ᓄᓇ ᑕᒪᒃᑯᐊ ᐱᓕᕆᐊᖑᓗᑎᒃ ᐊᕐᕋᒍᖓᓄ 6. ᑭᓱᑐᐃᓐᓇᕐᒥᒃ ᕿᒪᐃᔾᔮᖏᑦᑐᑦ ᐅᔭᕋᖕᓂᐊᕐᓂᐅᓚᐅᖅᑐᒧᑦ ᖃᐅᔨᓴᖅᑕᐅᖃᑦᑕᕆᐊᖃᖅᑐᓂᒃ ᐊᒻᒪᓘᓐᓃᑦ ᐊᐅᓚᑕᐅᓗᓂᕆᔭᖅᑕᖏᑦ ᐊᑯᓚᐃᑦᑐᒃᑯᑦ.

<u>ᓇᓚᐅᖅᑖᖅᑕᐅᓯᒪᔪᖅ ᐊᑭᓕᔭᖅᑕᖓ</u>

ᑲᕋᓴᐅᔭᒃᑯᑦ ᑐᖅᑯᖅᑐᐃᕕᖕᒥᒃ ᐊᑭᓕᔭᖅᑕᖏᑦ ᑎᑎᕋᖅᓯᒪᓪᓗᑎᒃ ᐊᑐᖅᓗᑎᒃ ᕿᑭᖅᑕᓂᒃᑯᑦ ᐃᓄᐃᑦ ᑲᑐᔾᔨᖃᑎᒌᑦ ᓴᒃᑯᑦᑎᓂᕐᒧᑦ ᐊᒻᒪᓗ ᐱᐅᓯᕆᐊᖅᑎᑦᑎᓂᕐᒧᑦ ᐊᑐᐊᒐᖏᓐᓂ ᓴᖅᑮᓯᒪᕗᑦ ᓇᓗᓇᐃᔭᖅᓯᒪᑦᑎᐊᖅᓗᑎᒃ ᐱᓕᕆᐊᒃᓴᐅᔪᑦ ᑎᑎᕋᖅᓯᒪᓪᓗᑎᒃ ᑭᑭᑕᖅᑲᖅᓯᒪᖏᓪᓗᑎᒃ ᐅᔭᕋᖕᓂᐊᕐᓂᕐᒧᑦ ᐱᓕᕆᕝᕕᐅᓂᑯᐃᑦ ᐊᒻᒪᓗ ᐃᓪᓗᐃᑦ ᐊᑐᖅᑕᐅᓂᑯᐃᑦ ᐅᔭᕋᖕᓂᐊᕐᓱᒃᑎᓪᓗᒋᑦ. ᐊᑭᓕᔭᖅᑕᖏᑦ ᑎᑎᕋᖅᑕᐅᓯᒪᓂᖏᑦ ᐃᓗᓕᖅᑲᐅᖅᐳᑦ ᓇᓗᓇᐃᔭᖅᓯᒪᓪᓗᑎᒃ ᐊᑭᓕᔭᖅᑕᖏᑦ ᒥᒃᓴᐅᓴᒃᓯᒪᔪᑦ ᐊᑐᓂ ᐃᒻᒪᑳ 220-ᑎᐅᔪᑦ ᐊᑐᓂ ᐱᓕᕆᐊᒃᓴᐅᔪᑦ ᓇᓗᓇᐃᖅᓯᒪᔪᑦ ᑕᕝᕙᓂ ᓴᒃᑯᑦᑎᓂᕐᒧᑦ ᐊᒻᒪᓗ ᐱᐅᓯᕆᐊᖅᑎᑦᑎᓂᕐᒧᑦ ᐸᒃᓇᒃᓯᒪᔪᓂ ᐃᑲᔪᖅᑐᖅᑕᐅᓪᓗᑎᒃ ᓇᓗᓇᐃᔭᖅᓯᒪᑦᑎᐊᖅᑐᓂᒃ ᐊᑐᕋᔭᖅᑕᖏᑦ ᐱᕐᑯᑏᑦ ᐊᒻᒪᓗ ᐅᖅᓱᒃᓴᐃᑦ ᑲᔅᓯᑐᕋᔅᒪᖓᑕ ᐊᒻᒪᓗ ᓇᓗᓇᐃᔭᖅᓯᒪᑦᑎᐊᖅᑐᓂᒃ ᒥᒃᓴᐅᓴᒃᓯᒪᔪᓂᒃ ᐊᒃᑐᐊᓗᐊᖏᑦᑐᓂᒃ ᑖᒃᑯᓄᖓ ᓱᕐᓗ ᕐᑯᓕᒥᒍᓛᑦ ᐊᒻᒪᓗ ᖃᖓᑕᓲᑦ ᐊᑐᖅᑕᐅᒐᔭᖅᑐᑦ, ᓄᓇᓕᐅᔪᒥ ᐊᐅᓚᑦᑎᓂᖅ, ᐅᒥᐊᕐᔪᐊᓕᕆᓂᖅ, ᑲᒪᒋᔭᐅᓂᖓ, ᓴᓇᔭᐅᓂᖏᑦ ᐊᒻᒪᓗ ᒪᑐᓯᒪᓕᖅᑎᓪᓗᒍ ᐅᔾᔨᖅᓴᕐᓂᐅᒐᔭᖅᑐᑦ. ᖃᓄᑎᒥᐅᒐᔭᕐᓂᖏᑦ ᓇᓗᓇᐃᔭᖅᓯᒪᑦᑎᐊᖅᑐᑦ ᑐᖅᓚᔪᓂᒃ ᐊᖅᑭᒃᓱᐃᓯᒪᕗᑦ ᑕᒪᒃᑯᓄᖓ ᑲᓐᑐᓛᒃᑎᐅᒐᔭᖅᑐᓄᑦ ᐱᓕᕆᐊᒃᓴᐅᒪᔪᖅᑐᓂᒃ ᐲᔭᐃᓗᑎᒃ, ᓱᕐᑎᓇᓗᑎᒃ ᐊᒻᒪᓗ ᓈᑕᐅᑲᑕᖅᓂᖏᑦ ᐱᕐᑯᑏᑦ ᐊᑦᑕᕐᓇᖏᑦᑐᒃᑯᑦ ᐊᑐᖅᑕᐅᕐᑯᔭᐅᓯᒪᔪᑦ ᐱᐅᓯᕆᐊᖅᑎᑦᑎᓂᕐᒧᑦ ᐸᕐᓇᒃᑕᐅᓯᒪᔪᑦ ᑐᕐᓚᓇᔭᖅᒥᑦ.

ᐊᑭᑐᓂᕆᒐᔭᖅᑕᖓ ᒥᒃᓴᐅᓴᒃᓯᒪᔪᖅ ᐊᑐᖅᓯᓯᒪᕗᑦ ᕿᑭᖅᑕᓂᒃᑯᑦ ᐃᓄᐃᑦ ᑲᑐᔾᔨᖃᑎᒌᖏᑦᑕ ᓴᒃᑯᑦᑎᓂᕐᒧᑦ ᐊᒻᒪᓗ ᐱᐅᓯᕆᐊᖅᑎᑦᑎᓂᕐᒧᑦ ᐊᑐᐊᒐᖏᓐᓂᒃ ᒪᓕᒃᑕᐅᑦᑎᐊᕆᐊᖅᑎᓯᒪᔪᑦ ᐊᒻᒪᓗ ᑎᑎᕋᖅᑕᐅᓯᒪᔪᑦ ᓂᕆᐅᒋᔭᐅᔪᑦ.

ᐊᑲᐅᖏᓐᓂᖅᐹᒃᑯᑦ ᐊᑐᖅᓯᔭᓇᐊᖅᕈᑎᒃ ᓴᒃᑯᑦᑎᓇᓱᒃᑎᓪᓗᒋᑦ, ᐱᐅᓯᕆᐊᖅᑎᑦᑎᔾᔪᑎᒃᓴᐅᑉ ᐊᑭᓕᔭᖅᑕᖓ ᒥᒃᓴᐅᓴᒃᓯᒪᕗᖅ $24,760,204-ᓂᒃ ᐃᓚᒥᓪᓗᓂᐅᒃ ᓇᓗᓇᕐᓂᖓ ᐊᒻᒪᓗ ᓴᓇᔭᐅᓂᒃᓴᖓᑕ ᖃᓄᐃᓕᖓᓂᒃᓴᖓᑦ ᐊᒻᒪ ᖃᓄᐃᓕᐅᕈᑎᒃᓴᐃᑦ ᐸᕐᓇᒥᐊᓖᑦ.

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BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2012 ABANDONMENT AND RECLAMATION PLAN

Key Updates to the A&R Plan

Section #	Page #	Summary of Change
2.3	—	Updated Figures 2.2 and 2.5 to include locations of spill kits
2.3	—	Updated Figure 2.3 to include locations of spill kits and 5 million L Fuel Tank
2.4	5	Updated document to include current regulatory authorizations and permits
4.3	16-18	Updated document for current camp and related facility infrastructure
4.4	19	Updated equipment list
4.7	20	Updated site fuel inventory and storage facilities
4.10	21	Updated waste management for closure of tanks-a-lot system
6.0	24	Included the progressive reclamation activities performed during 2011
7.1	27	Inserted Section 7.1 including procedures for initial site assessments during temporary closure
8.3 & 8.4	31	Inserted additional details regarding current humidity cell testing for the environmental impact assessment process
8.8	37	Updated fuel storage closure description
8.14	39-40	Updated to reflect closure schedule changes in Appendix H
10.0 & Appendix G	44	Updated closure cost estimate
11.0 & Appendix G	45	Updated financial security estimate
13.0	47	Updated QIA Concordance Table
Appendix H	—	Updated closure schedule

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2012 ABANDONMENT AND RECLAMATION PLAN

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BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2012 ABANDONMENT AND RECLAMATION PLAN

SECTION 1.0 - INTRODUCTION

The Mary River Project is an advanced iron ore exploration project (the Project) located on the north end of Baffin Island, in the Qikiqtani Region of Nunavut (Figure 1.1). The Project is wholly owned by the Canadian mining company Baffinland Iron Mines Corporation (BIM). BIM has released a Definitive Feasibility Study demonstrating the robust potential of full-scale development and has initiated the regulatory approval process for full-scale development. Programs and activities are designed to support exploration and advancing the Project to full-scale development.

This Abandonment and Reclamation Plan (A&R Plan) was prepared to address closure and reclamation in accordance with best corporate governance practices and as a condition of the surface lease held by BIM with the Qikiqtani Inuit Association (QIA). This A&R Plan applies to all infrastructure, equipment and material associated with advanced exploration activities for the Project, including facilities located at: the Mary River Camp, the Mid-Rail Camp, the Steensby Inlet Camp and the Milne Inlet Camp. The A&R Plan does not address any future activities contemplated by feasibility studies for full-scale development.

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

1.1 APPLICABLE GUIDELINES AND POLICIES

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

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

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

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

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

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

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

SECTION 2.0 - PROJECT INFORMATION

2.1 PROPONENT NAME AND ADDRESS

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

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

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

2.2 PROJECT LOCATION

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

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

2.3 SITE PLANS

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

2.4 LAND TENURE AND REQUIRED PERMIT, LICENCES AND AUTHORIZATIONS

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

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

BIM is the sole owner of the three mining leases at Mary River, the locations of which are shown on Figure 2.1. Lease 2484 covers the iron ore deposit referred to as Deposit No. 1; Lease 2485 covers Deposit Nos. 2, 3, and 3B; and Lease 2483 covers Deposit No. 4. The leases cover a total area of 1,593 ha and are renewable beyond the current 21-year period expiring on August 27, 2013.

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

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

- NTI Exploration Agreement - signed on May 1, 2008, identifies an NTI Exploration Area that includes an initial area of 16,695 ha in the vicinity of Deposit No. 1 and the original Lease 2484, and an additional area of 1,425 ha covering a portion of Deposit No. 5. The NTI Exploration Agreement will become a Joint Venture between BIM and NTI, only if and when a feasibility study is completed on the NTI Exploration Area;
- McOuat Lake Claim Block - 18 mineral claims registered with AANDC covering lands covering and surrounding both Deposit Nos. 4 and 5;
- Glacier Lakes Claim Block - 20 mineral claims surrounding Deposit No. 6;
- Turner River Claim Block - 9 mineral claims covering Deposit No. 7;
- North Cockburn River Claim Block - 8 mineral claims covering Deposit No. 8; and
- North Rowley River Claim Block - 4 mineral claims covering Deposit No. 9.

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

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

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

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

Type of Authorization	Permit No.	Authorizing Agency	Period Valid
Water License (Type B)	2BB-MRY1114	NWB	April 5, 2011 to April 5, 2014
Letter of Advice (July 25, 2007)	File No. NU-06-0084	DFO	N/A
Authorization under S.35(2) of Fisheries Act and four amendments.	File No NU-06-0084	DFO	No expiry; reporting required through 2011
Approvals under S.5(1) of Navigable Waters Protection Act	8200-09-10415 8200-09-10425 8200-09-10414 8200-09-10424	Transport Canada	June 22, 2009 to June 30, 2015
Inuit Land Use Lease and Quarry Concession (Inuit Owned Lands)	Q07L3C001	QIA	October 31, 2010[1]
Inuit Land Use Lease and Quarry Concession (Inuit Owned Lands)	Q10C3001	QIA	December 31, 2012
Land Use Permit (Crown Land)	N2007F0004	AANDC	July 4, 2010 to July 4, 2011
Land Use Permit (Crown Land)	N2006C0036	AANDC	April 3, 2010 to April 3, 2011
Quarry Permit (Crown Land)	2010QP0088	AANDC	May 12, 2010 to May 12, 2011

NOTES:

1. Inuit Land Use Lease Q07L3C001 expired and new lease agreement (Q10C3001) implemented

2.5 BRIEF OVERVIEW OF PAST PROJECT ACTIVITIES

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

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

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

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

In March 2008, BIM initiated the Nunavut Impact Review Board (NIRB) regulatory review of the full-scale development of the Mary River Project by the submission of the Development Proposal for the Mary River Project and associated applications. On February 11, 2009, the Minister of Indian and Northern Affairs Canada referred the Project to a Part 5 review under Article 12 of the NLCA. This referral was made in response to the recommendations of the NIRB Screening Report. On November 16, 2009, BIM received the Final Environmental Impact Statement Guidelines: NIRB File No. O8MN053. BIM acknowledged receipt of the Guidelines in a letter dated December 14, 2009 and submitted the Draft Environmental Impact Statement in January 2011. The Environmental Impact Statement is currently under review.

SECTION 3.0 - CURRENT PROJECT SITE CONDITIONS

3.1 GENERAL

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

3.2 TOPOGRAPHY

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

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

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

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

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

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

3.3 SURFICIAL GEOLOGY

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

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

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

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

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

Mary River

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

Milne Inlet Tote Road

The Milne Inlet Tote Road alignment generally follows a glacial valley oriented northwest-southeast to Mary River. The surficial deposits along this alignment include till veneer or blankets on the higher elevations with

some drumlins and moraines. Glaciofluvial outwash sediments (gravel and sand) forming braided floodplains, terraces and fans or stratified glacial drift (gravel and sand) are typically found in the valley floors. Limited bedrock exposure is present along the Milne Inlet Tote Road.

Milne Inlet

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

Proposed Railway

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

Steensby Inlet

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

3.4 SOILS

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

Project area soils were classified based on the Canadian System of Soil Classification (Soil Classification Working Group, 1998), and included primarily Cryosols (permanently frozen soils or soils with permafrost within 100-200 cm of soil surface) and Brunisols (soils with weak B horizon development). In general, Project-area soils all showed weakly developed horizons, with a general lack of organic material accumulation. Fine to medium-textured soil materials were generally cryoturbated, and patterned ground phenomena related to permafrost and freeze-thaw cycling were also commonly observed throughout the Project area. Soils throughout the Project area were generally poor in nutrients. This factor, in combination

with the depressed level of pedogenic development in the area and thinness of soils where present, generally make local soils unsuitable for stockpiling for revegetation purposes (Veldhuis, 2010).

3.5 PERMAFROST

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

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

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

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

3.6 SURFACE WATER

North Baffin Island is one of the coldest regions in Canada. The region experiences a mean annual temperature of approximately -15°C, with mean daily temperatures below -20°C from November through April, and above 0°C during June through August. The long period of sub-zero temperatures results in a very short runoff season, typically occurring from June through September. Runoff may extend to late October in systems with large lake components. The frigid temperatures also result in very low precipitation values for North Baffin Island, from the combined effect of the low moisture carrying capacity of cold air and the scarcity of liquid water available for evaporation. According to Natural Resources Canada the region is

classified as semi-arid with mean annual total precipitation ranging from 200 to 400 mm, although regional climate stations suggest that the true value is near the lower end of this range. The amount of water available for runoff is further reduced by the processes of evaporation, transpiration and sublimation. The frigid climate and subsequent lack of significant vegetative cover combine to minimize the volume of water evaporated and transpired to very low levels. Conversely sublimation, which is the process by which solid water changes phase directly to water vapour, frequently occurs during the winter months, largely as a result of blowing snow transport.

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

3.7 GROUNDWATER

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

As described in Section 3.5, of this A&R Plan, the Project is located in a zone of continuous permafrost, which extends to a projected 610 m below ground surface at Deposit No. 1. As such, no groundwater flow is anticipated to exist below the active layer. This conclusion is supported by observations at other mine sites in northern latitudes, including the Polaris[1] and Nanisivik underground mines, as well as the EKATI™ mine where open pits in moderately faulted granite did not generate groundwater until the pits extended below the limit of permafrost at around 350 to 400 m depth below ground surface (Kevin Jones, pers. comm.).

3.8 ARCHAEOLOGY

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

3.9 LOCAL LAND USES

Considerable effort has been expended by BIM to engage local communities and knowledge holders, through dialogue and participation from 2004 through 2011. Inuit knowledge studies were also undertaken in the five closest North Baffin communities over the period of 2006 through 2008, including interviews with 45 elders in three communities, and workshops in land use, caribou and marine mammals in five communities. This information, combined with feedback from stakeholder engagement activities and from operating in the area, has provided BIM with a good understanding of local land uses. BIM's understanding of local land uses, considering its Inuit knowledge study and existing information sources, is documented in a land use report that was appended to its Environmental Impact Statement submitted to the Nunavut Impact Review Board in early 2011.

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

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

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

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

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

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

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

SECTION 4.0 - PROJECT DESCRIPTION

4.1 GENERAL

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

4.2 BULK SAMPLE PIT AND STOCKPILES

Bulk Sample Pit

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

Stockpiles

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

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

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

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

Geochemistry

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

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

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

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

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

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

Mary River Crusher Site Ore Stockpiles and Milne Inlet Ore Stockpile - The crusher site for the bulk sampling program located near the Mary River Camp contains a pad and several small stock piles containing a total estimated tonnage of 31,900 t comprising non-representative (Mn-rich) and residual ore. The crusher site is located between (and within a hundred metres or less) of Sheardown Lake and a small tributary stream draining to Sheardown Lake. The soils at this location are very permeable with little in the way of surface runoff and no observable seeps. The Milne Inlet ore pad storage facility contains residual ore

are left over from the load-out of the bulk ore sample in 2008. The pad (on the order of 250m x 250m) sits immediately adjacent to Milne Inlet and is comprised of non-representative Mn-rich ore with residual ore grade material on top.

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

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

4.3 CAMPS AND RELATED FACILITIES

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

Mary River Camp

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

- 26 Weatherhaven tents;
- 11 Norseman tents;
- 3 Weatherhaven washroom/dry tents;
- 1 Weatherhaven firehall tent;
- 1 Weatherhaven kitchen (old) tent;
- 3 Weatherhaven workshop tents;
- 60 sea containers used for storage;
- 3 main camp generators;
- 2 incinerators;
- 1 sewage treatment plant;
- 3 sewage ponds;
- 13 fuel bladder tanks;
- fuel drums in secondary containment, including:
  - Jet A, 77 barrels;
  - Gasoline, 15 barrels; and
- mobile equipment along with laydown areas.

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

Milne Inlet Camp

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

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

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

Mid Rail Camp

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

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

The camp has been unoccupied since 2008.

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

Steensby Inlet Camp

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

- 16 wooden structure accommodation/working tents (for the kitchen and dining, living quarters, washrooms, laundry and water storage, generator);
- 2 main generators;
- incinerator;
- fuel drums in secondary containment, including:
  - Jet A, 1,800 barrels;
  - P-50 Diesel, 750 barrels;
- mobile equipment (2 pieces) along with a laydown area; and
- a 12-trailer camp delivered to Steensby Inlet in 2008 to replace or supplement the tent camp for use in the future field programs remains in storage at the laydown area.

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

Other Sites

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

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

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

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

4.4 EQUIPMENT

A portion of the equipment and materials used for the Bulk Sample Program and no longer required was backhauled to southern Canada in 2008. More equipment was included in the 2009 and 2010 backhaul.

A list of equipment on-site as of October 1, 2011 includes the following:

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

4.5 ROADS AND AIRSTRIPS

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

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

In 2009 and 2010 the road was maintained and included significant culvert and road upgrades to stabilize and reduce future maintenance requirements. The Milne Inlet Tote road has generally been stable since it was upgraded in 2008 as part of the Bulk Sample Program. A few very small unstable areas were identified in a 2009 geotechnical assessment and repairs executed under the direction of a professional engineer. Otherwise, the road had been stable since its construction. Beyond the areas identified the year after construction (2009), the tote road embankment has been stable along the entire alignment for over 2 years.

Subject to future permitting, it is planned that the road will continue to be used to provide all-season access throughout construction of the mine. Figure 2.1 shows the existing road alignment and the borrow sources identified for quarrying. Other smaller access roads are located at the Project Site, such as roads to: Deposit No. 1, Mary River landfill, Mary River salt station, Mary River explosives storage area, borrow areas and Mary River and Milne Inlet general camp roads. All of these roads have been stable since they were originally constructed.

4.6 BORROW SOURCES

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

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

4.7 FUEL STORAGE

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

Bulk fuel storage facilities include:

- A 5 million litre capacity bulk fuel storage facility at Milne Inlet, consisting of a single 5 million litre diesel tank in a lined containment facility, as well as a lined refuelling station and resupply pipeline. As of December 2011, it contains no fuel.
- An 8.25 million litre capacity bulk fuel storage facility at Milne Inlet, consisting of seventy three 114,000 L fuel bladders in a lined containment facility, as well as a lined re-fuelling station and resupply pipeline. As of October 1, 2011, contains approximately 3.07 million litres of P-50 and 0.9 million litres of Jet A.
- Bulk fuel bladder tank farm near the Mary River Camp with a capacity of 1.5 million litres, consisting of eleven 114,000 L bladders in lined containment. A double walled 75,000 litre tank in lined containment also located near the Mary River Camp. Contains approximately 0.88 million litres of P-50 and 10.9 thousand litres of Jet A.

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

In addition, barrelled fuel is stored in lined containment situated at Milne Inlet, Mary, River, Steensby Inlet and Mid Rail Camps. The total number of 200 L drums currently stored on-site as of October 1, 2011 is 2,698 drums; 2,550 barrels at Steensby Inlet Camp, 56 at Milne Inlet Camp, 92 at Mary River Camp and none at Mid Rail Camp

4.8 CHEMICALS

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

- oils, greases, lubricants, and drilling additives for mining and heavy equipment;
- calcium chloride flakes for drill water for exploration drilling;

- lead acid batteries and cleaning supplies at camp sites; and
- waste oils generated from mobile equipment and generators.

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

Hazardous and non-landfillable wastes generated from current and historic activities at Mary River were backhauled by sealift to licensed disposal and recycling facilities in southern Canada. The only hazardous material remaining at the site is the annual working inventory that is disposed of in southern Canada on an annual basis.

4.9 EXPLOSIVES

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

4.10 WASTE AND WATER MANAGEMENT

The water supply for each camp is described below.

- The water supply and treatment system (heated intake, ultra-violet disinfection) at Mary River Camp supplies water to the combined population at the camp site.
- Water supply at the Milne Inlet Camp site consists of holding tanks that are filled by truck from a nearby lake and treated using an ultra-violet (UV) disinfection system.
- Drinking water at the Mid Rail Camp comes from the adjacent unnamed lake, stored in holding tanks and treated using an ultra-violet (UV) light disinfection system.
- Drinking water at Steensby Inlet Camp, is sourced from the unnamed in-land freshwater lake and treated using an ultra-violet (UV) disinfection system.

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

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

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

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

Solid wastes are stored and disposed of as described below.

- Camp incinerators exist at each of the Mary River, Milne Inlet, Steensby Inlet and Mid Rail Camps for disposal of inert combustible non-hazardous solid wastes. Ash is collected in containers to help prevent wind distribution.
- Inert non-combustible wastes such as scrap metal, plastic, rubber, metals, wood that is not burned and ashes from the incinerator are collected and stored in preparation for disposal in the landfill at Mary River or hauled to Milne Inlet for disposal off site.
- Wastes generated at the refuge stations are stored in containers or ore sacks and backhauled to Mary River for disposal by incineration or eventual landfilling, as appropriate or to Milne Inlet for shipment off site.
- Waste oil and other hazardous and recyclable wastes are collected, temporarily stored on-site in a lined containment area and backhauled to Milne Inlet or Steensby Inlet in preparation for shipment off site. Used batteries are collected in sealed containers and transported off site. Empty fuel drums are crushed and packaged and temporarily stored on-site in preparation for transport off-site by sealift where they will be recycled.
- A landfill and associated access road at Mary River as approved by the Nunavut Water Board was constructed and began operations during 2010.

SECTION 5.0 - ABANDONMENT AND RECLAMATION PLAN OBJECTIVES AND CRITERIA

5.1 OBJECTIVES

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

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

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

5.2 CRITERIA

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

SECTION 6.0 - PROGRESSIVE RECLAMATION

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

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

Mary River Project Area	2008	2009	2010	2011
Steensby Inlet Camp	No activities	• Over 6000 barrels of fuel stockpiled at Steensby Inlet in secondary containment and all contractor equipment was demobilized from Steensby Inlet in 2009. The secondary containment liners have all been reclaimed are packaged ready for disposal in the south on the next scheduled Steensby Inlet sealift. Only a small quantity of barreled fuel remains in one stand alone secondary containment area supporting operation of the 40 person camp	No activities	No activities
Milne Inlet Tote Road	No activities	• All historical waste from the 1960's and waste from local North Baffin Community use (snowmobiles, barrels, etc..) were removed from the Milne Inlet to Mary River Corridor by Helicopter. • The Milne Inlet Tote Road was upgraded in a number of areas identified by a geotechnical assessment to ensure the long term physical stability of the road.	• Monitoring of the Milne Inlet Tote Road did not identify any areas requiring additional upgrades. All sections of the road were stable through 2010.	No activities
Exploration, Geotechnical and Other Areas	• Litter and debris were removed and test pits, channels and in-ground sumps were backfilled as part of the 2008 geotechnical drilling program. All geotechnical non-drill sites have been reclaimed. • Upon completion of the bulk sample extraction in 2008, the pit on Deposit No. 1 was contoured and sloped to ensure the benches were free draining, long term slope stability and safety of the area. The Pit and benches were assessed as stable in 2008 as per the Nunavut WCSS Mine Inspectors Report. Berms restricting vehicle access to the edge of the mountain constructed in 2008 and two seasons of freshet have found zero accumulation of water in the pit. Reclamation of the bulk sample has been completed.	• Reclamation of 50% of the geotechnical drill hole sites along the proposed rail alignment and at the port site have been completed. All future geotechnical and exploration drill hole sites will be reclaimed in the year they are drilled as part of BIM's standard operating practice. • The wind power generation study data collection tower installation located approximately 10 km North East of Mary River has been removed and reclamation of the area is complete. • The historical 1960's exploration camp located half way up the south side of Deposit No. 1 was dismantled and all material removed. • Pond Inlet was used as a primary staging area for the Project between 2004 and 2008. All residual equipment and material was either landfilled or removed from Pond Inlet by sealift. All hazardous material was packaged and shipped south and disposed of in an approved facility. All reclamation work in Pond Inlet has been completed.	• Partial reclamation of historical exploration drill sites on Deposit Nos. 1 and 3 was completed in 2010.	• Reclamation of all geotechnical drill hole sites drilled in 2011.

SECTION 7.0 - TEMPORARY SUSPENSION

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

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

7.1 PROCEDURES FOR INITIAL SITE ASSESSMENTS

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

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

7.2 BULK SAMPLE PIT

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

7.3 STOCKPILES

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

7.4 CAMP AND RELATED FACILITIES

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

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

7.5 EQUIPMENT

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

7.6 ROADS AND AIRSTRIPS

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

7.7 BORROW AREAS

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

7.8 FUEL STORAGE

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

7.9 CHEMICALS

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

7.10 EXPLOSIVES

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

7.11 WATER SUPPLY AND WASTE MANAGEMENT

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

Combustible non-hazardous inert wastes will be incinerated and any non-combustible inert wastes will be stored securely at their respective remote locations to be eventually landfilled.

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

7.12 MONITORING

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

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

SECTION 8.0 - FINAL CLOSURE AND EXECUTION PLAN

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

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

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

8.1 CLOSURE ASSUMPTIONS

At closure, the following assumptions have been made:

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

8.2 PROJECT SITE ABANDONMENT

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

- drain, isolate and secure camp water systems;
- drain, isolate and secure camp sewage treatment plant, lines and lagoons;
- drain, isolate and secure all local fuel storage supply systems;

- isolate and secure all bulk fuel storage systems such that tanks and bladders are isolated and contained within secondary containment;
- secure all barrelled fuel in secondary containment;
- secure all hazardous waste in secondary containment; and
- isolate and safely secure all mechanical and electrical elements.

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

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

8.3 BULK SAMPLE PIT

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

Geochemical test results as described in Section 0 have indicated a low risk for release of acidity or metals in response to oxidative weathering of the material in the ore left exposed in the bench walls of the pit. The walls and floor of the pit will be visually inspected as part of the monitoring program to identify any indications of acid generation or metal leaching, and any seepage that collects in or downstream of the bulk sample pit will be sampled and tested for general chemistry and metals during the site visits (discussed below). No metal leaching or acid generation is expected to occur. Currently humidity cell testing is being carried out as part of the environmental impact assessment process to confirm this expectation.

8.4 STOCKPILES

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

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

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

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

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

8.5 CAMP AND RELATED FACILITIES

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

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

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

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

equipment will be sealifted from site. All other BIM owned assets from the Mary River Project will be placed in the Mary River landfill, or shipped off site as hazardous material.

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

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

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

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

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

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

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

8.6 ROADS AND AIRSTRIPS

The Mary River and Milne Inlet airstrips will remain to allow for future access to the site for exploration, site inspections and other monitoring activities. Temporary airstrip lighting and cable system at Mary River will be removed and landfilled; the airstrip lighting ditches will be backfilled and graded to existing natural contours. The open ditches around the airstrip at Milne Inlet will be backfilled and graded to existing natural contours. The airstrips are at or slightly below grade in some areas and follow the natural contour of the existing land. Sections of the airstrip above surrounding grade will be graded with cross fall to promote good drainage. Sections below grade and already part of the natural contours will be left in their current stater

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

Milne Inlet Tote Road and General Site Roads - Water Crossings

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

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

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

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

Milne Inlet Tote Road and General Site Roads - Road Embankment

Based on experience since 2008, the Milne Inlet Tote Road and other site roads are in a stable condition. At the start of the reclamation measures all roads will be evaluated to identify areas of instability or significant erosion. All areas of road in stable condition will be left intact. Any areas of instability will be managed with the methods described below.

- In areas where the side slope of the road embankment is showing signs of instability the side slope will be regraded to 3H:1V. The regraded slope will be track walked perpendicular to the road alignment to trap fines in the track marks and dissipate energy from runoff. In areas of high erosion potential where

slope and grade controls are inadequate, erosion control dissipation will be achieved by strategic use of cobbles and boulders to dissipate energy.

- In areas of significant embankment construction the height of the road embankment may need to be reduced to construct a resulting berm with 3H:1V side slopes. This can be achieved by reducing the elevation of the road crest by removing road embankment. The resulting road alignment should be maintained to allow access for all-terrain vehicles.
- In areas where the road has been cut into a side hill and the cut area is showing signs of instability the cut slope will be stabilized by placing material against the cut to construct a resulting side slope of 3H:1V. The regraded slope will be track walked perpendicular to the road alignment to trap fines in the track marks and dissipate energy from runoff. If additional erosion protection measures are required cobbles and boulders may be strategically placed to dissipate energy.
- In areas where the road has long vertical grades measures will be required to prevent runoff from running down the slope on the road surface. The runoff will need to be directed either to an erosion-controlled ditch or into the natural environment. This can be achieved by grading the surface of the road to direct the water in the required direction or by installing water bars. Water bars can be constructed by; excavating a shallow ditch, constructing a small berm or a combination of the two across the road surface.

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

Deposit No. 1 Road

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

- Provide erosion control measures on the upper approximately 600 m of the road. The rest of the road has already had erosion control measures installed. Measures would include non-woven geotextile and/or coarse cobble fill lining of the ditches.
- In areas where the road has been cut into a side hill and the cut area is showing signs of instability the cut slope will be stabilized by placing material against the cut to construct a resulting side slope of 3H:1V. The regraded slope will be track walked perpendicular to the road alignment to trap fines in the track marks and dissipate energy from runoff. If additional erosion protection measures are required cobbles and boulders may be strategically placed to dissipate energy.
- Each of the culverts installed along the road will be removed by excavating the road embankment to the underlying coarse base and then removing the culvert. The side slopes along the road alignment will be graded to a final slope of 3H:1V. The culvert will be flattened and disposed of in the Mary River landfill.
- Measures will be required to prevent runoff from running along the road surface. Diversion of the runoff to the ditch or into the natural environment will be achieved by either grading the surface of the road or by installing water bars. Water bars can be constructed by; excavating a shallow ditch, constructing a small berm or a combination of the two across the road surface. Water bars may also be applied instead of or in conjunction with cross grading.

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

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

8.7 BORROW AND QUARRY AREAS

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

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

- develop generally accepted criteria for physical reclamation of sites where material was excavated for road construction;
- identify the primary factors that must be addressed during planning and implementing the borrow pit reclamation program;
- visit and document conditions at sites along the route; and
- develop a scope of work for final reclamation.

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

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

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

8.8 FUEL STORAGE

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

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

The 5 million litre bulk fuel facility located at Milne Inlet will have the fuel tank and pipeline dismantled for backhaul or salvage. The liner will be left in place and the bulk fuel facility will be regraded to match natural topography. Concrete structures will be broken up and concrete/rebar will be covered with overburden to a depth of at least 0.2 m. Soil sampling for hydrocarbons is not required because no fuel has been stored in the 5 million litre tank.

8.9 CHEMICALS

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

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

8.10 EXPLOSIVES

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

8.11 WASTE AND WATER MANAGEMENT

An access road and landfill, as approved by the Nunavut Water Board, were constructed and began operation at Mary River for the disposal of bulky inert wastes. No organic or hazardous wastes will be disposed of in the landfill. Operation of the landfill at closure will follow the current operations manual (Appendix F). Final closure of the landfill will include placing a soil cover over the entire surface of the landfill. In order to achieve permafrost encapsulation in the landfill site, the final cover will be thicker than the

active layer. Based on an active layer approximately 1 m thick, the final cover will be 1.5 m thick. The cover will be compacted and contoured to shed precipitation from the surface. It is anticipated that this cover will comprise 1.5 m of sand and gravel material. As part of operations, a perimeter berm will be constructed surrounding the landfill site. This will redirect surface runoff originating upstream of the landfill site. Monitoring of the landfill will be completed following closure activities. Inspections will review the condition of the cover, perimeter berms and overall condition of the site.

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

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

8.12 CONTAMINATED SOILS

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

Soil materials found to exceed acceptable criteria would be segregated and managed in-situ on site in a land farm at Milne Inlet. Engineering studies will be required to establish remediation criteria, land farm design and civil works plan and operations manual. The Nunavut Water Board (NWB) has approved properly designed landfarms as an acceptable method for remediating hydrocarbon impacted soils. During the follow-up and monitoring period, soil contaminated with petroleum products will be managed in the land farm. This land farm will be decommissioned near the end of the monitoring period.

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

8.13 ENGINEERING DESIGN AND EXECUTION PLANNING

In the event of bankruptcy and abandonment only limited additional site characterization will be needed to develop the engineering specifications and drawings required for contracting. Generally, figures and supporting documentation appended to this plan show; the extent of required reclamation and sufficient

detail for quantities, survey as-builts of stockpiles, sampling and analysis of waste rock and seepage water, sufficient detail for structures to determine requirement for demolition and removal.

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

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

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

8.14 TIMING AND SCHEDULE OF FINAL CLOSURE

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

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

The A&R Plan assumes a bankruptcy date of October 10, 2012.

Year 1 (2012)

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

Year 2 (2013)

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

- Freight demobilization sealift from Milne Inlet to the Port of Valleyfield;
- Bulk fuel demobilization sealift from Milne Inlet to the Port of Valleyfield; and
- Environmental monitoring.

Year 3 (2014)

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

Year 4 (2015)

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

Year 5 (2016)

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

Year 6 (2017)

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

SECTION 9.0 - POST RECLAMATION MONITORING

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

The monitoring plan will continue through closure and post-closure periods. Under the assumption of a closure date in October of 2012 (Year 1), all Project-related facilities except for a few items and the operation of the landfarm at Milne Inlet are scheduled to be completed in Year 3 (2014). As a result, post closure monitoring will conclude no later than 2017 (Year 6) for all Project-related facilities.

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

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

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

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

SECTION 10.0 - ESTIMATED CLOSURE COSTS

The 2012 A&R Plan and financial security estimate have been updated for 2012 based upon the requirements of the QIA Abandonment and Reclamation Policy for Inuit Owned Lands and reflects changes in reclamation requirements caused by operations and reclamation activities since the last version, and continued improvement in cost estimation accuracy.

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

A spreadsheet costing model (Appendix G-3) as per QIA A&R Policy format for presentation has been developed with a comprehensive work item list that addresses all Project-related activity areas and infrastructure related to the Mary River Project. The cost model is made up of a detailed direct cost estimate for each of approximately 220 individual tasks described in the A&R Plan supported by detailed material and fuel balances and detailed estimation of indirect costs such as helicopter and fixed wing aircraft support, camp operations, sealifts, supervision, engineering and post-closure environmental monitoring. The cost model outlining the detailed line item breakdown of each cost to complete reclamation of each component is presented in Appendix G-3. Unit rates and quantities for all the main work items for the abandonment and reclamation work have been developed. The unit rates and quantities used for the reclamation cost estimate are substantiated with supporting scope detail and back-up information (Appendix A, Appendix G-3 and G-4 and individual task references). The 2012 basis for the cost estimate of each Individual task contained within Appendix G-3 shall be used in conjunction with the corresponding sub-section contained in Section 8 of the this report and all its referenced drawings to form the complete scope of work and cost estimate. In instances where uncertainty in how quantities and unit cost values are calculated, the limitations in obtaining costing accuracy have been clearly outlined in the cost model per QIA A&R Policy format and a contingency to account for unknowns and limitations has been included for each of the approximately 220 individual reclamation tasks.

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

The abandonment and reclamation cost estimate is based on the current state of the Mary River Project on October 1, 2011 and assumes a hypothetical closure date of October 10, 2012 under a hypothetical bankruptcy scenario.

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

Unless otherwise noted in the individual task "Basis for 2012 Estimate" section of the cost estimate tables in Appendix G-3, the following general assumptions and references have been made in developing the cost estimate:

- The general execution plan for the 2012 A&R Plan is as follows:
    - all contractor owned equipment & material is demobilized;
    - a very small select quantity of high value, ready to ship BIM equipment deemed salvageable is demobilized;
    - BIM owned bulk and barrelled fuel is demobilized;
    - the working inventories of hazardous material are demobilized and disposed in approved facilities in the south;
    - clean wood is burned;
    - all other infrastructure, equipment, material, supplies & non-hazardous waste is directed to the Mary River landfill in the most efficient manner possible;
        - a significant portion of the tasks fall in this category and the scope of work reflects the simplicity of the tasks of demolishing and moving bulk volumes of material to the landfill;
    - where access to the Mary River Landfill is not possible, all remaining material is demobilized by sealift;
    - general technical specifications have been provided for numerous tasks that require a more technical scope;
    - a small number of tasks require additional site assessment and/or design engineering to determine reclamation criteria and the full scope of the reclamation activity. These tasks have estimates for this work; and
    - a more detailed summary of the general execution strategy, including schedule is summarized in Section 8.14 and further in Appendix H.
- Reclamation is carried out by a fully independent third party contractor that provides the best overall value to the QIA. This includes the cost of mobilization and demobilization of the contractor.
- The current site contractor 2011 contract rates for labour and equipment have been applied for heavy equipment operation and general labour. The labour and equipment rates are summarized in the 2012 A&R Plan Schedule of Labour & Equipment Rates included in Appendix G-3. All supporting quotes and contracts for labour, heavy equipment and charter fixed and rotary wing aircraft can be found in Appendix G-4 (in subdirectory Labour equipment charter rates).
- Mobilization and demobilization sealifts have been quoted based on the A&R Plan requirements.
- Both direct and indirect costs have been included.
- Direct and indirect cost estimates are based upon surveyed volumes, detailed material and sealift volume balances, actual site condition productivities and consumption rates experienced by BIM during 2008-2011 operations and progressive reclamation activities; existing contracts and quotations. The majority of 3rd party contractor work consists of simple demolition, civil works and transportation of material. It is assumed that any 3rd party contractor selected shall be capable of achieving these productivities with Project management support.

- A fully detailed six year A&R Plan fuel balance has been completed to determine annual fuel requirements to execute the entire A&R Plan. The balance identifies the quantity of fuel that must be purchased and mobilized in Year 2 by airlift and by sealift and a complete cost for all fuel was developed. The fuel balance and supporting vendor quotes can be found in Appendix G-4 (in subdirectory Camp Ops).
- Numerous sealifts are required for mobilization and demobilization to support execution of the A&R plan. A summary of the sealifts is detailed in Section 8.13 of this report. Unit cost from vendor quotes for sealifts at Steensby and Milne Inlets are provided in Appendix G-4 (in subdirectory Sealift).
- Detailed sealift and material balances have been developed based on current site inventories for the purpose of determined volumes required for estimating decommissioning and freight costs and for estimating volumes and defining their final reclamation destination including burning, landfill and sealift. The detailed balances form part of Appendix G-3. All of the annual sealift manifests used in the development of the balance can be found in Appendix G-4 (in subdirectory Sealift).
- The 2011 - Hazardous and Non-Hazardous Material Requiring Disposal Inventory worksheet was updated to reflect current waste inventory at site and is used in support of the detailed sealift and material balances. This inventory is provided as part of Appendix G-4 and was generated by a physical inventory count in September 2011.
- Under a hypothetical bankruptcy scenario, BIM corporate costs during abandonment, reclamation and post-closure monitoring are excluded from the cost estimate.
- Contingency has been applied to the cost estimate on a detailed task-by-task basis.
- Salvage value has not been included in this estimate. A salvage list of BIM owned equipment has been provided to support the scope for the purpose of estimating demobilization costs and is included in Appendix G-3.
- All significant work is assumed to be completed in Year 3 and Year 4 with land farming and post-closure environmental monitoring taking place in Years 5 and 6.

Details of the cost estimate are appended as Appendix G-3. A comparison to the cost estimate for the 2011 A&R Plan is also included in Appendix G-2 with a detailed variance analysis. Under a worst case abandonment scenario, the reclamation cost is estimated to be $24,760,204.

SECTION 11.0 - ESTIMATED FINANCIAL SECURITY

A financial security estimate has been included based upon the requirements of the QIA Abandonment and Reclamation Policy for Inuit Owned Lands (QIA A&R Policy). As per the QIA A&R Policy, the security estimate assumes a worst case scenario where QIA assumes authority over the entire Project) and reclamation is completed by a third party contractor. Under these worst case conditions, the security amount is estimated to be $24,760,204 as summarized in Table 11.1 and in Appendix G-1.

SECTION 12.0 - CONSULTATION WITH CLARC AND APPLICATION OF INUIT QAUJIMAJATUQANGIT

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

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

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

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

BIM was not successful in completing consultations with the QIA CLARC committees prior to the submission of the 2012 A&R Plan. Reference documentation is available in Appendix G-4 (in subdirectory CLARC Consultation).

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

SECTION 13.0 - CONCORDANCE TABLE

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

Item	QIA Policy	BIM Response
1	Have all reports and plans including addendums and responses been submitted?	Yes. The 2012 A&R plan and cost estimate, along with all addendums and supporting documentation has been submitted.
2	Are the submitted reports and plans executable standalone documents with adequate rationale and detail?	The majority of tasks are stand alone with adequate scope or criteria. There are a number of tasks that require additional assessment and engineering to develop a detailed scope suitable for achieving the task reclamation criteria. BIM can provide stand alone documentats upon request by QIA, if required. Allowances have been made for engineering design and execution planning through the life of the reclamation Project.
3	Do all reports and plans contain appropriate referencing (document name, author, section, and page number) to all supporting information?	Yes. The plan and cost estimate contains a large number of supporting documentation. References to all supporting documents have been made
4	Do the reports and plans demonstrate a firm understanding, of QIA's *Guiding Principles on Reclamation* and provide rationale on how these principles have been satisfied?	Yes. BIM has incorporated the guiding principles on reclamation in the development of the 2012 A&R Plan
5	Has Inuit Qaujimajatuqangit and consultation with Community Land and Resources Committee(s) been applied?	Yes. BIM has completed an IQ study and has incorporated it in to the development of the A&R Plan. As described in Section 12 of the A&R plan, several attempts by BIM to schedule local CLARC meetings with QIA could not be completed.
6	Are all the components that are considered in the abandonment and reclamation plan listed?	Yes. Components considered in the A&R Plan have been included in the Table of Contents and are listed as either a report, table, figure or appendix.
7	Does each component of the project have an abandonment and reclamation objective(s) and criteria?	Yes. A set of general objectives for the reclamation of the Mary River Project have been developed. Reclamation criteria have been established for each reclamation task or like group of tasks.
8	Has an A&R plan been provided with a financial security estimate?	Yes. A financial security estimate has been included as part of the plan.
9	Have Table 1, 2, 3 and 4 of Appendix B been used in completing the financial security estimate?	Yes. BIM has developed a spreadsheet cost model that is materially the same as or contains the required information to satisfy the QIA Policy.
10	Has evidence been provided to support the Policy assumptions for all reports and plans?	Yes. The evidence required to support the cost estimate and plans has been provided.

SECTION 14.0 - REFERENCES

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16. Knight Piésold Ltd. 2010a. Feasibility Design for Deposit No. 1 Open Pit. Ref. No. NB102-00181/8-4, Rev. 0., dated April 30, 2010.
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SECTION 15.0 - CERTIFICATION

This report was approved for distribution by the undersigned.

Approved by: 

Steve Sibbick, M.Sc. P.Geo
Principal Geochemist

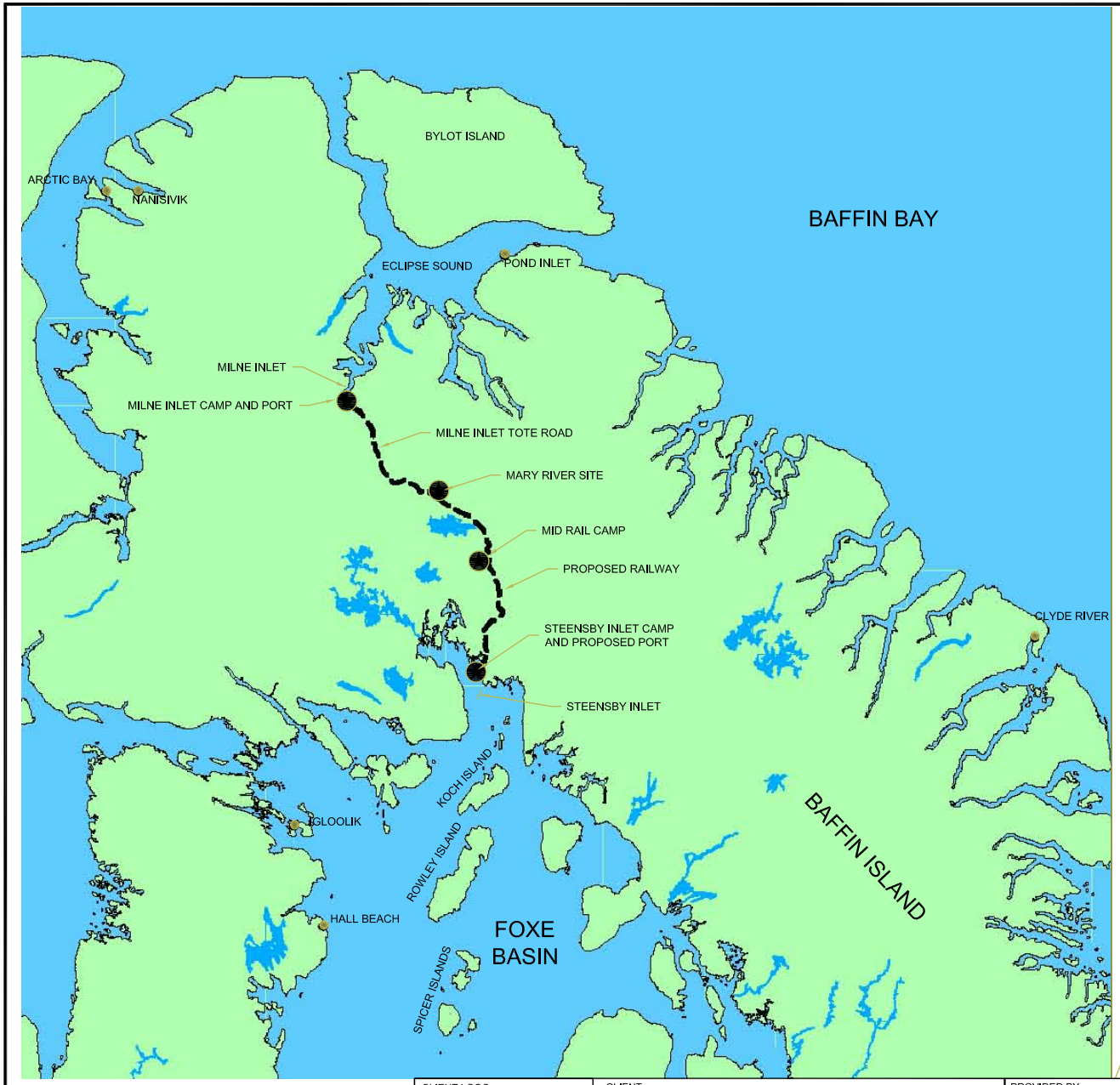
Table

Table 11.1
Baffinland Iron Mines Corporation
Mary River Project

2012 Abandonement and Reclamation Plan

				A&R Plan Annual Expenditures					Mar-12	
	Labor	Equipment	Mar 2012 Total	2012	2013	2014	2015	>2015	Contingency($)	Contingency (%)
Project Site Abandonment	$ 37,206	$ 11,900	$ 49,106	$ 49,106	$ -	$ -	$ -	$ -	$ 4,146	8%
Bulk Sample Pit	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	0%
Mineral Exploration Areas (Deposits No. 1, 2, 3)	$ 19,028	$ 64,695	$ 83,723	$ -	$ -	$ 83,723	$ -	$ -	$ 8,582	10%
Remote Sites	$ 15,024	$ 87,768	$ 102,792	$ -	$ -	$ 102,792	$ -	$ -	$ 9,402	9%
Stockpiles	$ 113,295	$ 156,112	$ 269,407	$ -	$ -	$ 269,407	$ -	$ -	$ 26,941	10%
Camps & Related Facilities	$ 987,436	$ 815,188	$ 1,802,624	$ -	$ 560,568	$ 1,238,652	$ 3,404	$ -	$ 260,334	14%
Roads & Airstrips	$ 2,043,465	$ 1,126,200	$ 3,169,665	$ -	$ 356,384	$ 604,091	$ 746,870	$ 1,462,320	$ 380,360	12%
Borrow Quarry Areas	$ 197,428	$ 284,158	$ 481,586	$ -	$ 55,000	$ 426,586	$ -	$ -	$ 104,873	22%
Fuel Storage Facilities (Bulk and Drums)	$ 513,254	$ 216,632	$ 729,886	$ -	$ 491,238	$ 238,648	$ -	$ -	$ 161,227	22%
Explosives	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	0%
Waste Management	$ 137,217	$ 422,076	$ 559,293	$ -	$ 203,142	$ 356,151	$ -	$ -	$ 108,265	19%
Hydrocarbon Impacted Soil	$ 543,000	$ 190,080	$ 733,080	$ -	$ 75,000	$ 658,080	$ -	$ -	$ 116,412	16%
General Site Area	$ 1,561,800	$ -	$ 1,561,800	$ -	$ 480,600	$ 600,600	$ 480,600	$ -	$ 156,180	10%
Sealift	$ 35,088	$ 4,322,624	$ 4,357,712	$ -	$ 3,086,004	$ 575,726	$ 629,916	$ 66,066	$ 447,581	10%
Camp Operation	$ 1,402,545	$ 5,627,091	$ 7,029,636	$ -	$ 4,252,211	$ 1,536,308	$ 1,241,117	$ -	$ 866,142	12%
Environmental Monitoring	$ 241,000	$ 64,500	$ 305,500	$ -	$ 21,100	$ 21,100	$ 21,100	$ 242,200	$ 73,950	24%
Subtotal - cash costs excluding Contingency	**$ 7,846,786**	**$ 13,389,024**	**$ 21,235,810**	**$ 49,106**	**$ 9,581,247**	**$ 6,711,864**	**$ 3,123,007**	**$ 1,770,586**		
Contingency			$ 2,724,394	$ -	$ -	$ -	$ -	$ -	$ 2,724,394	13%
Engineering Design & Execution Planning			$ 800,000	$ -	$ -	$ -	$ -	$ -		
Total Cash Cost Including Contingency & Engineering Design & Execution Planning	**$ 7,846,786**	**$ 13,389,024**	**$ 24,760,204**	**$ 49,106**	**$ 9,581,247**	**$ 6,711,864**	**$ 3,123,007**	**$ 1,770,586**		

Figures



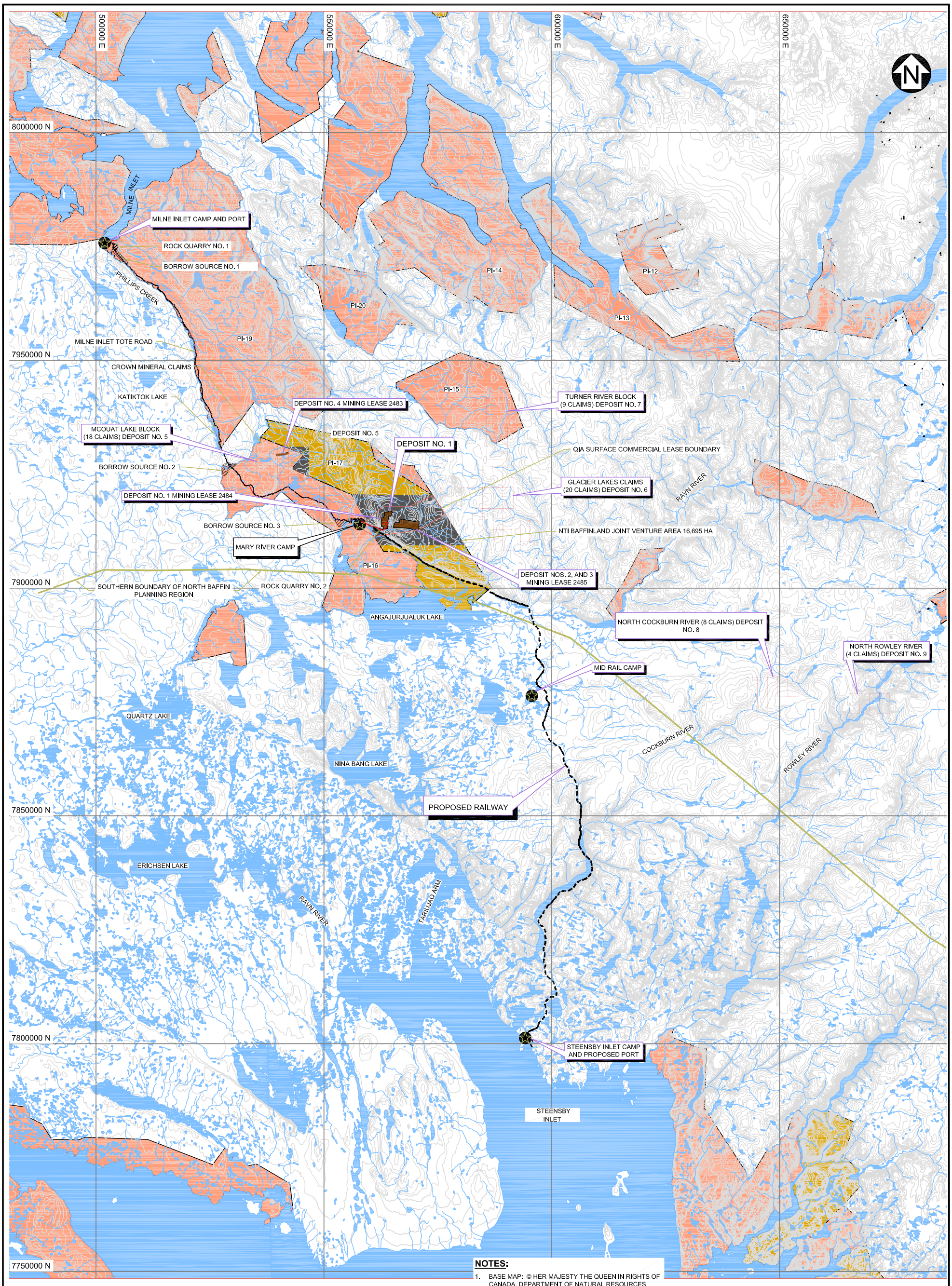
LEGEND:

- WATER
- CAMP LOCATION
- COMMUNITY

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

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

\\MIS-FS1\ProjectF$\EM\Projects\2011\TC111520 Baffinland A&R Plan\4_Updates\Figures\CAD\FIG 1.1 (A01_r0).dwg — Layout1 — Oct. 26, 2011 12:45:05 PM EDT by cronkhite



LEGEND:

- WATER
- INUIT OWNED LAND - SURFACE ONLY EXCLUDING MINERALS
- INUIT OWNED LAND - SURFACE AND SUBSURFACE INCLUDING MINERALS
- MINERAL LEASE BOUNDARY
- CROWN LAND
- EXISTING BORROW AREA (IOL COMMERCIAL LEASE)
- EXISTING ROCK QUARRY (IOL COMMERCIAL LEASE)
- NTI EXPLORATION AREA
- CROWN MINERAL CLAIMS
- MILNE INLET TOTE ROAD
- PROPOSED RAIL ALIGNMENT
- RIVER/STREAM/DRAINAGE
- CONTOUR

NOTES:

1. BASE MAP: © HER MAJESTY THE QUEEN IN RIGHTS OF CANADA, DEPARTMENT OF NATURAL RESOURCES (2004). ALL RIGHTS RESERVED.
2. COORDINATE GRID IS SHOWN IN UTM (NAD83) ZONE 17 AND IS IN METRES.
3. CONTOURS ARE IN METRES. CONTOUR INTERVAL VARIES.
4. PROPOSED RAIL ALIGNMENT PROVIDED BY CANARAIL CONSULTANTS INC.

SCALE 8 4 0 10 20 30 40 km

CLIENT LOGO: Baffinland Iron Mines Corporation	CLIENT: BAFFINLAND IRON MINES CORPORATION	PROVIDED BY: BIM	PROJECT: MARY RIVER PROJECT	PROJECT NO: TC111520
		CHK'D BY: ST		REV. NO.: A
AMEC Environment & Infrastructure, 160 Traders Boulevard East, Mississauga, Ontario, Canada L4Z 3K7		DATE: NOV. 2011	TITLE: LOCATION OF PROJECT ACTIVITIES NB102-181/29	FIGURE No. 2.1
		SCALE: AS SHOWN		

\\MIS-FS1\ProjectF$\EM\Projects\2011\TC111520 Baffinland A&R Plan\4_Updates\Figures\CAD\FIG 2.1 (B03_r0).dwg – Layout1 – Oct. 27, 2011 9:48am – svetlana.cronkhite

7917494 N
7916250 N
7915000 N
7913750 N
7912500 N
558750 E
560000 E
561250 E
562500 E
563750 E
565000 E

DEPOSIT NO, 1 MINING LEASE 2484
PROPOSED OPEN PIT OUTLINE
WEATHERED ORE STOCKPILE
HAUL ROAD
BULK SAMPLE PIT
DEPOSIT NOS. 2, 3 AND 3B MINING LEASE 2485
HAZARDOUS WASTE CONTAINMENT BERM
STORAGE AREA
BARRELED FUEL LINED CONTAINMENT
INCINERATOR
SEALIFT LAYDOWN AREA
PORTABLE WATER PUMP HOUSE
LAYDOWN AREA
CAMP LAKE
BULK FUEL STORAGE FACILITY
WESTERN BOUNDARY OF BAFFINLAND NTI MOU - EXPLORATION LANDS
ORIGINAL CAMP
EXISTING CAMP
HELIPAD
EXISTING POLISHING WASTE STABILIZATION PONDS (PWSPs)
AIRSTRIP
HTO CABIN
MILNE INLET TOTE ROAD
SEWAGE DISCHARGE PIPELINE
CRUSHER AND STOCKPILE PAD
ROCK QUARRY NO. 2
SHEARDOWN LAKE
EXPLOSIVES MAGAZINES
LANDFILL AND ACCESS ROAD

LEGEND:

- WATER
- RIVER/STREAM/DRAINAGE
- BAFFINLAND'S COMMERCIAL LEASE ON INUIT OWNED LAND
- MINING LEASE BOUNDARY
- WESTERN BOUNDARY OF BAFFINLAND NTI MOU - EXPLORATION LANDS
- SPILL KIT LOCATION

NOTES:

1. COORDINATE GRID IS UTM (NAD83) ZONE 17 AND IS IN METRES.
2. CONTOUR INTERVAL IS 10 METRES.
3. TOPOGRAPHY PROVIDED BY EAGLE MAPPING (2005).
4. MINE SITE INFORMATION PROVIDED BY GENIVAR DECEMBER 9, 2008.

SCALE 250 125 0 250 500 750 1000 1250 m

CLIENT LOGO: Baffinland Iron Mines Corporation	CLIENT: BAFFINLAND IRON MINES CORPORATION	PROVIDED BY: BIM	PROJECT: MARY RIVER PROJECT	PROJECT NO: TC111520
		CHK'D BY: ST		REV. NO.: A
AMEC Environment & Infrastructure, 160 Traders Boulevard East, Mississauga, Ontario, Canada L4Z 3K7		DATE: NOV. 2011	TITLE: EXISTING SITE LAYOUT AT MARY RIVER	FIGURE No. 2.2
		SCALE: AS SHOWN		

501500 E
502000 E
502500 E
503000 E
503500 E
504000 E
504500 E
505000 E
977000 N
976500 N
976000 N
975500 N
975000 N

MILNE INLET

TEMPORARY SPUD BARGE ARRANGEMENT (REMOVED OCTOBER 2008)

EFFLUENT DISCHARGE LOCATION TO RECEIVING ENVIRONMENT

EXISTING CABIN

ORE PAD AND RESIDUAL ORE

POLISHING/WASTE STABILIZATION POND

5 MILLION L FUEL TANK

LAYDOWN AREA

INCINERATOR

FUEL STORAGE

FUEL FARM

HAZARDOUS WASTE BERM

OWS AREA

TENT CAMP (2010)

LINED STORAGE AREA

TRAILER CAMP (CLOSED)

BULK FUEL LOAD OUT AREA

WASTE WATER TREATMENT FACILITY (NOT OPERATIONAL IN 2010 AND 2011)

LINED STORAGE

GARAGE

AIRSTRIP

LAYDOWN AREA

MILNE INLET TOTE ROAD

ROCK QUARRY NO. 1

PERMITTED OPEN BURN PIT AREA

BORROW PITS

BORROW SOURCE NO. 1

PHILLIPS CREEK

LEGEND:

- WATER
- WETLAND
- LAYDOWN AREA
- BAFFINLAND'S COMMERCIAL LEASE ON INUIT OWNED LAND
- MILNE INLET TOTE ROAD
- ROAD
- RIVER/STREAM/DRAINAGE
- DIRECTION OF SURFACE WATER RUNOFF
- EXISTING ROCK QUARRY (IOL COMMERCIAL LEASE)
- EXISTING BORROW AREA (IOL COMMERCIAL LEASE)
- SPILL KIT LOCATION

NOTES:

1. TOPOGRAPHY PROVIDED BY EAGLE MAPPING (2005).
2. COORDINATE GRID IS SHOWN IN UTM (NAD83) ZONE 17 AND IS IN METRES.
3. CONTOURS ARE IN METRES. CONTOUR INTERVAL IS 5 METRES.

SCALE 100 50 0 100 200 300 400 500 m

CLIENT LOGO: Baffinland Iron Mines Corporation	CLIENT: BAFFINLAND IRON MINES CORPORATION	PROVIDED BY: BIM	PROJECT: MARY RIVER PROJECT	PROJECT NO: TC111520
		CHK'D BY: ST		REV. NO.: A
AMEC Environment & Infrastructure, 160 Traders Boulevard East, Mississauga, Ontario, Canada L4Z 3K7		DATE: NOV. 2011	TITLE: EXISTING SITE LAYOUT AT MILNE INLET	FIGURE No. 2.3
		SCALE: AS SHOWN		

P:\EM\Projects\2011\TC111520 Baffinland A&R Plan\4_Updates\Figures\CAD\FIG 2.3 (B05_r0).dwg – Layout1 – Jan. 17, 2012 11:48am – greg.gwynne

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59+500
60+000
60+500
61+000
61+500
62+000
62+500

PROPOSED RAILWAY

MID RAIL CAMP LOCATION

2008 WATER SUPPLY INTAKE

MAX. DEPTH 10.5m

Path: P:\EM\Projects\2011\TC111520 Baffinland A&R Plan\4_Updates\Figures\GIS\MXD\Fig_24.mxd

LEGEND:

- WATER
- RIVER/STREAM/DRAINAGE
- PROPOSED RAILWAY
- EXISTING CAMP (CAMP NOT OCCUPIED DURING 2010)

0 0.5 1 2 3 4 Km

F1-69 of 230

NOTES:
- Topographic data provided by
- Knight Piesold Consulting
- Background map extracted from ESRI World Topo Map service
- Contour interval 2.5 m

Datum & Projection
NAD 1983 UTM Zone 17N

N W E S

Baffinland Iron Mines Corporation amec

MARY RIVER PROJECT

EXISTING SITE LAYOUT AT MID RAIL CAMP

PROJECT N°: TC111520 | **FIGURE: 2.4**

SCALE: 1:40,000 | Date: December, 2011

LEGEND:

- WATER
- RIVER/STREAM/DRAINAGE
- WETLAND
- SPILL KIT LOCATION

NOTES:

1. COORDINATE GRID IS UTM (NAD83) ZONE 17 AND IS IN METRES.
2. CONTOUR INTERVAL IS 5 METRES.
3. TOPOGRAPHY PROVIDED BY EAGLE MAPPING (2005).
4. PROPOSED RAIL ALIGNMENT PROVIDED BY CANARAIL CONSULTANTS INC. OCTOBER 7, 2008.
5. STEENSBY INLET INFRASTRUCTURE PROVIDED BY GENIVAR, DECEMBER 9, 2008.

SCALE 250 12.5 0 250 500 750 1000 1250 m

CLIENT LOGO: Baffinland Iron Mines Corporation	CLIENT: BAFFINLAND IRON MINES CORPORATION	PROVIDED BY: BIM	PROJECT: MARY RIVER PROJECT	PROJECT NO: TC111520
		CHK'D BY: ST		REV. NO.: A
AMEC Environment & Infrastructure 160 Traders Boulevard East Mississauga, Ontario, Canada L4Z 3K7	amec	DATE: NOV. 2011 SCALE: AS SHOWN	TITLE: EXISTING SITE LAYOUT AT STEENSBY INLET	FIGURE No. 2.5

P:\EM\Projects\2011\TC111520 Baffinland A&R Plan\4_Updates\Figures\CAD\FIG 2.5 (B06_r0).dwg – Layout1 – Dec. 05, 2011 1:04pm – michael.macaraeg

480000 490000 500000 510000 520000 530000 540000 550000 560000 570000 580000 590000 600000 610000 620000 630000 640000 650000

8000000 7990000 7980000 7970000 7960000 7950000 7940000 7930000 7920000 7910000 7900000 7890000 7880000 7870000 7860000 7850000 7840000 7830000 7820000 7810000 7800000 7790000 7780000 7770000 7760000

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Legend

- Milne Inlet Tote Road
- Proposed Railway Alignment
- Water

Elevation (m)

High : 1600

Low : 0

0 20 40 60 80 100 Km

F1-71 of 230

NOTES:
Topographic data provided by Knight Piesold Consulting

Datum & Projection:
NAD 1983 UTM Zone 17N

N W E S

Baffinland Iron Mines Corporation

amec

MARY RIVER PROJECT

RELIEF MAP OF THE NORTH BAFFIN REGION

PROJECT N°: TC111520

FIGURE: 3.1

SCALE: 1:687,000

Date: October, 2011

250000.000000 300000.000000 350000.000000 400000.000000 450000.000000 500000.000000 550000.000000 600000.000000 650000.000000 700000.000000 750000.000000 800000.000000 850000.000000 900000.000000

8050000.000000
8000000.000000
7950000.000000
7900000.000000
7850000.000000
7800000.000000
7750000.000000

SURFICIAL DEPOSITS

QUATERNARY

HOLOCENE

COLLUVIUM: block and rubble accumulations, 1-60 m thick.

Ca — Talus: active block and rubble accumulations as much as 50 m thick forming talus aprons and fans below cliffs resulting from rock falls and debris flows; commonly crossed by debris flow channels and levées.

FLUVIAL SEDIMENTS: alluvium; gravel and sand, 2-20 m thick.

Ap — Alluvial deposits: gravel and sand; 2-20 m thick; active braided floodplains, terraces, and fans; includes active proglacial outwash.

MARINE AND GLACIAL MARINE SEDIMENTS: gravel, sand, silt, and clay, 1-20 m thick, deposited in deltaic and beach environments during regression of the postglacial sea.

Mr — Beach sediments: gravel and sand, 1-5 m thick, forming ridges and swales.

Mt — Deltaic sediments: clay, silt, sand, and gravel, 5-20 m thick, forming coarsening upward sequences under dissected terraces.

Mv — Deepwater proglacial silt veneers: silt, clay silt, and fine sand with dropstones, 1-2 m thick.

GLACIAL LACUSTRINE SEDIMENTS: clay, silt, sand, and gravel deposited in glacier dammed lakes in deepwater, beach, and deltaic environments.

Lt — Deltaic sediments: clay, silts, sand, and gravel, 5-20 m thick, forming coarsening upward sequences under dissected terraces.

Lb — Deepwater proglacial silt: silt, clay silt, and fine sand with dropstones; veneers 1-2 m thick; blankets 2-5 m thick.

GLACIOFLUVIAL SEDIMENTS: gravel and sand, 1-10 m thick, deposited behind, at, and in front of the ice margin.

Gt — Proglacial outwash: gravel and sand, 1-10 m thick, forming braided floodplains, terraces, and fans.

Gh — Ice contact stratified drift: gravel and sand, 1-5 m thick, forming eskers, and kames.

EARLY HOLOCENE AND WISCONSINAN

TILL: nonsorted stony muds, 0.5-60 m thick, deposited in subglacial and ice marginal environments; lithic composition generally reflects underlying bedrock.

Tm — End moraine: 5-60 m high, composed of or mantled by till, extensively kettled in places; large features mainly cored by debris-rich relict glacier ice.

Tv — Till veneer: 0.5-2 m thick and discontinuous; some surfaces armoured by stones due to washing by subglacial meltwater.

Tb — Till blanket: 2-10 m thick forming an undulating blanket with drumlins and ribbed (Rogen) moraines in places.

BEDROCK

PRE-QUATERNARY

R — Rock: rock of various compositions and ages (Jackson and Sangster, 1987) variously modified by glacial erosion during the Quaternary and with patchy till cover; hilly and hummocky surfaces, ice moulded in places, with lake basins in subglacially scoured regions; cliffs resulting from glacial over-steepening; in places veneered by thin till, commonly bouldery.

LEGEND:

- WATER
- STUDY AREA BOUNDARY
- SURFICIAL GEOLOGY NOT AVAILABLE
- MILNE INLET TOTE ROAD
- PROPOSED RAIL ALIGNMENT

NOTES:
- Topographic data provided by Knight Piesold Consulting
- Background map extracted from ESRI World Topo service

Datum & Projection
NAD 1983 UTM Zone 17N

N W E S

0 50 100 200 300 400 Km

F1-72 of 230

Baffinland Iron Mines Corporation amec

MARY RIVER PROJECT

SURFICIAL GEOLOGY IN THE PROJECT AREA

PROJECT N°: TC111520 | **FIGURE: 3.2**

SCALE: 1:1,600,000 | Date: October, 2011

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550000 000000

SURFICIAL DEPOSITS

QUATERNARY

HOLOCENE

COLLUVIUM: block and rubble accumulations, 1-60 m thick.

Ca — Talus: active block and rubble accumulations as much as 50 m thick forming talus aprons and fans below cliffs resulting from rock falls and debris flows; commonly crossed by debris flow channels and levées.

FLUVIAL SEDIMENTS: alluvium; gravel and sand, 2-20 m thick.

Ap — Alluvial deposits: gravel and sand; 2-20 m thick; active braided floodplains, terraces, and fans; includes active proglacial outwash.

MARINE AND GLACIAL MARINE SEDIMENTS: gravel, sand, silt, and clay, 1-20 m thick, deposited in deltaic and beach environments during regression of the postglacial sea.

Mr — Beach sediments: gravel and sand, 1-5 m thick, forming ridges and swales.

Mt — Deltaic sediments: clay, silt, sand, and gravel, 5-20 m thick, forming coarsening upward sequences under dissected terraces.

Mv — Deepwater proglacial silt veneers: silt, clay silt, and fine sand with dropstones, 1-2 m thick.

GLACIAL LACUSTRINE SEDIMENTS: clay, silt, sand, and gravel deposited in glacier dammed lakes in deepwater, beach, and deltaic environments.

Lt — Deltaic sediments: clay, silts, sand, and gravel, 5-20 m thick, forming coarsening upward sequences under dissected terraces.

Lb — Deepwater proglacial silt: silt, clay silt, and fine sand with dropstones; veneers 1-2 m thick; blankets 2-5 m thick.

GLACIOFLUVIAL SEDIMENTS: gravel and sand, 1-10 m thick, deposited behind, at, and in front of the ice margin.

Gt — Proglacial outwash: gravel and sand, 1-10 m thick, forming braided floodplains, terraces, and fans.

Gh — Ice contact stratified drift: gravel and sand, 1-5 m thick, forming eskers, and kames.

EARLY HOLOCENE AND WISCONSINAN

TILL: nonsorted stony muds, 0.5-60 m thick, deposited in subglacial and ice marginal environments; lithic composition generally reflects underlying bedrock.

Tm — End moraine: 5-60 m high, composed of or mantled by till, extensively kettled in places; large features mainly cored by debris-rich relict glacier ice.

Tv — Till veneer: 0.5-2 m thick and discontinuous; some surfaces armoured by stones due to washing by subglacial meltwater.

Tb — Till blanket: 2-10 m thick forming an undulating blanket with drumlins and ribbed (Rogen) moraines in places.

BEDROCK

PRE-QUATERNARY

R — Rock: rock of various compositions and ages (Jackson and Sangster, 1987) variously modified by glacial erosion during the Quaternary and with patchy till cover; hilly and hummocky surfaces, ice moulded in places, with lake basins in subglacially scoured regions; cliffs resulting from glacial over-steepening; in places veneered by thin till, commonly bouldery.

LEGEND:

- WATER
- POTENTIAL DISTURBANCE AREA
- SURFICIAL GEOLOGY NOT AVAILABLE
- MILNE INLET TOTE ROAD
- PROPOSED RAIL ALIGNMENT

0 5 10 20 30 Km

F1-73 of 230

NOTES:
- Topographic data provided by Knight Piesold Consulting
- Background map extracted from ESRI World Topo service

Datum & Projection
NAD 1983 UTM Zone 17N

N W E S

Baffinland Iron Mines Corporation amec

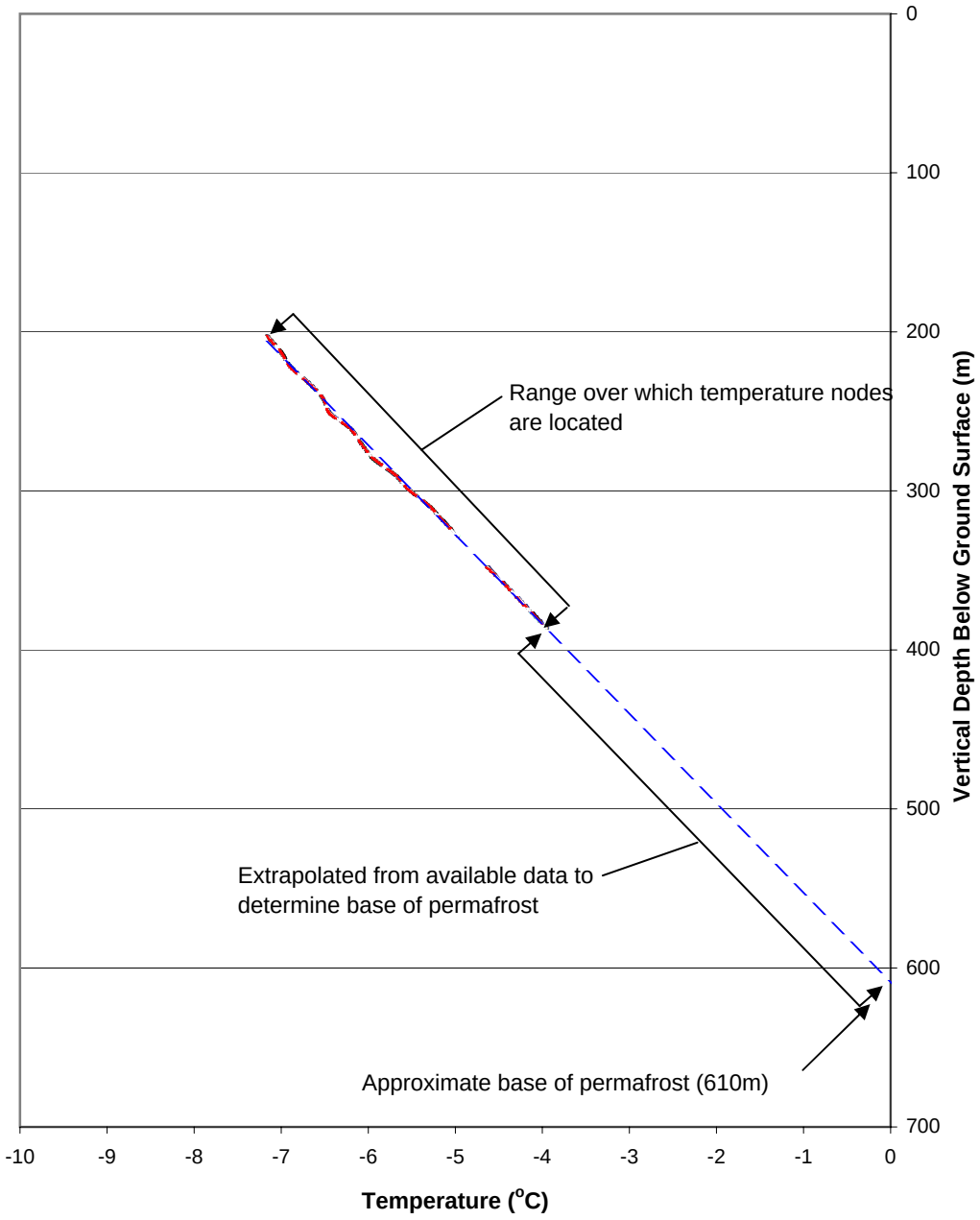
MARY RIVER PROJECT

SURFICIAL GEOLOGY IN THE PROJECT AREA

PROJECT N°: TC111520 | **FIGURE: 3.3**

SCALE: 1:125,000 | Date: December, 2011

Path: P:\EM\Projects\2011\TC111520 Baffinland A&R Plan\4_Updates\Figures\GIS\MXD\Fig_33.mxd



Notes:

1. DATA READINGS FROM AUGUST 25 - SEPTEMBER 25, 2007.
2. THERMISTOR READINGS WERE RECORDED BETWEEN DEPTH OF APPROXIMATELY 200 M AND 400 M BELOW THE GROUND SURFACE. TEMPERATURES ARE INTERPOLATED TO 610 M BELOW GROUND SURFACE.

BAFFINLAND IRON MINES CORPORATION

MARY RIVER PROJECT

DEEP THERMISTOR TEMPERATURE RESULTS

Knight Piésold CONSULTING

P/A NO.	REF.	REV.
NB102-181/29	1	0

FIGURE 3.4

7917494 N
7916250 N
7915000 N
7913750 N
7912500 N
558750 E
560000 E
561250 E
562500 E
563750 E
565000 E

SEA CONTAINERS
- DECOMMISSION AND USE TO TRANSFER MATERIAL OFF SITE WERE REQUIRED.
- REMOVE AND/OR DEMOLISH BY HAND AND/OR WITH HEAVY EQUIPMENT AND DISPOSE OF WITHIN THE MARY RIVER LANDFILL IF NOT REQUIRED TO TRANSFER MATERIAL OFF SITE

GENERAL NOTE
- WHERE APPROPRIATE, MATERIALS TO BE DISPOSED OF IN THE MARY RIVER LANDFILL WILL BE DRAINED TO REMOVE ANY POTENTIAL CONTAMINANTS OR HAZARDOUS MATERIALS
- NON-HAZARDOUS WASTE FOR DISPOSAL WILL BE TRUCKED TO THE MARY RIVER LANDFILL
- HAZARDOUS WASTE CONTAINED AND SEALIFTED FROM SITE TO A LICENSED WASTE DISPOSAL FACILITY

DEPOSIT NO. 1 MINING LEASE 2484
PROPOSED OPEN PIT OUTLINE
WEATHERED ORE STOCKPILE
HAUL ROAD
BULK SAMPLE PIT
HAZARDOUS WASTE CONTAINMENT BERM
STORAGE AREA
BARRELED FUEL LINED CONTAINMENT
SEALIFT LAYDOWN AREA
CAMP LAKE
REFER TO FIGURE 8.2
HELIPAD
EXISTING POLISHING WASTE STABILIZATION PONDS (PWSPs)
HTO CABIN
MILNE INLET TOTE ROAD
DEPOSIT NOS. 2, 3 AND 3B MINING LEASE 2485
CRUSHER AND STOCKPILE PAD
- REGRADE SURFACE TO PROVIDE DRAINAGE AND SIDE SLOPES TO 3H:1V OR FLATTER
- COVER IN 0.3 m OF LOCALLY AVAILABLE BORROW MATERIAL

INCINERATOR
- DRAIN TO REMOVE ANY POTENTIAL CONTAMINANTS OR HAZARDOUS MATERIALS
- REMOVE AND/OR DEMOLISH BY HAND AND/OR WITH HEAVY EQUIPMENT AND DISPOSE OF WITHIN THE MARY RIVER LANDFILL

WESTERN BOUNDARY OF BAFFINLAND NTI MOU - EXPLORATION LANDS
ROCK QUARRY NO. 2
SHEARDOWN LAKE
WASTE WATER TREATMENT FACILITY
- DECOMMISSION SEWAGE TREATMENT PLANT IN ACCORDANCE WITH MANUFACTURER PROCEDURES/RECOMMENDATIONS
- DECOMMISSION CONCRETE SEWAGE TANKS
- SEND ANY REMAINING SEWAGE OR SLUDGE TO THE POLISHING/WASTE STORAGE POND
- DISPOSE OF PLANTS AND CONCRETE TANKS IN THE MARY RIVER LANDFILL

EXPLOSIVES MAGAZINES AREA
- REMOVE MAGAZINES AND TRANSPORT TO MILNE INLET FOR REMOVAL FROM SITE
- GRADE TO EXISTING NATURAL CONTOURS

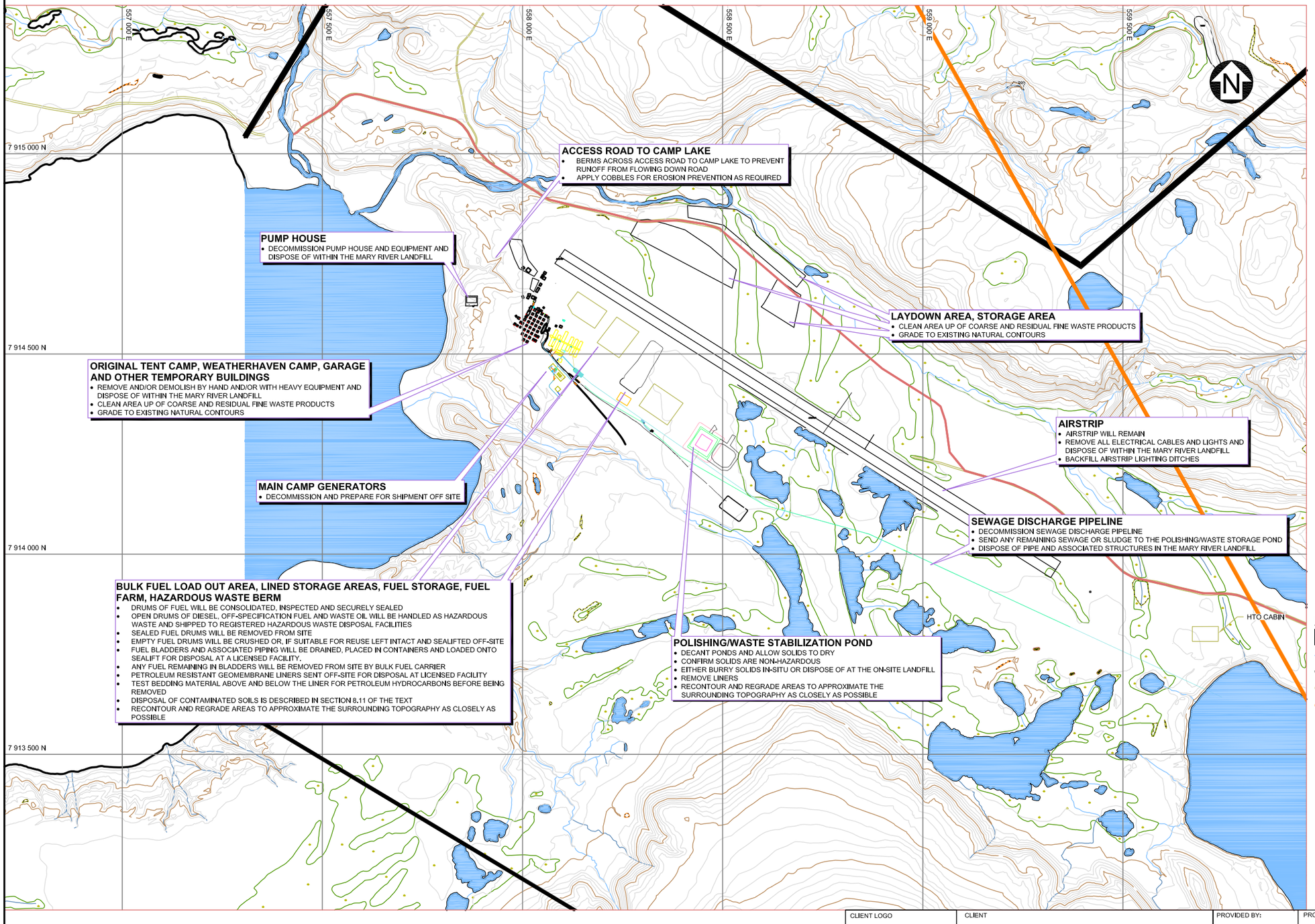
LANDFILL
- BAFFINLAND EXISTING LANDFILL OPERATIONS MANUAL CONTAINS DETAILED OPERATING AND CLOSURE STANDARDS TO BE FOLLOWED
- CONTINUE TO OPERATE LANDFILL SITE UNTIL CAMP DECOMMISSIONING IS COMPLETE
- PLACE 1.5 M THICK FINAL CLOSURE SOIL COVER OVER ENTIRE SURFACE OF LANDFILL
- NOMINAL COMPACTION OF COVER WITH BULLDOZER AND CONTOURED TO SHED PRECIPITATION FROM THE SURFACE

LEGEND:
- WATER
- RIVER/STREAM/DRAINAGE
- BAFFINLAND'S COMMERCIAL LEASE ON INUIT OWNED LAND
- MINING LEASE BOUNDARY
- WESTERN BOUNDARY OF BAFFINLAND NTI MOU - EXPLORATION LANDS

NOTES:
1. COORDINATE GRID IS UTM (NAD83) ZONE 17 AND IS IN METRES.
2. CONTOUR INTERVAL IS 10 METRES.
3. TOPOGRAPHY PROVIDED BY EAGLE MAPPING (2005).
4. MINE SITE INFORMATION PROVIDED BY GENIVAR DECEMBER 9, 2008.

SCALE 250 125 0 250 500 750 1000 1250 m

CLIENT LOGO: Baffinland Iron Mines Corporation	CLIENT: BAFFINLAND IRON MINES CORPORATION	PROVIDED BY: BIM	PROJECT: MARY RIVER PROJECT
		CHK'D BY: ST	PROJECT NO: TC111520
AMEC Environment & Infrastructure, 160 Traders Boulevard East, Mississauga, Ontario, Canada L4Z 3K7		DATE: NOV. 2011	REV. NO.: A
		SCALE: AS SHOWN	TITLE: RECLAMATION MEASURES MARY RIVER AREA
			FIGURE No. 8.1



LEGEND:

- WATER
- RIVER/STREAM/DRAINAGE
- BAFFINLAND'S COMMERCIAL LEASE ON INUIT OWNED LAND
- MINING LEASE BOUNDARY
- WESTERN BOUNDARY OF BAFFINLAND NTI MOU - EXPLORATION LANDS

NOTES:

1. COORDINATE GRID IS UTM (NAD83) ZONE 17 AND IS IN METRES.
2. CONTOUR INTERVAL IS 10 METRES.
3. TOPOGRAPHY PROVIDED BY EAGLE MAPPING (2005).
4. MINE SITE INFORMATION PROVIDED BY GENIVAR DECEMBER 9, 2008.

SCALE 100 50 0 100 200 300 400 500 m

CLIENT LOGO: Baffinland Iron Mines Corporation	CLIENT: BAFFINLAND IRON MINES CORPORATION	PROVIDED BY: BIM	PROJECT: MARY RIVER PROJECT
		CHK'D BY: ST	PROJECT NO: TC111520
AMEC Environment & Infrastructure, 160 Traders Boulevard East, Mississauga, Ontario, Canada L4Z 3K7		DATE: NOV. 2011	REV. NO.: A
		SCALE: AS SHOWN	TITLE: RECLAMATION MEASURES MARY RIVER CAMP
			FIGURE No. 8.2

7917494 N
7916250 N
7915000 N
7913750 N
7912500 N
558750 E
560000 E
561250 E
562500 E
563750 E
565000 E
CAMP LAKE
SHEARDOWN LAKE

LEGEND:

- WATER
- REGRADED AREA
- RIVER/STREAM/DRAINAGE
- BAFFINLAND'S COMMERCIAL LEASE ON INUIT OWNED LAND
- WESTERN BOUNDARY OF BAFFINLAND NTI MOU - EXPLORATION LANDS
- SURFACE WATER SAMPLE

NOTES:

1. COORDINATE GRID IS UTM (NAD83) ZONE 17 AND IS IN METRES.
2. CONTOUR INTERVAL IS 10 METRES.
3. TOPOGRAPHY PROVIDED BY EAGLE MAPPING (2005).
4. MINE SITE INFORMATION PROVIDED BY GENIVAR DECEMBER 9, 2008.

SCALE 250 125 0 250 500 750 1000 1250 m

CLIENT LOGO: Baffinland Iron Mines Corporation	CLIENT: BAFFINLAND IRON MINES CORPORATION	PROVIDED BY: BIM	PROJECT: MARY RIVER PROJECT
		CHK'D BY: ST	PROJECT NO: TC111520
AMEC Environment & Infrastructure, 160 Traders Boulevard East, Mississauga, Ontario, Canada L4Z 3K7		DATE: NOV. 2011	REV. NO.: A
		SCALE: AS SHOWN	TITLE: POST RECLAMATION MARY RIVER AREA
			FIGURE No. 8.3

MILNE INLET

502 500 E | 503 000 E | 503 500 E | 504 000 E | 504 500 E | 505 000 E

7 976 500 N

7 976 000 N

7 975 500 N

N

GENERAL NOTE
- WHERE APPROPRIATE, MATERIALS TO BE DISPOSED OF IN THE MARY RIVER LANDFILL WILL BE DRAINED TO REMOVE ANY POTENTIAL CONTAMINANTS OR HAZARDOUS MATERIALS
- NON-HAZARDOUS WASTE FOR DISPOSAL WILL BE TRUCKED TO THE MARY RIVER LANDFILL
- HAZARDOUS WASTE CONTAINED AND SEALIFTED FROM SITE TO A LICENSED WASTE DISPOSAL FACILITY

EFFLUENT DISCHARGE LOCATION TO RECEIVING ENVIRONMENT

EXISTING CABIN

ORE PAD AND RESIDUAL ORE
- REGRADE SURFACE TO PROVIDE DRAINAGE AND SIDE SLOPES OF 3H:1V OR FLATTER
- COVER IN 0.3 M OF LOCALLY AVAILABLE BORROW MATERIAL

POLISHING/WASTE STABILIZATION POND
- DECANT PONDS AND ALLOW SOLIDS TO DRY
- CONFIRM SOLIDS ARE NON-HAZARDOUS
- EITHER BURRY SOLIDS IN-SITU OR DISPOSE OF AT THE ON-SITE LANDFILL
- REMOVE LINERS
- RECONTOUR AND REGRADE AREAS TO APPROXIMATE THE SURROUNDING TOPOGRAPHY AS CLOSELY AS POSSIBLE

BULK FUEL LOAD OUT AREA, LINED STORAGE AREAS, FUEL STORAGE, FUEL FARM, HAZARDOUS WASTE BERM
- DRUMS OF FUEL WILL BE CONSOLIDATED, INSPECTED AND SECURELY SEALED
- OPEN DRUMS OF DIESEL, OFF_SPECIFICATION FUEL AND WASTE OIL WILL BE HANDLED AS HAZARDOUS WASTE AND SHIPPED TO REGISTERED HAZARDOUS WASTE DISPOSAL FACILITIES
- SEALED FUEL DRUMS WILL BE REMOVED FROM SITE
- EMPTY FUEL DRUMS WILL BE CRUSHED OR, IF SUITABLE FOR REUSE LEFT INTACT AND SEALIFTED OFF-SITE
- FUEL BLADDERS AND ASSOCIATED PIPING WILL BE DRAINED, PLACED IN CONTAINERS AND LOADED ONTO SEALIFT FOR DISPOSAL AT A LICENSED FACILITY.
- ANY FUEL REMAINING IN BLADDERS WILL BE REMOVED FROM SITE BY BULK FUEL CARRIER
- PETROLEUM RESISTANT GEOMEMBRANE LINERS SENT OFF-SITE FOR DISPOSAL AT LICENSED FACILITY
- TEST BEDDING MATERIAL ABOVE AND BELOW THE LINER FOR PETROLEUM HYDROCARBONS BEFORE BEING REMOVED
- DISPOSAL OF CONTAMINATED SOILS IS DESCRIBED IN SECTION 8.11 OF THE TEXT
- RECONTOUR AND REGRADE AREAS TO APPROXIMATE THE SURROUNDING TOPOGRAPHY AS CLOSELY AS POSSIBLE

LAYDOWN AREA
- CLEAN AREA UP OF COARSE AND RESIDUAL FINE WASTE PRODUCTS
- GRADE TO EXISTING NATURAL CONTOURS

INCINERATOR
- DRAIN TO REMOVE ANY POTENTIAL CONTAMINANTS OR HAZARDOUS MATERIALS
- REMOVE AND/OR DEMOLISH BY HAND AND/OR WITH HEAVY EQUIPMENT AND DISPOSE OF WITHIN THE MARY RIVER LANDFILL

TENT CAMP, GARAGE
- REMOVE AND/OR DEMOLISH BY HAND AND/OR WITH HEAVY EQUIPMENT AND DISPOSE OF WITHIN THE MARY RIVER LANDFILL
- CLEAN AREA UP OF COARSE AND RESIDUAL FINE WASTE PRODUCTS
- GRADE TO EXISTING NATURAL CONTOURS

WASTE WATER TREATMENT FACILITY
- DECOMMISSION SEWAGE TREATMENT PLANT IN ACCORDANCE WITH MANUFACTURER PROCEDURES/RECOMMENDATIONS
- SEND ANY REMAINING SEWAGE OR SLUDGE TO THE POLISHING/WASTE STORAGE POND
- WASTE WATER TREATMENT PLANT IS OWNED BY A SITE CONTRACTOR AND IS TO BE SHIPPED OFF SITE

AIRSTRIP
- AIRSTRIP WILL REMAIN
- REMOVE ALL ELECTRICAL CABLES AND LIGHTS AND DISPOSE OF WITHIN THE MARY RIVER LANDFILL
- BACKFILL DITCHES

TRAILER CAMP
- HARD WALLED TRAILER CAMP IS OWNED BY A SITE CONTRACTOR AND IS TO BE SHIPPED OFF SITE

OPEN BURN PIT AREA
- CLEAN UP AREA TO REMOVE ANY REMAINING WASTE PRODUCTS
- GRADE TO EXISTING NATURAL CONTOURS

FUEL STORAGE
FUEL FARM
HAZARDOUS WASTE BERM
LINED STORAGE AREA
BULK FUEL LOAD OUT AREA
OWS AREA
LINED STORAGE
GARAGE
LAYDOWN AREA
MILNE INLET TOTE ROAD
ROCK QUARRY NO. 1
BORROW SOURCE NO. 1
BORROW PITS

75
100

NOTES:
1. TOPOGRAPHY PROVIDED BY EAGLE MAPPING (2005).
2. COORDINATE GRID IS SHOWN IN UTM (NAD83) ZONE 17 AND IS IN METRES.
3. CONTOURS ARE IN METRES. CONTOUR INTERVAL IS 5 METRES.

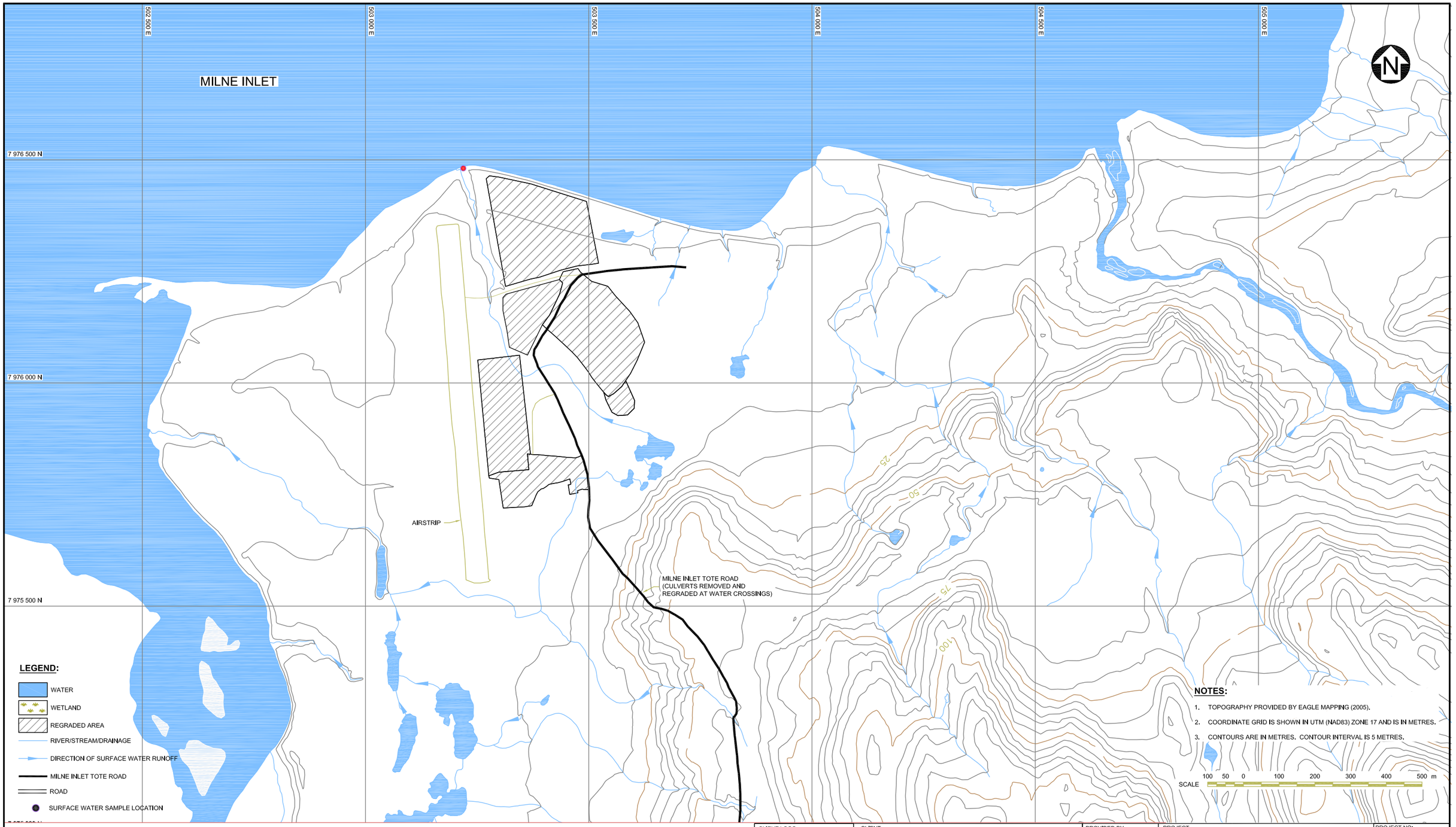
SCALE 100 50 0 100 200 300 400 500 m

LEGEND:

WATER
WETLAND
LAYDOWN AREA
BAFFINLAND'S COMMERCIAL LEASE ON INUIT OWNED LAND
RIVER/STREAM/DRAINAGE
DIRECTION OF SURFACE WATER RUNOFF
MILNE INLET TOTE ROAD
ROAD
EXISTING ROCK QUARRY (IOL COMMERCIAL LEASE)
EXISTING BORROW AREA (IOL COMMERCIAL LEASE)

CLIENT LOGO: Baffinland Iron Mines Corporation	CLIENT: BAFFINLAND IRON MINES CORPORATION	PROVIDED BY: BIM	PROJECT: MARY RIVER PROJECT	PROJECT NO: TC111520
		CHK'D BY: ST		REV. NO.: A
AMEC Environment & Infrastructure, 160 Traders Boulevard East, Mississauga, Ontario, Canada L4Z 3K7		DATE: NOV. 2011	TITLE: RECLAMATION MEASURES MILNE INLET	FIGURE No.: 8.4
		SCALE: AS SHOWN		

P:\EM\Projects\2011\TC111520 Baffinland A&R Plan\4_Updates\Figures\CAD\FIG 8.4 (B07_r0).dwg – Layout1 – Oct. 26, 2011 3:31pm – svetlana.cronkhite



CLIENT LOGO: Baffinland Iron Mines Corporation	CLIENT: BAFFINLAND IRON MINES CORPORATION	PROVIDED BY: BIM	PROJECT: MARY RIVER PROJECT	PROJECT NO: TC111520
		CHK'D BY: ST		REV. NO.: A
AMEC Environment & Infrastructure 160 Traders Boulevard East Mississauga, Ontario, Canada L4Z 3K7	amec	DATE: NOV. 2011 SCALE: AS SHOWN	TITLE: POST RECLAMATION MILNE INLET	FIGURE No. 8.5

\\MIS-FS1\ProjectF$\EM\Projects\2011\TC111520 Baffinland A&R Plan\4_Updates\Figures\CAD\FIG 8.5 (B08_r0).dwg – Layout1 – Oct. 27, 2011 9:59am – svetlana.cronkhite

590000.000000 592000.000000 594000.000000 596000.000000 598000.000000 600000.000000 602000.000000 604000.000000 606000.000000 608000.000000 610000.000000

7878000.000000 7876000.000000 7874000.000000 7872000.000000 7870000.000000

52+500
53+000
56+000
56+500
57+000
57+500
58+000
58+500
59+000
59+500
60+000
60+500
61+000
61+500
62+000
62+500
63+000
63+500
64+000

LAYDOWN AREA
•CLEAN AREA UP OF COARSE AND RESIDUAL FINE WASTE PRODUCTS

MAIN CAMP GENERATOR
•DECOMMISSION AND PREPARE FOR SHIPMENT OFF SITE

CAMP AND OTHER TEMPORARY BUILDINGS
•REMOVE AND/OR DEMOLISH BY HAND AND/OR WITH HEAVY EQUIPMENT AND DISPOSE OF WITHIN THE MARY RIVER LANDFILL

PROPOSED RAILWAY

MID RAIL CAMP LOCATION

2008 WATER SUPPLY INTAKE

MAX. DEPTH 10.5m

FUEL STORAGE
•DRUMS OF FUEL WILL BE CONSOLIDATED, INSPECTED AND SECURELY SEALED
•OPEN DRUMS OF DIESEL, OFF SPECIFICATION FUEL AND WASTE OIL WILL BE HANDLED AS HAZARDOUS WASTE AND SHIPPED TO REGISTERED HAZARDOUS WASTE DISPOSAL FACILITIES
•SEALED FUEL DRUMS WILL BE REMOVED FROM SITE
•EMPTY FUEL DRUMS WILL BE CRUSHED OR, IF SUITABLE FOR REUSE LEFT INTACT AND SEALIFTED OFF-SITE
•TEST BEDDING MATERIAL ABOVE AND BELOW THE LINER FOR PETROLEUM HYDROCARBONS BEFORE BEING REMOVED
•DISPOSAL OF CONTAMINATED SOILS IS DESCRIBED IN SECTION 8.11 OF THE TEXT
•RECONTOUR AND REGRADE AREAS TO APPROXIMATE THE SURROUNDING TOPOGRAPHY AS CLOSELY AS POSSIBLE

Path: P:\EM\Projects\2011\TC111520 Baffinland A&R Plan\4_Updates\Figures\GIS\MXD\Fig_86.mxd

LEGEND:

- WATER
- RIVER/STREAM/DRAINAGE
- PROPOSED RAILWAY
- EXISTING CAMP (CAMP NOT OCCUPIED DURING 2010)

0 0.5 1 2 3 4 Km

F1-80 of 230

NOTES:
- Topographic data provided by
- Knight Piesold Consulting
- Background map extracted from ESRI World Topo Map service
- Contour interval 2.5 m

Datum & Projection
NAD 1983 UTM Zone 17N

N W E S

Baffinland amec Iron Mines Corporation

MARY RIVER PROJECT

RECLAMATION MEASURES
MID RAIL CAMP

PROJECT N°: TC111520 | **FIGURE: 8.6**

SCALE: 1:50,000 | Date: October, 2011

590000.000000 592000.000000 594000.000000 596000.000000 598000.000000 600000.000000 602000.000000 604000.000000 606000.000000 608000.000000 610000.000000

7878000.000000 7876000.000000 7874000.000000 7872000.000000 7870000.000000

52+500 53+000 53+500 54+000 54+500 55+000 55+500 56+000 56+500 57+000 57+500 58+000 58+500 59+000 59+500 60+000 60+500 61+000 61+500 62+000 62+500 63+000 63+500 64+000

Path: P:\EM\Projects\2011\TC111520 Baffinland A&R Plan\4_Updates\Figures\GIS\MXD\Fig_87.mxd

LEGEND:

- WATER
- RIVER/STREAM/DRAINAGE
- PROPOSED RAILWAY

0 0.5 1 2 3 4 Km

F1-81 of 230

NOTES:
- Topographic data provided by
- Knight Piesold Consulting
- Background map extracted from ESRI World Topo Map service
- Contour interval 2.5 m

Datum & Projection
NAD 1983 UTM Zone 17N

N W E S

Baffinland amec Iron Mines Corporation

MARY RIVER PROJECT

POST RECLAMATION MID RAIL CAMP

PROJECT N°: TC111520 | **FIGURE: 8.7**

SCALE: 1:50,000 | Date: October, 2011

N

594 500 E
595 000 E
595 500 E
596 000 E
596 500 E
597 000 E

801 000 N
7 800 500 N
7 800 000 N
7 799 500 N
7 799 000 N

MAIN CAMP GENERATORS
- DECOMMISSION AND PREPARE FOR SHIPMENT OFF SITE

INCINERATOR
- DRAIN TO REMOVE ANY POTENTIAL CONTAMINANTS OR HAZARDOUS MATERIALS
- REMOVE AND/OR DEMOLISH BY HAND AND/OR WITH HEAVY EQUIPMENT AND SEALIFT OFF-SITE FOR DISPOSAL

CAMP AND OTHER TEMPORARY BUILDINGS
- REMOVE AND/OR DEMOLISH BY HAND AND/OR WITH HEAVY EQUIPMENT AND SEALIFT OFF-SITE FOR DISPOSAL

FUEL STORAGE
- DRUMS OF FUEL WILL BE CONSOLIDATED, INSPECTED AND SECURELY SEALED
- OPEN DRUMS OF DIESEL, OFF-SPECIFICATION FUEL AND WASTE OIL WILL BE HANDLED AS HAZARDOUS WASTE AND SHIPPED TO REGISTERED HAZARDOUS WASTE DISPOSAL FACILITIES
- SEALED FUEL DRUMS WILL BE REMOVED FROM SITE
- EMPTY FUEL DRUMS WILL BE CRUSHED OR, IF SUITABLE FOR REUSE LEFT INTACT AND SEALIFTED OFF-SITE
- TEST BEDDING MATERIAL ABOVE AND BELOW THE LINER FOR PETROLEUM HYDROCARBONS BEFORE BEING REMOVED
- DISPOSAL OF CONTAMINATED SOILS IS DESCRIBED IN SECTION 8,11 OF THE TEXT
- RECONTOUR AND REGRADE AREAS TO APPROXIMATE THE SURROUNDING TOPOGRAPHY AS CLOSELY AS POSSIBLE

LAYDOWN AREA
- ALL MATERIAL IN LAYDOWN AREA INCLUDING CAMP, LUMBER, RIG MATTS, ETC REQUIRES NO PACKAGING AND IS READY FOR SEALIFT PICK UP
- CLEAN AREA UP OF COARSE AND RESIDUAL FINE WASTE PRODUCTS
- GRADE TO EXISTING NATURAL CONTOURS

WATERLINE (APPROXIMATE)

WATERLINE
- DECOMMISSION WATER PIPELINE
- SEALIFT OFF-SITE FOR DISPOSAL

3 Km LAKE WATER SOURCE

STEENSBY INLET

LEGEND:

WATER

RIVER/STREAM/DRAINAGE

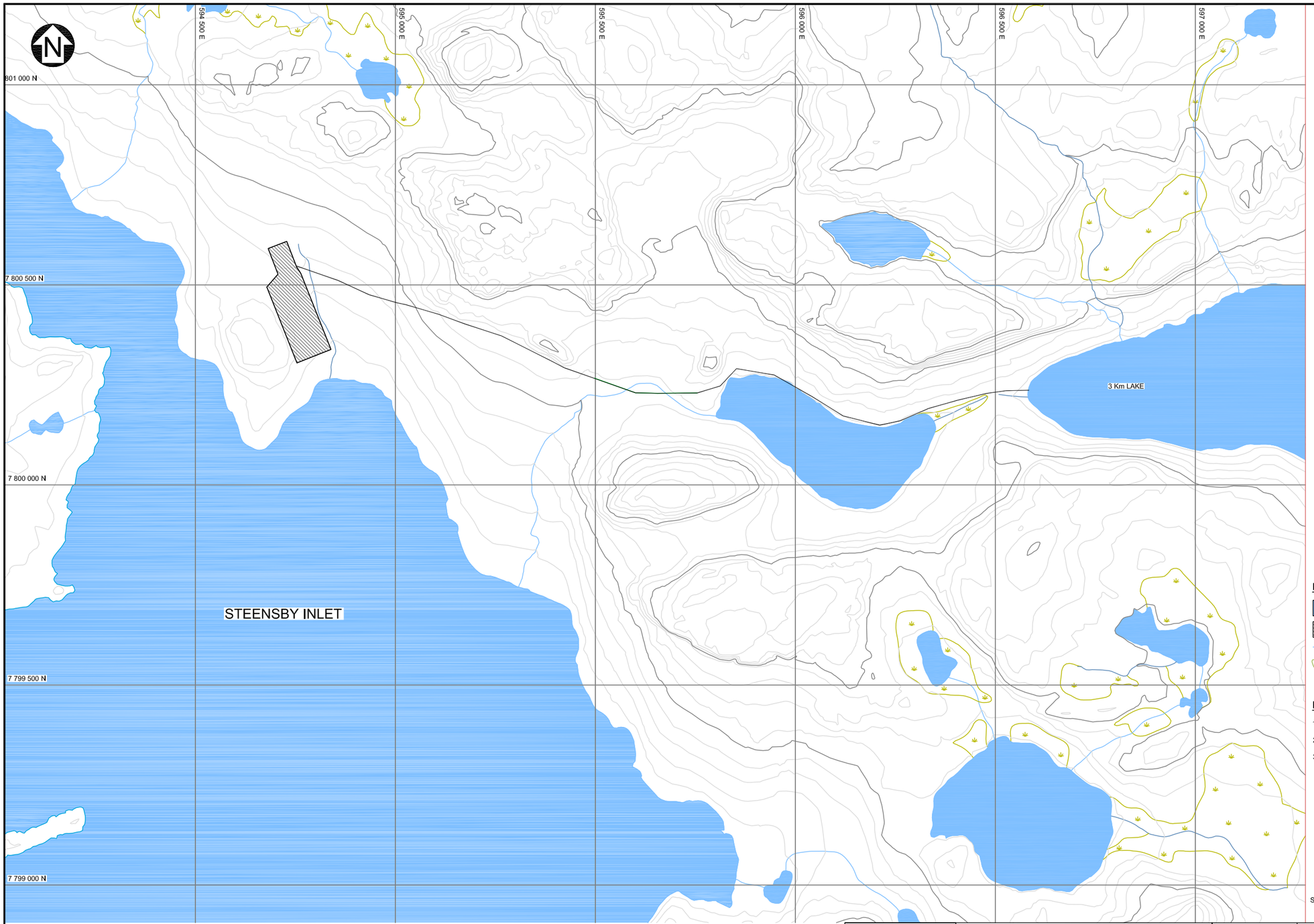
WETLAND

NOTES:

1. COORDINATE GRID IS UTM (NAD83) ZONE 17 AND IS IN METRES.
2. CONTOUR INTERVAL IS 5 METRES.
3. TOPOGRAPHY PROVIDED BY EAGLE MAPPING (2005).
4. STEENSBY INLET INFRASTRUCTURE PROVIDED BY GENIVAR, DECEMBER 9, 2008.

SCALE 250 12,5 0 250 500 750 1000 1250

CLIENT LOGO: Baffinland Iron Mines Corporation	CLIENT: BAFFINLAND IRON MINES CORPORATION	PROVIDED BY: BIM	PROJECT: MARY RIVER PROJECT	PROJECT NO: TC111520
		CHK'D BY: ST		REV. NO.: A
AMEC Environment & Infrastructure, 160 Traders Boulevard East, Mississauga, Ontario, Canada L4Z 3K7		DATE: NOV. 2011	TITLE: RECLAMATION MEASURES STEENSBY INLET	FIGURE No. 8.8
		SCALE: AS SHOWN		



LEGEND:

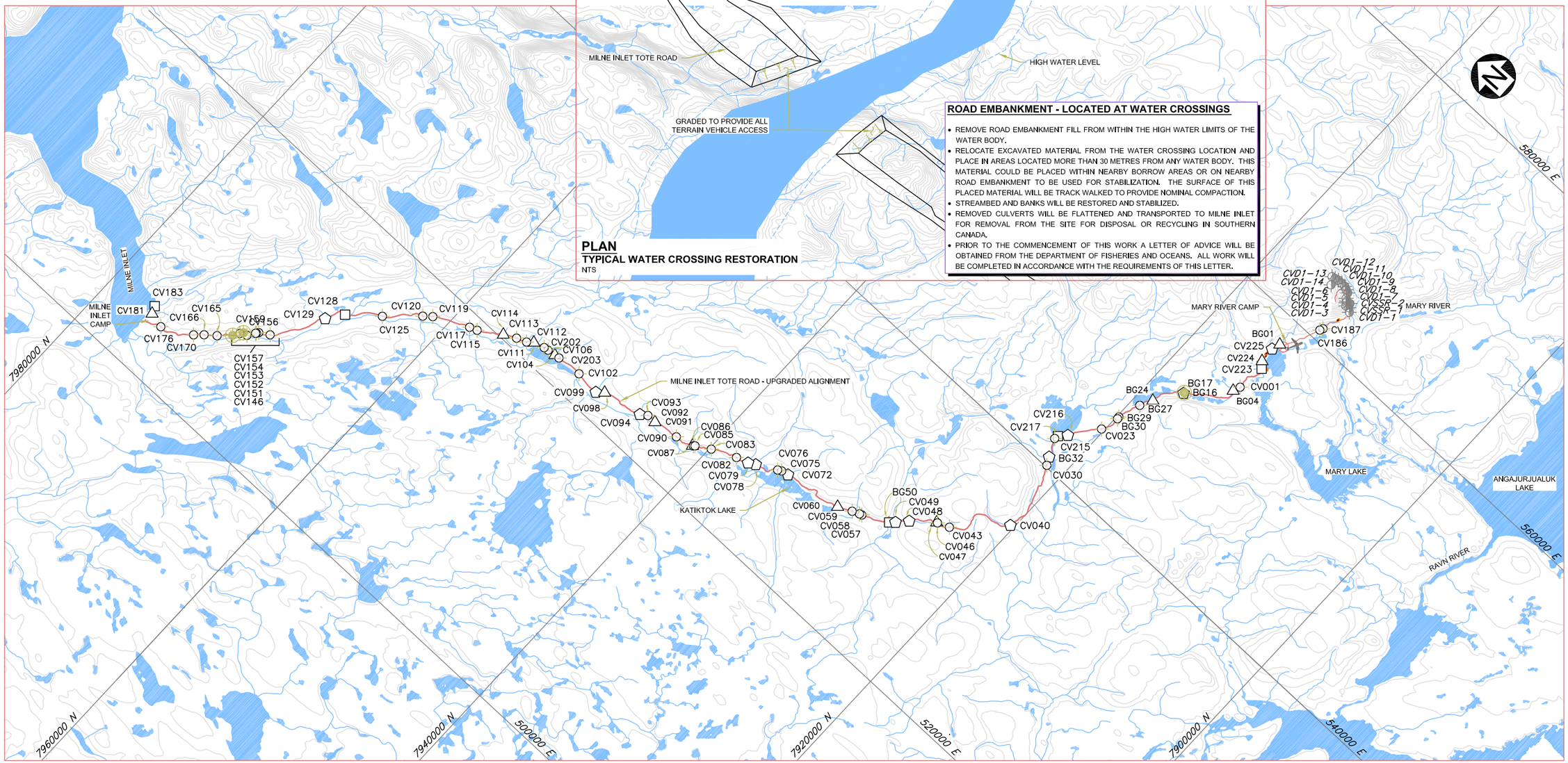
- WATER
- REGRADED AREA
- RIVER/STREAM/DRAINAGE
- WETLAND

NOTES:

1. COORDINATE GRID IS UTM (NAD83) ZONE 17 AND IS IN METRES.
2. CONTOUR INTERVAL IS 5 METRES.
3. TOPOGRAPHY PROVIDED BY EAGLE MAPPING (2005).

SCALE 250 12.5 0 250 500 750 1000 1250

CLIENT LOGO: Baffinland IRON MINES CORPORATION	CLIENT: BAFFINLAND IRON MINES CORPORATION	PROVIDED BY: BIM	PROJECT: MARY RIVER PROJECT
		CHK'D BY: ST	PROJECT NO: TC111520
AMEC Environment & Infrastructure 160 Traders Boulevard East Mississauga, Ontario, Canada L4Z 3K7		DATE: NOV. 2011	REV. NO.: A
		SCALE: AS SHOWN	TITLE: POST RECLAMATION STEENSBY INLET
			FIGURE No.: 8.9



LEGEND:

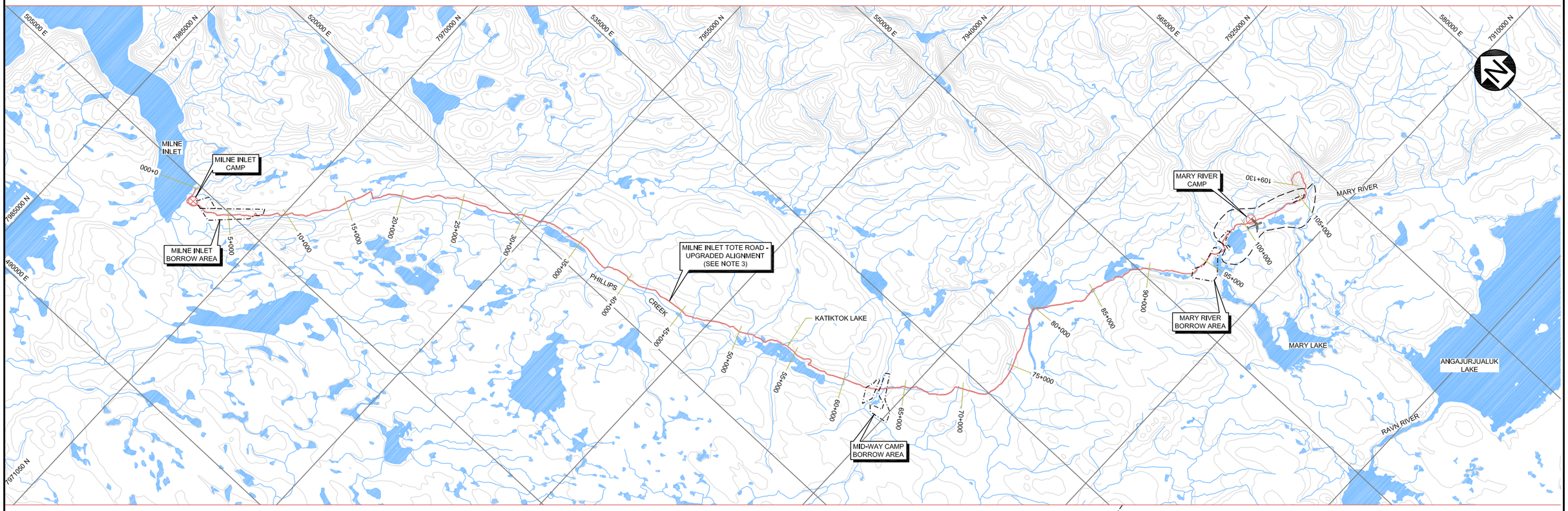
- WATER
- MILNE INLET TOTE ROAD - UPDATED ALIGNMENT
- AIRSTRIP
- EXPLORATION CAMP LOCATION
- CULVERT LOCATION
- EXTRA SMALL CROSSING
- SMALL CROSSING
- MEDIUM CROSSING
- LARGE CROSSING
- EXTRA LARGE CROSSING

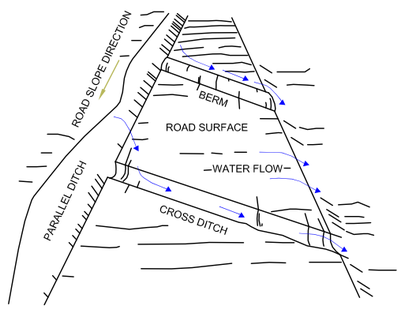
NOTES:

1. COORDINATE GRID IS UTM (NAD83) ZONE 17.
2. BASE MAP: © HER MAJESTY THE QUEEN IN RIGHTS OF CANADA, DEPARTMENT OF NATURAL RESOURCES, (2004). ALL RIGHTS RESERVED.
3. CONTOURS ARE IN METRES. CONTOUR INTERVAL VARIES.
4. MILNE INLET TOTE ROAD ALIGNMENT SURVEY PROVIDED BY GENIVAR (SURVEY COMPLETED IN JULY 2008).
5. NOT FOR CONSTRUCTION.

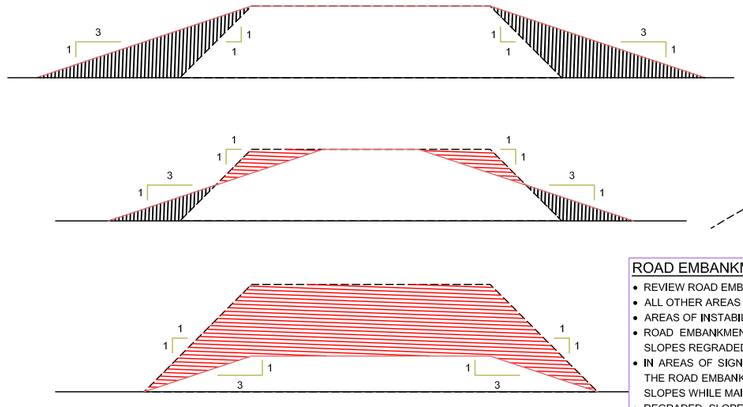
CLIENT LOGO: Baffinland Iron Mines Corporation	CLIENT: BAFFINLAND IRON MINES CORPORATION	PROVIDED BY: BIM	PROJECT: MARY RIVER PROJECT	PROJECT NO: TC111520
		CHK'D BY: ST		REV. NO.: A
AMEC Environment & Infrastructure, 160 Traders Boulevard East, Mississauga, Ontario, Canada L4Z 3K7		DATE: NOV. 2011	TITLE: MILNE INLET TOTE ROAD WATER CROSSING RESTORATION	FIGURE No. 8.10
		SCALE: AS SHOWN		

\\MIS-FS1\Projects$\EM\Projects\2011\TC111520 Baffinland A&R Plan\4_Updates\Figures\CAD\FIG 8.10 (B01_r0).dwg – Layout1 – Oct. 26, 2011 3:17pm – svetlana.cronkhite

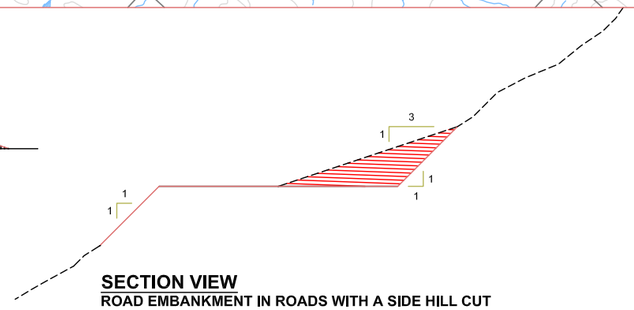




PERSPECTIVE VIEW
WATER BAR DETAILS
NTS



SECTION VIEW
ROAD ALIGNMENT
NTS



SECTION VIEW
ROAD EMBANKMENT IN ROADS WITH A SIDE HILL CUT
NTS

ROAD EMBANKMENT

- REVIEW ROAD EMBANKMENT TO ENSURE THAT IT IS IN A STABLE CONDITION.
- ALL OTHER AREAS OF ROAD IN STABLE CONDITION WILL BE LEFT INTACT.
- AREAS OF INSTABILITY WILL BE MANAGED AS FOLLOWS.
- ROAD EMBANKMENTS WITH AREAS OF INSTABILITY WILL HAVE THE SIDE SLOPES REGRADED TO 3H:1V.
- IN AREAS OF SIGNIFICANT EMBANKMENT CONSTRUCTION THE SURFACE OF THE ROAD EMBANKMENT MAY NEED TO BE REDUCED TO PROVIDE 3H:1V SIDE SLOPES WHILE MAINTAINING ALL-TERRAIN VEHICLE ACCESS.
- REGRADED SLOPES WILL BE TRACKED WALKED PERPENDICULAR TO THE ROAD ALIGNMENT TO TRAP FINES IN THE TRACK MARKS AND DISSIPATE ENERGY FROM RUNOFF.
- IN AREAS OF HIGH EROSION POTENTIAL WHERE SLOPE AND GRADE CONTROLS ARE INADEQUATE FOR EROSION CONTROL DISSIPATION WILL BE ACHIEVED BY STRATEGIC USE OF COBBLES AND BOULDERS TO DISSIPATE ENERGY.

ROAD EMBANKMENT IN AREAS WITH A SIDE-HILL CUT

- REVIEW CUT SLOPE FOR SIGNS OF INSTABILITY OR THAW SUSCEPTIBILITY.
- IF UNSTABLE OR THAW SUSCEPTIBLE CONDITIONS ARE NOTED THE SLOPE SHOULD BE BACKFILLED TO FORM A REGRADED SLOPE OF APPROXIMATELY 3H:1V.
- AREAS OF CUT NOT SHOWING SIGNS OF INSTABILITY WILL BE LEFT INTACT.

ROAD EMBANKMENT WITH STEEP GRADE

- SECTIONS OF THE ROAD WITH STEEP GRADE WILL HAVE WATER BARS INSTALLED TO DIRECT RUNOFF FROM THE ROAD SURFACES.
- WATER BARS WILL ALSO BE INSTALLED IN AREAS WHERE SIGNIFICANT SNOW ACCUMULATION OCCURS TO DIVERT THE SNOW MELT FROM THE ROAD SURFACES.

LEGEND:

- WATER
- MILNE FACILITIES AREA
- CUT
- FILL
- BORROW AREA
- MILNE INLET TOTE ROAD - AS CONSTRUCTED ALIGNMENT
- AIRSTRIP
- EXPLORATION CAMP LOCATION

NOTES:

1. COORDINATE GRID IS UTM (NAD83) ZONE 17.
2. MAPPING IS FROM NATURAL RESOURCES CANADA NATIONAL TOPOGRAPHIC DATA BASE 1:250000 AND PROVIDED BY BAFFINLAND IRON MINES CORPORATION.
3. MILNE INLET TOTE ROAD ALIGNMENT SURVEY PROVIDED BY GENIVAR (SURVEY COMPLETED IN JULY 2008).

SCALE A 3 1.5 0 5 10 15 km

CLIENT LOGO: Baffinland Iron Mines Corporation	CLIENT: BAFFINLAND IRON MINES CORPORATION	PROVIDED BY: BIM	PROJECT: MARY RIVER PROJECT	PROJECT NO: TC111520	
		CHK'D BY: ST		REV. NO.: A	
AMEC Environment & Infrastructure, 160 Traders Boulevard East, Mississauga, Ontario, Canada L4Z 3K7		DATE: NOV. 2011	TITLE: ROAD UPGRADES PLAN, SECTIONS AND DETAILS	FIGURE No. 8.11	
		SCALE: AS SHOWN			

2012 ABANDONMENT AND RECLAMATION PLAN
FOR ADVANCED EXPLORATION ACTIVITIES

Appendix A
Bulk Sample Pit Mine Inspector Report and Photo
(Included with Electronic Version Only)

2012 ABANDONMENT AND RECLAMATION PLAN
FOR ADVANCED EXPLORATION ACTIVITIES

Appendix A-1
Nunavut Workplace Safety and Compensation Commission Mine Inspectors Report
(Included with Electronic Version Only)

2012 ABANDONMENT AND RECLAMATION PLAN
FOR ADVANCED EXPLORATION ACTIVITIES

Appendix A-2
Bulk Sample Bench Photo
(Included with Electronic Version Only)

2012 ABANDONMENT AND RECLAMATION PLAN
FOR ADVANCED EXPLORATION ACTIVITIES

Appendix B
As-Built and Design Information
(Included with Electronic Version Only)

2012 ABANDONMENT AND RECLAMATION PLAN
FOR ADVANCED EXPLORATION ACTIVITIES

Appendix B-1
Mary River
(Included with Electronic Version Only)

2012 ABANDONMENT AND RECLAMATION PLAN
FOR ADVANCED EXPLORATION ACTIVITIES

Appendix B-2
Milne Inlet
(Included with Electronic Version Only)

2012 ABANDONMENT AND RECLAMATION PLAN
FOR ADVANCED EXPLORATION ACTIVITIES

Appendix B-3
Steensby Inlet
(Included with Electronic Version Only)

2012 ABANDONMENT AND RECLAMATION PLAN
FOR ADVANCED EXPLORATION ACTIVITIES

Appendix B-4
Milne Inlet Tote Road – Water Crossings
(Included with Electronic Version Only)

2012 ABANDONMENT AND RECLAMATION PLAN
FOR ADVANCED EXPLORATION ACTIVITIES

Appendix B-5
Milne Inlet Tote Road – Water Crossings Summary Table
(Included with Electronic Version Only)

2012 ABANDONMENT AND RECLAMATION PLAN
FOR ADVANCED EXPLORATION ACTIVITIES

Appendix B-6
Milne Inlet Tote Road – Road Embankment
(Included with Electronic Version Only)

2012 ABANDONMENT AND RECLAMATION PLAN
FOR ADVANCED EXPLORATION ACTIVITIES

Appendix B-7
Mary River Landfill and Access Road
(Included with Electronic Version Only)

2012 ABANDONMENT AND RECLAMATION PLAN
FOR ADVANCED EXPLORATION ACTIVITIES

Appendix C
Geochemical Testing Results
(Included with Electronic Version Only)

2012 ABANDONMENT AND RECLAMATION PLAN
FOR ADVANCED EXPLORATION ACTIVITIES

Appendix C-1
2008 Geochemical Testing Program
(Included with Electronic Version Only)

2012 ABANDONMENT AND RECLAMATION PLAN
FOR ADVANCED EXPLORATION ACTIVITIES

Appendix C-2
Geochemical Testing Program Results Since 2008
(Included with Electronic Version Only)

2012 ABANDONMENT AND RECLAMATION PLAN
FOR ADVANCED EXPLORATION ACTIVITIES

Appendix D
Borrow Site Reclamation Overview Milne Inlet Access Road,
Mary River Project, Baffin Island, NU
(Included with Electronic Version Only)

2012 ABANDONMENT AND RECLAMATION PLAN
FOR ADVANCED EXPLORATION ACTIVITIES

Appendix E
Closure Criteria

Project Site Abandonment

	Closure Criteria
TOTALS	
Pre-abandonment shutdown	
Drain, isolate and secure camp water systems	Mary River Project Site abandonment is completed such that all facilities, equipment and material are secured in a method that ensures: 1. The short term safety of all persons who return or travel to the abandoned site. A. All power systems are isolated and secured with locks B. All mechanical systems are de-energized. 2. The short term protection of the environment by securing and preventing any negative impact on the natural environment, including: A. Drain, isolate and secure Camp sewage treatment plant, lines and lagoons B. Drain, isolate and secure all local fuel storage supply systems . C. Isolate and secure all bulk fuel storage systems such that tanks and bladders are isolated and contained within secondary containment D. Secure all barreled fuel in secondary containment E. Secure all hazardous waste in secondary containment 3. Provide the QIA with a report summarizing the specific task executed in meeting these criteria.
Drain, isolate and secure Camp sewage treatment plant, lines and lagoons	
Drain, isolate and secure all local fuel storage supply systems	
Isolate and secure all bulk fuel storage systems such that tanks and bladders are isolated and contained within secondary containment	
Secure all barreled fuel in secondary containment	
Secure all hazardous waste in secondary containment	
Isolate and safely secure all mechanical and electrical elements.	
BIMC declares bankruptcy and abandons Mary River and Milne Inlet (Oct 10, 201H)	
Post-Abandonment Inspection by QIA	
Commercial Flights (Ottawa - Iqaluit return x 3)	Criteria to be established by Landowner prior to inspection
Charter flight (Iqaluit - MR - MI - MR-Iqaluit)	
Inspect and secure critical areas at Mary River and Milne Inlet	
Preliminary assessment to support closure design and future A&R execution.	

Bulk Sample Pit

TOTALS	Closure Criteria
Decommission bulk sample pit	
Remedial blasting for stability	The Bulk Sample Pit is a misnomer in that the area where the bulk sample was removed consists of two benches, the lowest of which is open at grade to the South face of the mountain. Providing for the public safety: 1. The pit walls or rock faces are stable and are satisfactory to the Nunavut Workplace Safety and Compensation Commission Mines Inspector 2.. Berms are constructed restricting vehicle access beyond the lowest bench over the edge of the mountain 4. The pit or bench floor is graded and sloped such that it is free draining 5. Access to the benches bermed to prevent motor vehicle access 6. All residual overburden and ore is chemically stable and surface water drainage is below the water license effluent criteria and the concentration limits listed under the Schedule 4 of the Metal Mines Effluent Regulations(MMER)
Remedial excavation for stability	
Runoff diversion around top of pit	
Decommission explosives magazine	

Mineral Exploration Areas (Deposits No. 1, 2, 3)

	Closure Criteria
TOTALS	
Decommission mineral exploration areas	
Remove water lines from exploration areas	1. The aluminum Victaulic water lines and residual hose on #1 deposit are removed and disposed of the Mary River landfill
Drill holes filled and residual casings cut	1. Exploration drill holes residual casing is cut at surface and the hole filled. 2. All drill cuttings not required to fill the hole are spread evenly over the ground surrounding the hole
Level pads, backfill sumps and grade to natural contours	1. Drill pads created during the 1960s are to be left in their current state. After 40 years, the historical access roads and pads are stable and the natural recovery of vegetation is well established with low susceptibility to erosion. 2. Drill pads created during exploration activity in the 2000s are leveled, sloped and contoured to the surrounding topography 3. Sumps are backfilled and contoured to the surrounding topography. 4. Surface configuration - Where contouring of above grade earthworks, slopes, where practical, should be graded to no steeper than 3 horizontal: 1 vertical. Slopes should usually be graded in a configuration that allows for even, unconcentrated drainage. 5. Regraded slopes are tracked walked perpendicular to the grade to trap fines in the track marks and dissipate energy from runoff.
Prepare core for long-term site storage adjacent to airstrip	1. Exploration drill core transferred to sea containers for long term storage. 2. Containers welded closed and stored on the North side of the Mary River airstrip on dry, flat stable ground for long term storage
Inspection and final reclamation of exploration drill hole locations	1. Final inspection of all exploration areas to confirm completion of all work breakdown structure tasks listed above
Decommission salt mixing stations	1. Salt mixing stations and water pump stations are dismantled and removed from site and disposed of in the Mary River landfill.

Remote Sites

TOTALS	Closure Criteria
Remote Sites	
Inspection and final reclamation of geotechnical drill holes and test pit locations	1. Geotechnical drill holes are filled, residual casing is cut at surface, and sumps are graded to natural contours 2. All drill cuttings not required to fill the hole are spread evenly over the ground surrounding the hole
Removal of casing/thermistors	Thermocouple cable is removed, residual casing is cut at surface and sumps are graded to natural contours.
Decommissioning of meteorological stations (3)	1. Meteorological station equipment & material is removed from each site and disposed of in the Mary River landfill 2. The disturbed land graded to natural contours.
Decommissioning of hydrology stations (4)	1. Hydrology equipment & materials are removed from hydrology sites and disposed of in the Mary River landfill.
Removal of current meter in Steensby Inlet	N/A

Stockpiles

	Closure Criteria
TOTALS	
Mary River Stockpiles	
Grade weathered ore stockpiles at crusher area	1. . Stockpiles are chemically stable with no acid rock drainage 2. Stockpiles requiring covering for long term stability and to ensure they are aesthetically and environmentally compatible with surrounding undisturbed landscape and to allow for future use by people and wildlife. 3. Recontouring and regrading to approximate the surrounding topography as closely as possible to enhance stability, reduce susceptibility to erosion, and facilitate efforts to establish vegetation.
Haul and place cover on ore pad area at Mary River	
Milne Inlet Stockpiles	
Grade residual ore stockpiles at Milne Inlet	1. . Stockpiles are chemically stable with no acid rock drainage 2. Stockpiles requiring covering for long term stability and to ensure they are aesthetically and environmentally compatible with surrounding undisturbed landscape and to allow for future use by people and wildlife.

Stockpiles

	Closure Criteria
Haul and place cover on ore pad area at Milne Inlet	3. Recontouring and regrading to approximate the surrounding topography as closely as possible to enhance stability, reduce susceptibility to erosion, and facilitate efforts to establish vegetation.

Camps & Related Facilities

		Closure Criteria
	GRAND TOTAL	
	Site Contractor Decommissioning and Demob - Mary River Camp	
	Decommission/Package mobile equipment	Mobile equipment is decommission and packaged for sealift backhaul.
	Ship material by land to Milne Inlet for shipment	N/A - Logistics support for execution of A & R Plan
	Decommissioning Mary River camp	
	Decommission 100 man Weatherhaven camp	1. All contractor owned equipment is decommissioned , packaged and backhauled to the south. 2. All Baffinland owned equipment designated as salvage are to decommissioned, packaged and backhauled to the south.
	Decommission/Package stand alone accommodation/work tent camp (26 Weatherhaven tents)	3. All remaining buildings, material and infrastructure are to be demolished, removed and disposed of in the Mary River Landfill A. All hazardous materials and chemicals are removed prior to demolition and packaged as specified in the Waste Management worksheet.

Camps & Related Facilities

	Closure Criteria
Decommission/Package stand alone accommodation/work tent camp (11 Norseman tents)	
Decommission concrete sewage tanks	All remaining buildings, material and infrastructure are to be demolished, removed and disposed of in the Mary River Landfill A. All hazardous materials and chemicals are removed prior to demolition and packaged as specified in the Waste Management worksheet.
Burn appropriate materials or Landfill	All remaining buildings, material and infrastructure are to be demolished, removed and disposed of in the Mary River Landfill A. All hazardous materials and chemicals are removed prior to demolition and packaged as specified in the Waste Management worksheet. All material not scheduled for backhaul to the south will be either landfilled or burned in compliance with existing permit requirements
Ship material by land to Milne Inlet for sealift Yr. 3	N/A - Logistics Support for execution of A & R Plan

Camps & Related Facilities

	Closure Criteria
Electrical Support for all decommissioning work at Mary River and Milne Inlet	Electrical Support for execution of A & R plan
Organize material for shipment	
Boart	All equipment and material removed and backhauled to the South.
Nuna	All equipment and material removed and backhauled to the South.
Package BIM sea cans for backhaul	All equipment and material removed and backhauled to the South.
Decommission/Package 3 shops	Shops are of temporary construction and are to be removed and disposed of in the Mary River Landfill. 1. All hazardous materials and chemicals are removed prior to demolition and packaged as specified in the Waste Management worksheet. 2. Remove equipment designated as salvage in the Sealift In worksheet 3. Dispose of remaining buildings & material in the landfill.
Decommission/Package related infrastructure (lines, piping, associated small buildings)	All remaining infrastructure is of temporary construction and is to be removed and disposed of in the Mary River Landfill. 1. All hazardous materials and chemicals are removed prior to demolition and packaged as specified in the Waste Management worksheet. 2. Remove equipment designated as salvage in the Sealift In worksheet 3. Dispose of remaining buildings & material in the landfill.
General site cleanup	

Camps & Related Facilities

	Closure Criteria
Loader use for redirecting coarse clean up streams	All foreign material is collected and removed from the surface of the ground are to be removed and disposed of in the Mary River Landfill. 1. All hazardous materials and chemicals are removed prior to demolition and packaged as specified in the Waste Management worksheet. 2. Remove equipment designated as salvage in the Sealift In worksheet 3. Dispose of remaining buildings & material in the landfill
Clean up residual fine waste on ground	All residual foreign material is collected and removed from the surface of the ground
Contouring & grading	
Coarse contouring - Dozer	All disturbed land associated with the camp including pads, staging & lay down areas and accesses shall be reclaimed as follows: 1. Complete removal of all drainage structures. 2. Contour & grading of all disturbed areas to the natural topography 2. Application of armouring in areas of high erosion potential where slope & grade are inadequate for erosion control 5. Roadblocks to prevent vehicular access, where earthworks may create a hazard for motor vehicles
Coarse contouring - loader & excavator	
Final grading	
Decommission Refuge Sites	
Decommission refuge sites	All equipment & material is disposed of in the landfill or backhauled south.
Site Contractor Decommissioning and Demob - Milne Inlet Camp	
Decommission/Package Shanco Camp (10 trailers)	All equipment and material disposed of in the landfill or removed and backhauled to the South.

Camps & Related Facilities

	Closure Criteria
Decommission remaining mobile equipment	Equipment and material removed and backhauled to the South for salvage or for delivery to contractor
Decommission Milne Inlet camp (4 month operation @ Avg 4 person/day)	
Decommission/Package other stand alone work tents (9 wood structure tents)	All buildings & material re of temporary construction and are to be removed and disposed of in the Mary River Landfill 1. All hazardous materials and chemicals are removed prior to demolition and packaged as specified in the Waste Management worksheet. 2. Remove equipment designated as salvage in the Sealift In worksheet 3. Dispose of remaining buildings & material in the landfill.
Truck waste from Milne Inlet Camp to Mary River Camp for land filling	Transportation service to support execution of A & R plan

Camps & Related Facilities

	Closure Criteria
Organize material for shipment	
Nuna	All equipment and material removed and backhauled to the South.
BIM Barge Loader	Equipment and material removed and backhauled to the South for salvage
Decommission/Package 1 shops	Shops are of temporary construction and are to be removed and disposed of in the Mary River Landfill. 1. All hazardous materials and chemicals are removed prior to demolition and packaged as specified in the Waste Management worksheet. 2. Remove equipment designated as salvage in the Sealift In worksheet 3. Dispose of remaining buildings & material in the landfill.
Decommission/Package related infrastructure (lines, piping, associated small buildings)	All remaining infrastructure is of temporary construction and is to be removed and disposed of in the Mary River Landfill. 1. All hazardous materials and chemicals are removed prior to demolition and packaged as specified in the Waste Management worksheet. 2. Remove equipment designated as salvage in the Sealift In worksheet 3. Dispose of remaining buildings & material in the landfill.
General site cleanup	
Loader use for redirecting coarse clean up streams	All foreign material is collected and removed from the surface of the ground
Clean up residual fine waste on ground	All residual foreign material is collected and removed from the surface of the ground
Contouring & grading	
Coarse contouring - Dozer	

Camps & Related Facilities

	Closure Criteria
Coarse contouring - loader & excavator	All disturbed land associated with the camp including pads, staging & lay down areas and accesses shall be reclaimed as follows: 1. Complete removal of all drainage structures. 2. Contour & grading of all disturbed areas to the natural topography 2. Application of armouring in areas of high erosion potential where slope & grade are inadequate for erosion control 5. Roadblocks to prevent vehicular access, where earthworks may create a hazard for motor vehicles
Final grading	
Decommission Mid-Rail Camp (14 days @ 6 man camp)	
Decommission/Package stand alone accommodation/work tent camp	All buildings, material & equipment is of temporary construction and is to be relocated to Mary River and disposed of in the Mary River Landfill or backhauled to the south. 1. All hazardous materials and chemicals are removed prior to demolition and packaged as specified in the Waste Management worksheet. 2. Remove equipment designated as salvage in the Sealift In worksheet 3. Dispose of remaining buildings & material in the landfill.
Decommission/Package genset and incinerator	
Decommission tent camp and related infrastructure (lines, piping, associated buildings)	
Decommission lay down areas	
General site cleanup	All residual foreign material is collected and removed from the surface of the ground
Fly waste from Mid Rail Camp to Mary River Camp for lanfilling	Transportation services to support execution of A & R plan
Decommission Steensby Inlet Camp (14 Days @ 6 man camp)	
Decommission/Package stand alone accommodation/work tent camp (25 wood structure tents)	All buildings, material & equipment is of temporary construction. 1. All hazardous materials and chemicals are removed prior to demolition and packaged as specified in the Waste Management worksheet. These materials will be backhauled south for disposal in an approved recycling or disposal facility on the Steensby sealift 2. Remove equipment designated as salvage in the Sealift In worksheet. This material will be backhauled on the Steensby sealift 3. Dispose of remaining buildings & material in the Mar River landfill or backhauled to the South.
Decommission/package genset and incinerator	
Decommission related infrastructure (lines, piping, associated buildings)	
Decommission lay down areas	

Camps & Related Facilities

	Closure Criteria
Decommission fuel storage (200 drums of fuel)	All piping, bladders and other material having contained hydrocarbons are considered hazardous material and will be backhauled for disposal in approved disposal facilities in the South as described in the Waste Management worksheet
General site cleanup	All residual foreign material is collected and removed from the surface of the ground
Decommission remaining mobile equipment (4 pieces)	Remove equipment designated as salvage in the Sealift In worksheet. This material will be backhauled on the Steensby sealift
Organize material for shipment and sealift support	- Coordinate sealift with charter company - All reclamation work to be completed and no material, equipment or any other unnatural thing remains at the Steensby Camp - Use Loader to back blade & contour land disturbed by camp infrastructure & sealift activity - Upon completion of sealift, all reclamation work is complete at Steensby
Steensby Port resupply by Helicopter	Transportation services to support execution of the A & R plan

Roads & Airstrips

	Closure Criteria
GRAND TOTAL	
Year 2 Freshet Management Field Activities	
Direct Freshet Management Cost	Operational pre-reclamation requirement.
Year 3 Freshet Management Field Activities	

Roads & Airstrips

	Closure Criteria
Direct Freshet Management Cost	Operational pre-reclamation requirement.
Year 4 Freshet Management Field Activities	

Roads & Airstrips

	Closure Criteria
Direct Freshet Management Cost	Operational requirement to maintain integrity of the Road infrastructure prior to reclamation.
MI Tote Road Operation	
Operate Tote road for shipments	Operational requirement to maintain integrity of the Road infrastructure prior to reclamation.
#1 Deposit Haul Roads	

Roads & Airstrips

	Closure Criteria
Inspect and repair any erosion on #1 Deposit Rd. and cross grade road	Permanent abandonment of gravel roads generally entails leaving the existing roads and road bed alignments in place. However, the rights-of-way must be reclaimed in a manner that ensures landforms are compatible with the surrounding landscape and where required to achieve a stable post-reclamation configuration. 1. All drainage and crossing structures on the roads to be removed completely and areas reclaimed, including the stabilization of stream banks where required. 2. Complete removal of crossing structure abutments 3. Application of rip rap/cobble in areas of high erosion potential where slope & grade controls are inadequate for erosion control 4. Contouring & grading of roads with cross falls to minimize erosion. 5. Roadblocks to prevent vehicular access, where, upon removal of drainage & crossing structures or other earthworks, a hazard would exist to motor vehicles
Stabilize inside ditches with cobble	
Remove round culverts, install water bars and stabilize water crossings	
Install safety berms restricting vehicle access at the location where the haul road enters the bulk sample pit	

Roads & Airstrips

	Closure Criteria
Re-grade pad & repair any erosion at #1 deposit salt station	
Milne Inlet Tote Road	
Inspect and repair any erosion on Tote Road	
Remove all box culvert crossings and stabilize slopes	Permanent abandonment of gravel roads generally entails leaving the existing roads and road bed alignments in place. However, the rights-of-way must be reclaimed in a manner that ensures landforms are compatible with the surrounding landscape and where required to achieve a stable post-reclamation configuration. 1. All drainage and crossing structures on the roads to be removed completely and areas reclaimed, including the stabilization of stream banks where required. 2. Complete removal of crossing structure abutments 3. Application of rip rap/cobble in areas of high erosion potential where slope & grade controls are inadequate for erosion control 4. Contouring & grading of roads with cross falls to minimize erosion. 5. Roadblocks to prevent vehicular access, where, upon removal of drainage & crossing structures or other earthworks, a hazard would exist to motor vehicles

Roads & Airstrips

	Closure Criteria
Install water bars (road embankment cross cuts) at locations where the road tote road is constructed in to an embankment to prevent erosion	
Remove all round culvert crossings and stabilize slopes.	
General access Roads	
Grade and contour road surfaces and remove culverts from access roads (Explosives, landfill, sewage lagoon and water intake access roads)	Permanent abandonment of gravel roads generally entails leaving the existing roads and road bed alignments in place. However, the rights-of-way must be reclaimed in a manner that ensures landforms are compatible with the surrounding landscape and where required to achieve a stable post-reclamation configuration. 1. All drainage and crossing structures on the roads to be removed completely and areas reclaimed, including the stabilization of stream banks where required. 2. Complete removal of crossing structure abutments 3. Application of rip rap/cobble in areas of high erosion potential where slope & grade controls are inadequate for erosion control 4. Contouring & grading of roads with cross falls to minimize erosion. 5. Roadblocks to prevent vehicular access, where, upon removal of drainage & crossing structures or other earthworks, a hazard would exist to motor vehicles
Airstrips	
Remove Mary River airstrip lighting (there is currently no lighting present at Milne Inlet)	1. All material, including cables and lights, is removed and disposed of in the Mary River landfill 2. Ditches are backfilled, graded and coutoured to surrounding landscape

Roads & Airstrips

	Closure Criteria
Fill in airstrip lighting ditches & regrade at Milne Inlet and Mary River	1. The one drainage culvert spaning tand bisecting he airstip has been in place for 50 years, It will be left in place to allow access to the full length of the airstrip 2. The airstrip will be craded to promote drainage and compacted for stability

Borrow/Quarry Areas

	Closure Criteria
Total	
Geotechnical monitoring of permitted & road side borrow area reclamation	Engineering Task - Criteria to be established as part of the design.
Grade and contour primary borrow sites at Milne Inlet, Mary River, Midway and quarry	Borrow areas are graded and contoured to minimize ponding and prevent erosion and sediment run-off to receiving waters - Slopes are graded to a maximum of 3:1. - Borrow area graded and contoured to prevent ponding. - Drainage is directed away from water sources where possible and armored to prevent erosion. - All borrow areas are physically & geotechnically stable in the long term. - Additional criteria developed in Appendix D
Grade and contour road side borrow areas within alignment	
Borrow materials from permitted borrow areas (m3)	Task is a material cost - No closure criteria

Fuel Storage Facilities (Bulk and Drums)

	Closure Criteria
GRAND TOTAL	
Mary River Fuel Farm	
Return excess fuel at Mary River to Milne Inlet	Transportation Support for execution of A & R Plan
Drain, fold, and containerize Mary River bladder tanks	All piping, bladders and other material having contained hydrocarbons are considered hazardous material and will be backhauled for disposal in approved disposal facilities in the South as described in the Waste Management worksheet
Remove all geomembrane fuel liners, package and transport to Milne Inlet for sea-lift backhaul	1. Sample soil covering geomembrane for presence of hydrocarbon. 2. Soils above the acceptable criteria diverted to land farm for treatment. 3. All geomembrane liners are considered to hazardous material and will be backhauled for disposal in approved disposal facilities in the South as described in the Waste Management worksheet

Fuel Storage Facilities (Bulk and Drums)

	Closure Criteria
Execute civil works to transport potential hydrocarbon contaminated soil form the Mary River bulk fuel farm to the Milne Inlet land farm	Engineering retained to establish remediation criteria, land farm design & civil works plan and operations manual. Closure criteria to be established as part of the design.

Fuel Storage Facilities (Bulk and Drums)

		Closure Criteria
	Execute civil works to transport potential hydrocarbon contaminated soil from Mary River non-bulk fuel farm lined containment areas to the Milne Inlet land farm	EBA engineering retained to establish remediation criteria, land farm design & civil works plan and operations manual. Closure criteria to be established as part of the design.
	Recontour surface	1. Recontour and regrade to approximate the surrounding topography as closely as possible to enhance stability, reduce susceptibility to erosion, and facilitate efforts to establish vegetation. 2. Restoration of the pre-disturbance surface water regime, if appropriate. 3. The area is at grade with no surface water flow - No other method of erosion control is required in this area 4. Natural revegetation of disturbed areas is the preferred method given the latitude of the project.
	Milne Inlet Fuel Farm	

Fuel Storage Facilities (Bulk and Drums)

	Closure Criteria
Milne Inlet fuel farm Oil Water Separation Operation	1. Water is treated and discharged in compliance with regulatory permits and limits
Milne Inlet Bulk Fuel Sealift Backhaul Support	Contract Service for support of execution of A & R Plan

Fuel Storage Facilities (Bulk and Drums)

	Closure Criteria
Drain, fold, and containerize Milne bladder tanks	All piping, bladders and other material having contained hydrocarbons are considered hazardous material and will be backhauled for disposal in approved disposal facilities in the South as described in the Waste Management worksheet
Remove Piping from fuel farm	All piping and other material having contained hydrocarbons are considered hazardous material and will be backhauled for disposal in approved disposal facilities in the South as described in the Waste Management worksheet
Remove all hazardous material/fuel storage geomembrane fuel liners and package for sea-lift backhaul. (All lined berms except Milne Inlet Fuel Farm)	1. Sample soil covering geomembrane for presence of hydrocarbon. 2. Soils above the acceptable criteria diverted to land farm for treatment. 3. All geomembrane liners are considered to hazardous material and will be backhauled for disposal in approved disposal facilities in the South as described in the Waste Management worksheet

Fuel Storage Facilities (Bulk and Drums)

	Closure Criteria
Execute civil works to convert the fuel farm to hydrocarbon impacted soil land farm	EBA engineering retained to establish remediation criteria, land farm design & civil works plan and operations manual. Closure criteria to be established as part of the design.

Fuel Storage Facilities (Bulk and Drums)

	Closure Criteria
Execute civil works to transport potential hydrocarbon contaminated soil from Milne Inlet non-bulk fuel farm lined containment areas	Engineering retained to establish remediation criteria, land farm design & civil works plan and operations manual. Closure criteria to be established as part of the design.
Recontour surface	1. Recontour and regrade to approximate the surrounding topography as closely as possible to enhance stability, reduce susceptibility to erosion, and facilitate efforts to establish vegetation. 2. Restoration of the pre-disturbance surface water regime, if appropriate. 3. The area is at grade with no surface water flow - No other method of erosion control is required in this area 4. Natural revegetation of disturbed areas is the preferred method given the latitude of the project.

Explosives

	Closure Criteria
Total	
Prepare explosives for shipping	All explosives products safely disposed or removed
Ship explosives to Milne Inlet	N/A
Ship explosives via land to Milne Inlet	All explosives products safely disposed or removed

Waste Management

	Closure Criteria
GRAND TOTAL	
Operate Landfill	
Construct Access Road to Landfill including haulage	Permanent abandonment of gravel roads generally entails leaving the existing roads and road bed alignments in place. However, the rights-of-way must be reclaimed in a manner that ensures landforms are compatible with the surrounding landscape and where required to achieve a stable post-reclamation configuration. 1. All drainage and crossing structures on the roads to be removed completely and areas reclaimed, including the stabilization of stream banks where required. 2. Complete removal of crossing structure abutments 3. Application of rip rap in areas of high erosion potential where slope & grade controls are inadequate for erosion control 4. Contouring & grading of roads with cross falls to minimize erosion. 5. Roadblocks to prevent vehicular access, where, upon removal of drainage & crossing structures or other earthworks, a hazard would exist to motor vehicles
Expand Landfill Berms including haulage	Landfill constructed according to approved engineering drawings and approved regulatory permits. Landfill operated and closed out in compliance with regulatory permit.

Waste Management

	Closure Criteria
Borrow Haulage required for operation of land fill to capacity	Landfill operated and closed out in compliance with regulatory permit.
Borrow Haulage required for capping landfill	Landfill operated and closed out in compliance with regulatory permit.
Ship waste by land Mary River to Milne Inlet	
Prepare chemicals for shipping	All hazardous materials and chemicals requiring treatment or disposal off site are prepared and packaged for shipment in compliance with the requirements of the Transportation of Dangerous Goods Act.

Waste Management

	Closure Criteria
Disposal cost of hazardous material in the South (except bulk contaminated soil)	All hazardous materials & chemicals are to be backhauled by sealift to Montreal and then to approved recycling or disposal facilities in the south.
Sewage - Mary River	
Decant sewage lagoons	Discharge sewage lagoon liquor in compliance with regulatory permits
Sludge removal & transfer to landfill	Sludge disposed in compliance with regulatory permits.

Waste Management

	Closure Criteria
Liner removal & berm reclamation	1. Recycle clean fill for use on other reclamation tasks. 2. Backfill and grade all remaining excavations to existing natural contours.
Liner disposal	Liner disposed in landfill in compliance with regulatory permit requirements
Sewage - Milne	
Decant sewage lagoons	Discharge sewage lagoon liquor in compliance with regulatory permits
Sludge removal & transfer to landfill	Sludge disposed in compliance with regulatory permits.

Waste Management

	Closure Criteria
Liner removal & berm reclamation	1. Recycle clean fill for use on other reclamation tasks. 2. Backfill and grade all remaining excavations to existing natural contours.
Liner disposal	Liner disposed in landfill in compliance with regulatory permit requirements

Hydrocarbon Impacted Soil

		Closure Criteria
	Total	
	Complete phase 1 to phase 3 environmental assessment to identify hydrocarbon contaminated soil and to develop soil remediation criteria and land farm design	Engineering services to support the execution of the A & R plan. Criteria to be established as part of design.
	Land farm Operation Yr 3	
	Milne Inlet - Till hydrocarbon impacted soil - Land farm operation	Engineering retained to develop closure criteria as part of design.

Hydrocarbon Impacted Soil

	Closure Criteria
food & accommodations	Logistics & operations services to support execution of A & R plan
Year 4-6 commercial flights for labour	Transportation services to support execution of A & R plan
Fixed wing support (note: equip hrs refer to statute miles)	Transportation services to support execution of A & R plan
Third Party Consultant to monitor and support land farm operations	Contract service to determine if land farm operation meets the closure criteria to be established byengineering design
Land farm Operation Yr 4	

Hydrocarbon Impacted Soil

	Closure Criteria
Milne Inlet - Till hydrocarbon impacted soil - Land farm operation	Engineering retained to develop closure criteria as part of design.
food & accommodations	Logistics & operations services to support execution of A & R plan
Year 4-6 commercial flights for labour	Transportation services to support execution of A & R plan
Fixed wing support (note: equip hrs refer to statute miles)	Transportation services to support execution of A & R plan

Hydrocarbon Impacted Soil

	Closure Criteria
Third Party Consultant to monitor and support land farm operations	Contract service to determine if land farm operation meets the closure criteria to be established by engineering design
Land farm Operation Yr 5	
Milne Inlet - Till hydrocarbon impacted soil	Engineering retained to develop closure criteria as part of design.
food & accommodations	Logistics & operations services to support execution of A & R plan

Hydrocarbon Impacted Soil

	Closure Criteria
Year 5 commercial flights for labour	Transportation services to support execution of A & R plan
Fixed wing support (note: equip hrs refer to statute miles)	Transportation services to support execution of A & R plan
Third Party Consultant to verify site land farm cleanup progress	Contract service to determine if land farm operation meets the closure criteria to be established by engineering design
Land farm Operation Yr 6	
Milne Inlet - Till hydrocarbon impacted soil	Engineering design to develop closure criteria

Hydrocarbon Impacted Soil

	Closure Criteria
food & accommodations	Logistics & operations services to support execution of A & R plan
Year 5 commercial flights for labour	Transportation services to support execution of A & R plan
Fixed wing support (note: equip hrs refer to statute miles)	Transportation services to support execution of A & R plan
Third Party Consultant to verify site land farm cleanup progress	Contract service to determine if land farm operation meets the closure criteria to be established by engineering design

General Site Area

	Closure Criteria
Total	
Project Management & Supervision Year 2	
Third party Contractor - Admin & supervisory staff	Contract services so support execution of the A & R plan
Project Management Supervision	Baffinland site supervision to support execution of the A & R plan
Project Management & Supervision Year 3	
Third party Contractor - Admin & supervisory staff	Contract services so support execution of the A & R plan
Project Management Supervision	Baffinland site supervision to support execution of the A & R plan
Project Management & Supervision Year 4	

General Site Area

	Closure Criteria
Third party Contractor - Admin & supervisory staff	Contract services so support execution of the A & R plan
Project Management Supervision	Baffinland site supervision to support execution of the A & R plan

Sealift Materials

	Closure Criteria
GRAND TOTAL	
Freight Sealift Milne Inlet to Montreal Year 2	
Shipment, loading and off loading	
Land freight for 3rd party A&R contractor equipment and supplies from mobilization location to port in Montreal (Year 2)	
Dedicated Charter Freight Sealift of 3rd party contractor equipment and supplies to Milne Inlet, and to demobilize contractor equipment currently located at MR and MI,	

Sealift Materials

	Closure Criteria
Demobilize by sealift site contractor and specified BIM equipment currently located at MR and MI,	
Land freight for site contractor and BIM owned equipment currently located at MR and Milne Inlet	
Freight Sealift Milne Inlet to Montreal Year 3	
Dedicated Charter Freight Sealift for supply of year 4 material & supplies, and for the backhaul of MI Tote Road Culverts and remaining material and 3rd party contractor equipment from M	
Freight Sealift Milne Inlet to Montreal Year 4	
Shipment, loading and off loading	
Land freight for material & supplies from mobilization location to Port of Valleyfield	

Sealift Materials

	Closure Criteria
Dedicated Charter Freight Sealift for supply of year 5 & 6 material & supplies.	Transportation services to support execution of A & R plan
Demobilize decommissioned material and 3rd party contractor equipment from MI	
Land freight for decommissioned material and equipment from Port of Valleyfield	
Bulk Fuel Demobilization Sealift - Milne Inlet Year 2	

Sealift Materials

	Closure Criteria
Dedicated charter - Bulk Fuel Tanker to backhaul bulk fuel to refinery for disposal	
Salvage of Baffinland owned fuel	
Demobilize Freight Sealift Steensby Port to Port of Valleyfield - Year 3	
Shipment, loading and off loading	
Vessel Costs Steensby - 1 freight backhaul sealift in Year 3	

Sealift Materials

	Closure Criteria
Land Freight	
Freight Sealift Milne Inlet to Port of Valleyfield Year 6	
Shipment, loading and off loading	
Vessel & stevedoring costs for backhaul of land farm timer, tilling equipment (i.e. loader with tiller drag), accommodation trailer and residual Milne Inlet camp & support supplies and equipment. Milne Inlet to Port of Valleyfield	Transportation services to support execution of A & R plan

Sealift Materials

	Closure Criteria
Land freight cost for Year 6 backhaul sealift	Transportation services to support execution of A & R plan

Camp Operations

	Closure Criteria
GRAND TOTAL	
A&R Fuel Purchase	
Cash cost of fuel & barrel deposit	Material purchase to support execution of A&R plan
Hercules Aircraft mobilization from Yellowknife to Mary River	Transportation services to support execution of A & R plan

Camp Operations

	Closure Criteria
Mary River Camp Operation Yr 2	
Helicopter support	Transportation services to support execution of A & R plan

Camp Operations

	Closure Criteria
Fixed wing Charter Support	Transportation services to support execution of A & R plan
Commercial flights for25 person camp (MR & MI)	Transportation services to support execution of A & R plan
21 person camp operation	Logistics and operation to support execution of A & R plan

Camp Operations

	Closure Criteria
Camp Operating Overhead	Logistics and operation to support execution of A & R plan
Food	Logistics and operation to support execution of A & R plan
Mary River Camp Operation Yr 3	

Camp Operations

	Closure Criteria
Helicopter support	Transportation services to support execution of A & R plan
Fixed wing support (note: units under Equip Hrs refers to statue miles)	Transportation services to support execution of A & R plan

Camp Operations

	Closure Criteria
Commercial flights for 29 person camp (MR & MI)	Transportation services to support execution of A & R plan
29 person camp operation	Logistics and operation to support execution of A & R plan
Camp Operating Overhead	Logistics and operation to support execution of A & R plan
Food	Logistics and operation to support execution of A & R plan
Steensby Inlet Camp Operation	

Camp Operations

	Closure Criteria
6 person camp operation - Decommissioning	Logistics and operation to support execution of A & R plan
2 person camp operation - Sealift	Logistics and operation to support execution of A & R plan
Camp Operating Overhead	Logistics and operation to support execution of A & R plan
Food	Logistics and operation to support execution of A & R plan
Milne Inlet Year 2- Operate avg 5 - person camp (16 person peak for 2 weeks)	

Camp Operations

	Closure Criteria
6 person camp operation (Support Labour)	Logistics and operation to support execution of A & R plan
Camp Operating Overhead	Logistics and operation to support execution of A & R plan
Food	Logistics and operation to support execution of A & R plan
Milne Inlet Year 3 - Operate avg 5 - person camp	
6 person camp operation (Support Labour)	Logistics and operation to support execution of A & R plan

Camp Operations

	Closure Criteria
Camp Operating Overhead	Logistics and operation to support execution of A & R plan
Food	Logistics and operation to support execution of A & R plan
Milne Inlet Year 4 - Operate avg 14 person camp	
14 person camp operation (Support Labour)	Logistics and operation to support execution of A & R plan

Camp Operations

	Closure Criteria
Camp Operating Overhead	Logistics and operation to support execution of A & R plan
Fixed wing support (note: units under Equip Hrs refers to statue miles)	Transportation services to support execution of A & R plan
Commercial flights for Milne Inlet camp	Transportation services to support execution of A & R plan

Camp Operations

	Closure Criteria
Food	Logistics and operation to support execution of A & R plan
MidRail - Operate 7-person camp	
6 person camp operation (Support Labour)	Logistics and operation to support execution of A & R plan
Camp Operating Overhead	Logistics and operation to support execution of A & R plan
Food	Logistics and operation to support execution of A & R plan

Environmental Monitoring

	Closure Criteria
Total	**One annual site visit is undertaken for 5 years and remedial measures are undertaken as required**
Environmental supervision & reporting during ongoing monitoring	Evaluation to determine whether physical and chemical objectives & closure criteria meet the criteria established by this A & R plan for project closeout
Environmental Monitoring Year 2	
Annual site visits - preparation/consumables	
Annual site visits - water sampling (note: units under Equip Hrs refers to # samples)	

Environmental Monitoring

	Closure Criteria
Annual site visit - site overview	
commercial flights for labour	Transportation services to support execution of A & R plan
Annual site visit - helicopter support	Transportation services to support execution of A & R plan
Environmental Monitoring Year 3	
Annual site visits - preparation/consumables	N/A - off site logistics support

Environmental Monitoring

	Closure Criteria
Annual site visits - water sampling (note: units under Equip Hrs refers to # samples)	Evaluation to determine whether physical and chemical objectives & closure criteria meet the criteria established by this A & R plan for project closeout
Annual site visit - site overview	Evaluation to determine whether physical and chemical objectives & closure criteria meet the criteria established by this A & R plan for project closeout
Post 2011 commercial flights for labour	Transportation services to support execution of A & R plan
Annual site visit - helicopter support	Transportation services to support execution of A & R plan
Environmental Monitoring Year 4	

Environmental Monitoring

	Closure Criteria
Annual site visits - preparation/consumables	N/A - off site logistics support
Annual site visits - water sampling (note: units under Equip Hrs refers to # samples)	Evaluation to determine whether physical and chemical objectives & closure criteria meet the criteria established by this A & R plan for project closeout
Annual site visit - site overview	
Post 2011 commercial flights for labour	Transportation services to support execution of A & R plan

Environmental Monitoring

	Closure Criteria
Annual site visit - helicopter support	Transportation services to support execution of A & R plan
Environmental Monitoring Year 5	
Annual site visits - preparation/consumables	N/A - off site logistics support
Annual site visits - water sampling (note: units under Equip Hrs refers to # samples)	Evaluation to determine whether physical and chemical objectives & closure criteria meet the criteria established by this A & R plan for project closeout
Annual site visit - site overview	Evaluation to determine whether physical and chemical objectives & closure criteria meet the criteria established by this A & R plan for project closeout

Environmental Monitoring

	Closure Criteria
Post 2011 commercial flights for labour	Transportation services to support execution of A & R plan
Annual site visit - helicopter support	Transportation services to support execution of A & R plan
Environmental Monitoring Year 6	
Annual site visits - preparation/consumables	N/A - off site logistics support

Environmental Monitoring

	Closure Criteria
Annual site visits - water sampling (note: units under Equip Hrs refers to # samples)	Evaluation to determine whether physical and chemical objectives & closure criteria meet the criteria established by this A & R plan for project closeout
Annual site visit - site overview	Evaluation to determine whether physical and chemical objectives & closure criteria meet the criteria established by this A & R plan for project closeout
Post 2011 commercial flights for labour	Transportation services to support execution of A & R plan
Annual site visit - helicopter support	Transportation services to support execution of A & R plan

2012 ABANDONMENT AND RECLAMATION PLAN
FOR ADVANCED EXPLORATION ACTIVITIES

Appendix F
Mary River Landfill Operations Manual
(Included with Electronic Version Only)

2012 ABANDONMENT AND RECLAMATION PLAN
FOR ADVANCED EXPLORATION ACTIVITIES

Appendix G
Cost Estimate Details

2012 ABANDONMENT AND RECLAMATION PLAN
FOR ADVANCED EXPLORATION ACTIVITIES

Appendix G-1
Cost Summary for Closure and Security Estimate

Appendix G-1 2012 A&R Plan Cost Summary for Closure and Security Estimate

	Labor	Equipment	Feb 2012 Total	Feb 2011 Total	Difference	% Change	A&R Plan Annual Expenditures 2012	2013	2014	2015	>2015	Feb-12 Contingency($)	Feb-12 Contingency (%)	Feb-11 Contingency($)	Feb-11 Contingency (%)
Project Site Abandonment	$ 37,206	$ 11,900	$ 49,106	$ 49,106	$ -	0%	$ 49,106	$ -	$ -	$ -	$ -	$4,146	8%	$ 4,146	8%
Bulk Sample Pit	$ -	$ -	$ -	$ -	$ -	-	$ -	$ -	$ -	$ -	$ -	$ -	0%	$ -	0%
Mineral Exploration Areas (Deposits No. 1, 2, 3)	$ 19,028	$ 64,695	$ 83,723	$ 79,775	$ 3,948	5%	$ -	$ -	$ 83,723	$ -	$ -	$8,582	10%	$ 8,188	10%
Remote Sites	$ 15,024	$ 87,768	$ 102,792	$ 102,792	$ -	0%	$ -	$ -	$ 102,792	$ -	$ -	$9,402	9%	$ 9,402	9%
Stockpiles	$ 113,295	$ 156,112	$ 269,407	$ 45,372	$ 224,035	494%	$ -	$ -	$ 269,407	$ -	$ -	$26,941	10%	$ 8,764	19%
Camps & Related Facilities	$ 987,436	$ 815,188	$ 1,802,624	$ 1,800,916	$ 1,708	0%	$ -	$ 560,568	$ 1,238,652	$ 3,404	$ -	$260,334	14%	$ 258,827	14%
Roads & Airstrips	$ 2,043,465	$ 1,126,200	$ 3,169,665	$ 2,452,859	$ 716,806	29%	$ -	$ 356,384	$ 604,091	$ 746,870	$ 1,462,320	$ 380,360	12%	$ 294,865	12%
Borrow Quarry Areas	$ 197,428	$ 284,158	$ 481,586	$ 470,762	$ 10,824	2%	$ -	$ 55,000	$ 426,586	$ -	$ -	$104,873	22%	$ 103,678	22%
Fuel Storage Facilities (Bulk and Drums)	$ 513,254	$ 216,632	$ 729,886	$ 532,637	$ 197,249	37%	$ -	$ 491,238	$ 238,648	$ -	$ -	$161,227	22%	$ 127,577	24%
Explosives	$ -	$ -	$ -	$ -	$ -	-	$ -	$ -	$ -	$ -	$ -	$ -	0%	$ -	0%
Waste Management	$ 137,217	$ 422,076	$ 559,293	$ 568,669	$ (9,376)	-2%	$ -	$ 203,142	$ 356,151	$ -	$ -	$108,265	19%	$ 110,145	19%
Hydrocarbon Impacted Soil	$ 543,000	$ 190,080	$ 733,080	$ 1,172,682	$ (439,602)	-37%	$ -	$ 75,000	$ 658,080	$ -	$ -	$116,412	16%	$ 176,491	15%
General Site Area	$ 1,561,800	$ -	$ 1,561,800	$ 1,562,040	$ (240)	0%	$ -	$ 480,600	$ 600,600	$ 480,600	$ -	$156,180	10%	$ 156,204	10%
Sealift	$ 35,088	$ 4,322,624	$ 4,357,712	$ 4,353,868	$ 3,844	0%	$ -	$ 3,086,004	$ 575,726	$ 629,916	$ 66,066	$447,581	10%	$ 446,597	10%
Camp Operation	$ 1,402,545	$ 5,627,091	$ 7,029,636	$ 7,030,577	$ (941)	0%	$ -	$ 4,252,211	$ 1,536,308	$ 1,241,117	$ -	$866,142	12%	$ 866,236	12%
Environmental Monitoring	$ 241,000	$ 64,500	$ 305,500	$ 303,636	$ 1,864	1%	$ -	$ 21,100	$ 21,100	$ 21,100	$ 242,200	$73,950	24%	$ 73,732	24%
Subtotal - cash costs excluding Contingency	**$ 7,846,786**	**$ 13,389,024**	**$ 21,235,810**	**$ 20,525,691**	**$ 710,119**	**3%**	**$ 49,106**	**$ 9,581,247**	**$ 6,711,864**	**$ 3,123,007**	**$ 1,770,586**				
Contingency	$ -	$ -	$2,724,394	$ 2,644,852	$79,542	3%	$ -	$ -	$ -	$ -	$ -	$2,724,394		$ 2,644,852	
Total Cash Cost	$ 7,846,786	$ 13,389,024	$ 23,960,204	$ 23,170,543	$ 789,661	3%	$ 49,106	$ 9,581,247	$ 6,711,864	$ 3,123,007	$ 1,770,586				
Salvage (FOB Montreal)	$ -	$ -	$ (2,824,697)	$ (2,470,971)	$ (353,726)	14%	$ -	$ (1,460,032)	$ (1,364,665)	$ -	$ -				
Total Cash Costs net of salvage	$ 7,846,786	$ 13,389,024	$ 21,135,507	$ 20,699,572	$ 435,935	2%	$ 49,106	$ 11,041,279	$ 8,076,529	$ 3,123,007	$ 1,770,586				

Security Estimate as Per QIA A&R Policy

					Description of Major Variances between Feb 2012 and Feb 2011 Security Estimates
Total - Cash Costs Excluding Contingency and Engineering Design & Execution Planning	$ 21,235,810	$ 20,525,691	$ 710,119	3%	See Appendix G-2 Variance analysis - Feb 2012 vs. Feb 2011 Cost Estimate
Contingency	$ 2,724,394	$ 2,644,852	$ 79,542	3%	Contingency - The amount of funds, budget or time needed above the estimate to reduce the risk of overruns of project objectives for a defined scope to a level acceptable to the organization. No significant change to contingency
Engineering Design & Execution Planning	$ 800,000	$ 615,771	$ 184,229	30%	Engineering design and execution planning is budgeted to cover general miscellaneous engineering design for tasks not specifically estimated in direct costs or identified in general technical specifications, and to cover general execution planning of annual reclamation programs
Total Cash Cost Including Contingency & Engineering Design & Execution Planning	$ 24,760,204	$ 23,786,314	$ 973,890	4%	
Total Security Estimate	$ 24,760,204	$ 23,786,314	$ 973,890	4%	
Value of Security Bond	$ 26,200,000	$ 26,200,000	$ -	0%	Baffinland Proposed value of 2011 security bond

2012 ABANDONMENT AND RECLAMATION PLAN
FOR ADVANCED EXPLORATION ACTIVITIES

Appendix G-2
Variance Analysis – 2012 versus 2011 Cost Estimate

Appendix G-2 2012 A&R Plan Variance Analysis - Feb 2012 versus Feb 2011 Cost Estimate

					Cash Contingency ($)			Cash Contingency (%)			
	Feb 2012 Total	Feb 2011 Total	Variance ($)	Variance (%)	Feb 2012	Feb 2011	Variance ($)	Feb 2012	Feb 2011	Variance (%)	Key Variances
Project Site Abandonment	$ 49,106	$ 49,106	$ -	0%	$ 4,146	$ 4,146	$ -	8%	8%	0%	**Cost:** - No significant variances **Contingency:** - No significant variances
Bulk Sample Pit	$ -	$ -	$ -	-	$ -	$ -	$ -	0%	0%	0%	**Cost:** - No significant variances **Contingency:** - No significant variances
Mineral Exploration Areas (Deposits No. 1, 2, 3)	$ 83,723	$ 79,775	$ 3,948	5%	$ 8,582	$ 8,188	$ 394	10%	10%	0%	**Cost:** - No significant variances **Contingency:** - No significant variances
Remote Sites	$ 102,792	$ 102,792	$ -	0%	$ 9,402	$ 9,402	$ 0	9%	9%	0%	**Cost:** - No significant variances **Contingency:** - No significant variances
Stockpiles	$ 269,407	$ 45,372	$ 224,035	494%	$ 26,941	$ 8,764	$ 18,177	10%	19%	-9%	**Cost:** -Changes to cover design increase to thickness of 0.5 m **Contingency:** -No significant variances
Camps & Related Facilities	$ 1,802,624	$ 1,800,916	$ 1,708	0%	$ 260,334	$ 258,827	$ 1,507	14%	14%	0%	**Cost:** - No significant variances **Contingency:** - No significant variances
Roads & Airstrips	$ 3,169,665	$ 2,452,859	$ 716,806	29%	$ 380,360	$ 294,865	$ 85,495	12%	12%	0%	**Cost:** - Changes to culvert removal cost estimates and ditch rehabilitation cost estimate **Contingency:** - No significant variances
Borrow Quarry Areas	$ 481,586	$ 470,762	$ 10,824	2%	$ 104,873	$ 103,678	$ 1,195	22%	22%	0%	**Cost:** - No significant variances **Contingency:** - No significant variances
Fuel Storage Facilities (Bulk and Drums)	$ 729,886	$ 532,637	$ 197,249	37%	$ 161,227	$ 127,577	$ 33,650	22%	24%	-2%	**Cost:** - No significant variances **Contingency:** - No significant variances
Explosives	$ -	$ -	$ -	-	$ -	$ -	$ -	0%	0%	0%	**Cost:** - No significant variances **Contingency:** - No significant variances
Waste Management	$ 559,293	$ 568,669	$ (9,376)	-2%	$ 108,265	$ 110,145	$ (1,880)	19%	19%	0%	**Cost:** - No significant variances **Contingency:** - No significant variances
Hydrocarbon Impacted Soil	$ 733,080	$ 1,172,682	$ (439,602)	-37%	$ 116,412	$ 176,491	$ (60,079)	16%	15%	1%	**Cost:** - Increase work plan to 4 years **Contingency:** - No significant variances
General Site Area	$ 1,561,800	$ 1,562,040	$ (240)	0%	$ 156,180	$ 156,204	$ (24)	10%	10%	0%	**Cost:** - No significant variances **Contingency:** - No significant variances
Sealift	$ 4,357,712	$ 4,353,868	$ 3,844	0%	$ 447,581	$ 446,597	$ 984	10%	10%	0%	**Cost:** - No significant variances **Contingency:** - No significant variances
Camp Operation	$ 7,029,636	$ 7,030,577	$ (941)	0%	$ 866,142	$ 866,236	$ (94)	12%	12%	0%	**Cost:** - No significant variances **Contingency:** - No significant variances
Environmental Monitoring	$ 305,500	$ 303,636	$ 1,864	1%	$ 73,950	$ 73,732	$ 218	24%	24%	0%	**Cost:** - No significant variances **Contingency:** - No significant variances
Subtotal - cash costs excluding Contingency	**$ 21,235,810**	**$ 20,525,691**	**$ 710,119**	**3%**	**$ 2,724,394**	**$ 2,644,852**	**$ 79,542**	**13%**	**13%**	**0%**	

2012 ABANDONMENT AND RECLAMATION PLAN
FOR ADVANCED EXPLORATION ACTIVITIES

Appendix G-3
Cost Estimation Details for Closure

2012 A&R Plan Cost Estimation Details for Closure

Project Site Abandonment	Labor				Equipment													
		# Units	Unit Rate	Cost	Units	# Units	Unit Rate	Cost	Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency (%)	Contingency	Basis for 2012 Contingency	Basis for 2012 Estimate
Grand Total				$ 37,206				$11,900	$49,106	$49,106	$ -	$ -	$ -	$ -	8%	$4,146		
Pre-abandonment shutdown	Person Day	1		$ -				$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -		Operations Manager, officers of the company and Board of Directors have a legal requirement and personally liability to ensure the health & safety of employees and the security of the site to prevent any short term adverse effect on the environment. Water, sewage, fuel, power & hazardous material will be secured before site is abandoned. This work will be conducted by Baffinland Staff prior to abandonment and carries not cost
Drain, isolate and secure camp water systems	Person Day	1		$ -	Hours			$ -	$ -						0%	$ -		
Drain, isolate and secure Camp sewage treatment plant, lines and lagoons	Person Day	1		$ -	Hours			$ -	$ -						0%	$ -		
Drain, isolate and secure all local fuel storage supply systems	Person Day	1		$ -	Hours			$ -	$ -						0%	$ -		
Isolate and secure all bulk fuel storage systems such that tanks and bladders are isolated and contained within secondary containment	Person Day	1		$ -	Hours			$ -	$ -						0%	$ -		
Secure all barreled fuel in secondary containment	Person Day	1		$ -	Hours			$ -	$ -						0%	$ -		
Secure all hazardous waste in secondary containment	Person Day	1		$ -	Hours			$ -	$ -						0%	$ -		
Isolate and safely secure all mechanical and electrical elements.	Person Day	1		$ -	Hours			$ -	$ -						0%	$ -		

Bulk Sample Pit	Labor				Equipment													
	Units	# Units	Unit Rate	Cost	Units	# Units	Unit Rate	Cost	Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency (%)	Contingency ($)	Basis for 2012 Contingency	Basis for 2012 Estimate
Grand Total																		
Decommission bulk sample pit	Person Day	0	$ -	$ -	Hours	0	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	0%	$ -		
Remedial blasting for stability	Person Day	0	$ -	$ -	Hours	0	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	0%	$ -		Pit was assessed as stable in 2008 as per the Nunavut WCSS Mine Inspectors Report. Berms restricting vehicle access to the edge of the mountain constructed in 2008. No blasting required. See Report in Appendix G-4, 2012 A&R Plan Estimating Docs\Bulk Sample Pit\WSCC Inspection of Bulk Sample Pit
Remedial excavation for stability	Person Day	0	$ -	$ -	Hours	0	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	0%	$ -		Pit was assessed as stable in 2008 as per the Nunavut WCSS Mine Inspectors Report. Berms restricting vehicle access to the edge of the mountain constructed in 2008. No remedial excavation required. See Report Appendix G-4, 2012 A&R Plan Estimating Docs\Bulk Sample Pit\WSCC Inspection of Bulk Sample Pit
Runoff diversion around top of pit	Person Day	0	$ -	$ -	Hours	0	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	0%	$ -		Documented visual observations conducted during the 2009/2010 freshets confirmed that the pit is free draining during all stages of the freshet melt and through seasonal rain fall events . See photo demonstrating free draining status during freshet Appendix G-4, 2012 A&R Plan Estimating Docs\Bulk Sample Pit\July 6 09 bulk sample bench photo - free draining 2009-2010 results of effluent seepage from the pit are below the water license effluent criteria and the concentration limits listed under Schedule 4 of the Metal Mines Effluent Regulations (MMER) indicating surface runoff quality should remain stable. Monitoring will continue but no reclamation activity has been costed. See detailed summary in A&R plan Section 4.2.3
Decommission explosives magazine	Person Day	0	$ -	$ -	Hours	0	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	0%	$ -		All explosives decommissioned in 2010. No further decommissioning of magazines required.

Minearl Exploration Areas (Dep. 1-3)		Labor				Equipment													
	Year	Units	# Units	Unit Rate	Cost	Units	# Units	Unit Rate	Cost	Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency (%)	Contingency	Basis for 2012 Contingency	Basis for 2012 Estimate
Grand Total					***$19,028***				***$64,695***	***$83,723***	***$ -***	***$ -***	***$83,723***	***$ -***	***$ -***	***10%***	***$8,582***		
Decommission mineral exploration areas	3				$19,028				$64,695	$83,723	$ -	$ -	$83,723	$ -	$ -		$8,582		
Remove water lines from exploration areas	3	Person Day	12	$439	$5,268	Hours	6	$1,590	$9,540	$14,808			$14,808			15%	$2,221	Quantities and scope are well defined	4 person crew - 3 days. Assume general labour used. See Appendix G-3, 2012 A&R Schedule of Labour,. 6 hours helicopter time to sling down water lines from Deposit #1 . The water lines have been packaged and moved numerous time. Estimate based on historical productivity to package and move piping.
Drill holes filled and residual casings cut	3	Person Day	4	$439	$1,756	Hours	18	$1,590	$28,620	$30,376			$30,376			5%	$1,519	Quantities, scope and productivity are well defined. Equipment hours assigned to task at double the historical rate for holes spaced closely together. A conservative 5% contingency has been applied.	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 kilometers 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. For General labour and helicopter rates see Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Level pads, backfill sumps and grade to natural contours	3	Person Day	5	$996	$4,980	Hours	60	$217	$13,020	$18,000			$18,000			15%	$2,700	Quantities and scope are well defined. A 15% contingency has been applied to address risk of extended excavator travel time between holes	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. See Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Prepare core for long-term site storage adjacent to airstrip	3	Person Day	4	$439	$1,756	Hours		$0	$0	$1,756			$1,756			15%	$263	Task is essentially complete. A 15% contingency is adequate to cover what is now a small task.	All of the exploration core was moved in to containers for permanent storage in 2010. An allowance has been made to containerized the working inventory of core not containerized under an abandonment scenario. General labour rates applied. See Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Inspection and final reclamation of exploration drill hole locations	3	Person Day	2	$439	$878	Hours	6.5	$1,590	$10,335	$11,213			$11,213			10%	$1,121	Quantities and scope are well defined. A 10% contingency is appropriate for the scope	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. See Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Decommission salt mixing stations	3	Person Day	10	$439	$4,390	Hours	2	$1,590	$3,180	$7,570			$7,570			10%	$757	Quantities and scope are well defined. A 10% contingency is appropriate for the scope.	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. See Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table

Remote Sites		Labor				Equipment													
	Year	Units	# Units	Unit Rate	Cost	Units	# Units	Unit Rate	Cost	Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency (%)	Contingency	Basis for 2012 Contingency	Basis for 2012 Estimate
Grand Total					**$ 15,024**				**$ 87,768**	**$ 102,792**	**$ -**	**$ -**	**$ 102,792**	**$ -**	**$ -**	**9%**	**$9,402**		
Inspection and final reclamation of geotechnical drill holes and test pit locations	3	Person Day	10	$439	$ 4,390	Hours	33	$ 1,590	$ 52,470	$ 56,860			$ 56,860			10%	$ 5,686	Quantities & scope are well defined including the location & number of drill holes and reclamation productivity based on 50% of holes completed. A 10% contingency is deemed appropriate.	2012 Estimate based on actuals labour & helicopter hours to complete exactly half of the holes in 2009 . Assume Helicopter hours = 0.27 hours/hole . See Appendix G-4, 2012 A&R Plan Estimating Docs\Remote Sites\Geotech Hole Reclamation Completion Report rev 2_Sept with attachments file for detailed scope of holes requiring reclamation (PDF file), reclamation costs and helicopter utilization assumptions (Excel spreadsheets embedded in PDF). 10 additional helicopter hours added to the 23 hours required to cover additional mobilization time to the south end of the rail alignment.
Removal of casing/thermistors	3	Person Day	6	$439	$ 2,634	Hours	16.2	$ 1,590	$ 25,758	$ 28,392			$ 28,392			10%	$ 2,839	Quantities & scope are well defined including the location & number of thermistors. Scope is the same as geotechnical holes and actual unit costs were derived from the completion of a large number of geotech holes reclaimed in 2009. A 10% contingency is appropriate	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 = 6 man days. Scope to be completed by helicopter with general labour support. See Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Decommissioning of meteorological stations (3)	3	Person Day	6	$800	$ 4,800	Hours	3	$ 1,590	$ 4,770	$ 9,570			$ 9,570			5%	$ 479	Scope is well defined and stations are located adjacent to the camps - a 5% no contingency has been applied.	Assume 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. See Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Decommissioning of hydrology stations (4)	3	Person Day	4	$800	$ 3,200	Hours	3	$ 1,590	$ 4,770	$ 7,970			$ 7,970			5%	$ 399	Stations are small units that fit inside the aircraft. Locations are well established. Helicopter hours 50% larger than calculated. A 5% contingency has been applied	Labour budget 2 persons for 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. See Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Removal of current meter in Steensby Inlet		Person Day			$ -	Hours			$ -	$ -	$ -								The battery for the buoy release mechanism on both units no longer have power. The units are no longer retrievable. No cost applied to task in 2012.

Stockpiles	Year	Labor				Equipment													
		Units	# Units	Unit Rate	Cost	Units	# Units	Unit Rate	Cost	Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency (%)	Contingency	Basis for 2012 Contingency	Basis for 2012 Estimate
Grand Total					***$113,295***				***$156,112***	***$269,407***	***$ -***	***$ -***	***$269,407***	***$ -***	***$ -***	***10%***	***$26,941***		
Mary River Stockpiles	**3**				**$38,097**				**$48,784**	**$86,881**	**$ -**	**$ -**	**$86,881**	**$ -**	**$ -**		**$8,688**		
Grade weathered ore stockpiles at crusher area	3	Person Day	7	$996	$6,972	Hours	84	$176	$14,784	$21,756			$21,756			10%	$2,176	Scope and quantities are well defined. Labour productivity is based on 4 years of civil construction in the arctic. In light of the multi year geochemical results, a contingency of 10 % has been applied.	28,800 tonnes Deposit #1 and 31,900 tonnes at the crusher pad. Estimate 7 days of D8 dozer to level and contour the stockpiles. Stockpile volumes have been surveyed (See Appendix B-2 for surveyed as built and Appendix G-4, 2012 A&R Plan Estimating Docs\Stockpiles\Ore Stockpile volume calculations) Labour and equipment productivity is well established based on 4 year of civil construction at site. See Operator Labour & Equipment rates in Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Haul and place cover on ore pad area at Mary River	3	Person Day	31.25	$996	$31,125	Hours	250	$136	$34,000	$65,125			$65,125			10%	$6,513		Specify Cover thickness of 0.5 m. Approximate footprint of Mary River Stockpile 24,500 m2 (Figure 2.2). Assume slopes 2H:1V approximate surface area of 27,500 m2. Required volume of 13,750m3. KP calcs - 13750 m3/32.52 cubes/truck = 423 trips/17 trips/day (@40 minutes per trip) = 25 man days. Assume 4 trucks and 1 dozer = 6.25 days total labour 31.25 days. Overburden unit rate of $5/m3 total cost of $68,750.
Milne Inlet Stockpiles	**3**				**$75,198**				**$107,328**	**$182,526**	**$ -**	**$ -**	**$182,526**	**$ -**	**$ -**		**$18,253**		
Grade residual ore stockpiles at Milne Inlet	3	Person Day	6	$996	$5,976	Hours	72	$176	$12,672	$18,648			$18,648			10%	$1,865	Scope and quantities are well defined. Labour productivity is based on 4 years of civil construction in the arcticy. In light of the multi year geochemical results, a contingency of 10 % has been applied.	Lump stockpile is 2900 cubes and fines 1060. Dozer the stockpiles across pad area will increase pad height by 0.44m (2900+1060/8674 {area of pad}). Maximum height of pad will be 2.44 meters. Assume 3 days dozer & loader operation. Stockpile volumes have been surveyed (See Appendix B-2 for surveyed as built and Appendix G-4, 2012 A&R Plan Estimating Docs\Stockpiles\Ore Stockpile volume calculations.) Labour and equipment productivity is well established based on 4 year of civil construction at site. See Operator Labour & Equipment rates Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Haul and place cover on ore pad area at Milne Inlet	3	Person Day	69.5	$996	$69,222	Hours	696	$136	$94,656	$163,878			$163,878			10%	$16,388		Specify Cover thickness of 0.5 m. Approximate footprint of Mary River Stockpile 68,500 m2 (Figure 2.2). Assume slopes 2H:1V approximate surface area of 76,500 m2. Required volume of 38,250 m3. KP calcs - 38,250 m3/32.52 cubes/truck = 1176 trips/17 trips/day (@40 minutes per trip) = 69.5 man days. Assume 4 trucks and 1 dozer = 17.4 days total labour 86.9 days. Overburden unit rate of $5/m3 total cost of $191,250.

Camp and Related Facilities	Year	Labor				Equipment												Basis for 2012 Contingency	Basis for 2012 Estimate
		Units	Person	Unit Rate	Cost	Units	Equip Hrs	Unit Rate	Cost	Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency (%)	Contingency		
Grand Total					***$987,436***				***$815,188***	***$1,802,624***	***$0***	***$560,568***	***$1,238,652***	***$3,404***	***$0***	***14%***	***$260,334***		
Site Contractor Decommissioning and Demob - Mary River Camp	**2**		**213.5**		**$216,132**				**$101,724**	**$317,856**	**$ -**	**$ 317,856**	**$ -**	**$ -**	**$ -**		**$47,678**		
Decommission/Package mobile equipment	2	Person Day	160	$996	$159,360	Hours	80	$138	$11,040	$170,400	$ -	$ 170,400	$ -	$ -	$ -	15%	$25,560	Individual equipment & material were estimated based on detailed material balance of volumes shipped to, consumed at and backhauled from Mary River camp and cost estimates developed. Although the scope of work is well defined, there is some risk to the estimate in terms of the productivity (time requirements). Hence a 15% contingency is warranted to cover a potentially larger number of hours to complete the work.	Assume 45 man days for decommissioning and packaging Nuna & mobile equipment & Boart equipment. Mobile Equipment must remain functional to demobilize on to Mary River therefore requires minimal decommissioning. Estimate based on Contractor equipment list and operator labour rates - Appendix G-3,2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Ship material by land to Milne Inlet for shipment	2	Person Day	57	$996	$56,772	Hours	687	$132	$90,684	$147,456	$ -	$ 147,456	$ -	$ -	$ -	15%	$22,118		Estimate split in to two tasks. Approximately 50% of the calculated volume is Nuna & Boart owned assets. Estimate split evenly between the decommissioning and demob of Nuna equipment and the remainder of equipment and material in Year 3. Assume equipment rates reflect actual utilization. 75% truck & 25% loader. Recalculated based on reduced salvage volume. Labour & equipment requirements calculated from volume estimates derived from detailed 'Material Balance' worksheet and historical site labour and productivity. All 'Material Balance' volumes based on sealift volume balance supported by sealift transportation provider volume data from 2006 to 2011 (See Appendix G-3 for 2012 Material and Sealift Balance table and Appendix G-4, 2012 A&R Plan Estimating Docs\Sealift for all sealift and backhaul sealift manifests) 6568/38 cubes/truck/ 2 truck trips/shift= 86 person shifts + 25% for loader support = 107 person shifts. 107 person shifts & 1284 equipment hours; Estimate based on Contractor equipment list and operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Decommissioning Mary River camp	**3**		**241**		**$329,768**				**$303,408**	**$633,176**	**$ -**	**$ -**	**$ 633,176**	**$ -**	**$ -**		**$85,206**		
Decommission 100 man Weatherhaven camp	3	Person Day	42	$996	$41,832	Hours	504	$147	$74,088	$115,920	$ -	$ -	$ 115,920	$ -	$ -	15%	$17,388	Individual equipment & material were estimated based on detailed material balance of volumes shipped to, consumed at and backhauled from Mary River camp and cost estimates developed. Although the scope of work is well defined, there is some risk to the estimate in terms of the productivity (time requirements). Hence a 15% contingency is warranted to cover a potentially larger number of hours to complete the work.	Assume land filled - excavator, loader & 4 trucks 7 days. 6 men * 7 days = 42 man days * 12 hours equipment =504. Estimate based on well defined scope, labour & equipment rates and operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Decommission/Package stand alone accommodation/work tent camp (26 Weatherhaven tents)	3	Person Day	12	$996	$11,952	Hours	144	$147	$21,168	$33,120	$ -	$ -	$ 33,120	$ -	$ -	15%	$4,968		Assume land filled - excavator, loader & 4 trucks 2 days. 6 men* 2 days =12 man days * 12 hours equipment =144 Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Decommission/Package stand alone accommodation/work tent camp (11 Norseman tents)	3	Person Day	12	$996	$11,952	Hours	144	$152	$21,888	$33,840	$ -	$ -	$ 33,840	$ -	$ -	15%	$5,076		Assume land filled - excavator, loader & 4 trucks 2 days. 6 men* 2 days =12 man days * 12 hours equipment =144 Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
~~Decommission concrete sewage tanks~~										$0	$ -	$ -	$ -	$ -	$ -		$0	Scope well defined and time requirement is short	Progressively Rehabilitated
Burn appropriate materials or Landfill	3	Person Day	60	$996	$59,760	Hours	720	$141	$101,520	$161,280	$ -	$ -	$ 161,280	$ -	$ -	15%	$24,192	Scope volume and haul distances are short and cycle times well defined. Additional allowances included for bulking factors and multiple locations even though distances are short. A 15% contingency is considered appropriate.	Estimated volume required to burn or landfill = 9282m3. See Appendix G- 3, 2012 Mary River Project A & R Plan Material Balance, Total Mary River waste destined for land fill or to be burned. Assume the following productivity. Bulk up volume by 15% to account for expansion from shipping volume. = 10674 m3. - Kenworth truck round trip haul & load time =0.5 hours, a 4 truck fleet and 10.5 hours/day hauling.- Assume D7 and 345 excavator working full time to support demolition and loading.- Man haul days = 10674/27 cubes/truck/10.5 hrs/day/0.5hrs/trip= 19 man days @ 4 trucks/day = 5 day. Assume Supporting equipment required = D7 & 345 & 980 loader for demolition and loading and a D7 dozer for compaction at landfill = 5 haul days * 4 supporting equipment = 20 man days. Assume because this is the majority of bulk movement of material there are multiple small areas requiring consolidation an additional 50% increase in labour = 30 haul track man days and 30 support man haul days. Assume weighted equipment rate

Camp and Related Facilities	Year	Labor				Equipment				Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency (%)	Contingency	Basis for 2012 Contingency	Basis for 2012 Estimate
		Units	Person	Unit Rate	Cost	Units	Equip Hrs	Unit Rate	Cost										
Ship material by land to Milne Inlet for sealift Yr. 3	3	Person Day	107	$996	$106,572	Hours	642	$132	$84,744	$191,316	$ -	$ -	$ 191,316	$ -	$ -	15%	$28,697		Estimate split in to two tasks. Approximately 50% of the calculated volume is Nuna owned assets. Estimate split evenly between the decommissioning and demob of Nuna equipment and the remainder of equipment and material in Year 3. Revised equipment rates to reflect actual utilization. 75% truck & 25% loader. Recalculated based on reduced salvage volume. Calculated labour & equipment from L14 'Material Balance' 6568/38 cubes/truck/ 2 truck trips/shift= 86 person shifts + 25% for loader support = 107 person shifts. 107 person shifts & 1284 equipment hours;
Electrical Support for all decommissioning work at Mary River and Milne Inlet	3	Person Months	4	$24,425	$97,700				$0	$97,700	$ -	$ -	$ 97,700	$ -	$ -	5%	$4,885	Estimate based on Invoice support for a qualified ticketed electrician. Electrical decommissioning is expected to be completed in less than 2 months. A full four month cost has been applied. A 5% contingency is deemed adequate	Estimate based on contract Labour rate for 1 electrician continuously employed through May through August of Year 3 to support the decommissioning of the Mary River and Milne Inlet camp electrical systems and disconnect power from the Steensby and Midrail camps. See Appendix G-4, 2012 A&R Plan Estimating Docs\Camps\Procon Electrical Baffinland Iron - Mary River Project 2011 for quote) Hourly rates equivalent to $6130/week or $24,425/month. Electrical decommissioning expected to take 2 months. Additional two months costed for general support
Organize material for shipment	**2**		**106**		**$74,473**				**$46,116**	**$120,589**	**$ -**	**$ 120,589**	**$ -**	**$ -**	**$ -**		**$18,088**		
Boart	2	Person Day	28	$800	$22,400	Hours	48	$66	$3,168	$25,568	$ -	$ 25,568	$ -	$ -	$ -	15%	$3,835		Assume 1 week * 4 men + part time skid steer . Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Nuna	2	Person Day	14	$958	$13,412	Hours	72	$125	$9,000	$22,412	$ -	$ 22,412	$ -	$ -	$ -	15%	$3,362		Package Nuna containers, & miscellaneous material for shipping . Assume two warehousemen * 2 weeks & mobile hours part time. Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Package BIM sea cans for backhaul	2	Person Day	15	$439	$6,585	Hours	18	$66	$1,188	$7,773	$ -	$ 7,773	$ -	$ -	$ -	15%	$1,166	Individual equipment & material were estimated based on detailed material balance of volumes shipped to, consumed at and backhauled from Mary River camp and cost estimates developed. Although the scope of work is very well defined, there is some risk to the estimate in terms of the productivity estimate (time requirements). Hence a 15% contingency is warranted to cover a potentially larger number of hours to complete the work.	Assume majority of low value inventory to be land filled/burned. BIM inventory to be backhauled is relatively small - CAT parts etc. Revised equipment rate to reflect use of contractor owned equipment. Increase by 1.5 times to account for additional sea cans (previously 40 now 60) General labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Decommission/Package 3 shops	2	Person Day	24	$439	$10,536	Hours	72	$125	$9,000	$19,536	$ -	$ 19,536	$ -	$ -	$ -	15%	$2,930		Assume CH & Nuna shops packaged. BIM Quonset is land filled. Assume 3 men @4 days/shop + 1 mobile equipment 3 days/shop. General labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Decommission/Package related infrastructure (lines, piping, associated small buildings)	3	Person Day	30	$718	$21,540	Hours	180	$132	$23,760	$45,300	$ -	$ -	$ 45,300	$ -	$ -	15%	$6,795		100 man camp genset isolated. Water lines /sewage cut in 30 foot lengths and landfilled. Assume 3 men 7 days + boom truck Existing electrical cables land filled. Excavator required to trench for cable recovery. All small buildings demolished in bulk and shipped to landfill. Assume 3 days each of excavator & loader & haul truck time for demolition of small wooden buildings (9 man days & 180 equipment hours).. Labour updated to reflect 50% general labourer & 50% Operators. Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
General site cleanup	**3**		**73**		**$36,503**				**$6,528**	**$43,031**	**$ -**	**$ -**	**$ 43,031**	**$ -**	**$ -**		**$6,455**		
Loader use for redirecting coarse clean up streams	3	Person Day	8	$996	$7,968	Hours	96	$68	$6,528	$14,496	$ -	$ -	$ 14,496	$ -	$ -	15%	$2,174	Individual facilities were identified at the Mary River camp and cost estimates developed. Although the scope of work is very well defined, there is some risk to the estimate in terms of the productivity estimate (time requirements). Hence a 15% contingency is warranted to cover a potentially larger number of hours to complete the work.	Use loader to clean up coarse waste streams (burn/landfill). Assume 8 days of loader time to clean up coarse waste. Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Clean up residual fine waste on ground	3	Person Day	65	$439	$28,535	Hours	0	$0	$0	$28,535	$ -	$ -	$ 28,535	$ -	$ -	15%	$4,280		Use Bull gang (labourers) to walk the entire site with half ton truck support to hand pick fine waste from ground and move to landfill. Assume 10 labourers walking + 3 driving for 5 days. Truck rates covered in general camp decommissioning. General labour rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .

Camp and Related Facilities	Year	Labor				Equipment				Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency (%)	Contingency	Basis for 2012 Contingency	Basis for 2012 Estimate
		Units	Person	Unit Rate	Cost	Units	Equip Hrs	Unit Rate	Cost										
Contouring & grading	**3**		**25**		**$24,900**				**$41,424**	**$66,324**	**$ -**	**$ -**	**$ 66,324**	**$ -**	**$ -**		**$9,949**		
Coarse contouring - Dozer	3	Person Day	10	$996	$9,960	Hours	120	$149	$17,880	$27,840	$ -	$ -	$ 27,840	$ -	$ -	15%	$4,176	Individual facilities were identified at the Mary River camp and cost estimates developed. Although the scope of work is well defined, there is some risk to the estimate in terms of the productivity estimate (time requirements). Hence a 15% contingency is warranted to cover a potentially larger number of hours to complete the work.	Dozer work for uncounted gray water pits and 100 man camp pad. (assume entire tote road, & landfill road to remain in operating condition). Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Coarse contouring - loader & excavator	3	Person Day	8	$996	$7,968	Hours	96	$149	$14,304	$22,272	$ -	$ -	$ 22,272	$ -	$ -	15%	$3,341		Loader & excavator hours road to camp lake & other minor work. Assume 4 man days each. Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Final grading	3	Person Day	7	$996	$6,972	Hours	84	$110	$9,240	$16,212	$ -	$ -	$ 16,212	$ -	$ -	15%	$2,432		Assume 7 days of grader operation. Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Decommission Refuge Sites	**3**		**2**		**$1,992**				**$904**	**$2,896**	**$ -**	**$ -**	**$ 2,896**	**$ -**	**$ -**		**$145**		
Decommission refuge sites	3	Person Day	2	$996	$1,992	Hours	8	$113	$904	$2,896	$ -	$ -	$ 2,896	$ -	$ -	5%	$145	Scope well defined and time requirement is short	Labour & equipment to complete work - 2 sites on tote road. Equipment rate updated to reflect use of haul truck and Loader. Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Site Contractor Decommissioning and Demob - Milne Inlet Camp	**2**		**70**		**$71,440**				**$20,388**	**$91,828**	**$ -**	**$ 91,828**	**$ -**	**$ -**	**$ -**		**$13,774**		
Decommission/Package Shanco Camp (10 trailers)	2	Person Day	40	$898	$35,920	Hours	48	$166	$7,968	$43,888	$ -	$ 43,888	$ -	$ -	$ -	15%	$6,583	Individual facilities were identified at the Milne Inlet camp and cost estimates developed. Although the scope of work is well defined, there is some risk to the estimate in terms of the productivity estimate (time requirements). Hence a 15% contingency is warranted to cover a potentially larger number of hours to complete the work.	Labour rate updated to reflect 50/50 shanco tech & Nuna HEO. Equip. rate reflects 75/25 use of D7 & excavator. . Entire camp was installed in 2 days with a dozer & a crane. Upon completion of labour, skidding of camp to beach lay down area can be accomplished in less time than assembly. Assume 36 hours D7 and 12 excavator. Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Decommission remaining mobile equipment	2	Person Day	30	$1,184	$35,520	Hours	90	$138	$12,420	$47,940	$ -	$ 47,940	$ -	$ -	$ -	15%	$7,191	Estimate a based on list or remaining contractor equipment at site. Although the scope of work is well defined, there is some risk to the estimate in terms of the productivity estimate (time requirements). Hence a 15% contingency is warranted to cover a potentially larger number of hours to complete the work.	2012 estimate reflecting the reduced quantity of equipment present at Milne Inlet and demobilized in previous years and historical mechanic labour to execute sealift demobilization. Mechanic labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Decommission Milne Inlet camp (4 month operation @ Avg 4 person/day)	**3**		**52**		**$50,680**				**$81,696**	**$132,376**	**$ -**	**$ -**	**$ 132,376**	**$ -**	**$ -**		**$19,856**		
Decommission/Package other stand alone work tents (9 wood structure tents)	4	Person Day	4	$718	$2,872	Hours	24	$164	$3,936	$6,808	$ -	$ -	$ -	$ 6,808	$ -	15%	$1,021	Individual facilities were identified at the Milne Inlet camp and cost estimates developed. Although the scope of work is well defined, there is some risk to the estimate in terms of the productivity estimate (time requirements). Hence a 15% contingency is warranted to cover a potentially larger number of hours to complete the work.	Remove canvass & burn. Assume 4 guys 1 day + excavator & haul truck for wood to burn. Equipment rates updated to reflect 50/50 use of excavator & haul truck. Operator labour & equipment rates - Appendix G- 3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Truck waste from Milne Inlet Camp to Mary River Camp for land filling	3	Person Day	48	$996	$47,808	Hours	576	$135	$77,760	$125,568	$ -	$ -	$ 125,568	$ -	$ -	15%	$18,835	Scope volume and haul distances are short and cycle times well defined. Additional allowances included for bulking factors and multiple locations, even though distances are short. A 15% contingency is considered appropriate.	Estimated volume required to burn or landfill =1075m3. See Appendix G- 3, 2012 A&R Plan Material Balance, Total Milne Inlet waste destined for land fill or to be burned. Assume the following productivity. Bulk up volume by 20% to account for expansion from shipping volume. =1290 m3. - Kenworth truck round trip haul & load time =5.5 hours, a 4 truck fleet and 11 hours/day hauling.- Assume D7 and 345 excavator working full time to support demolition and loading.- Man haul days = 1290/27 cubes/truck/11 hrs/day/5.5hrs/trip= 24 man days @ 4 trucks/day = 6 days. Assume Supporting equipment required = D7 & 345 =6haul days *2 supporting equipment = 12 man days. Assume because this is the majority of bulk movement of material there are multiple small areas requiring consolidation an additional 50% increase in labour for haul trucks= 36 haul track man days and 12 support man haul days=48 man days total Assume weighted equipment rate based on equipment used.
Organize material for shipment	**3**		**108**		**$82,922**				**$22,968**	**$105,890**	**$ -**	**$ -**	**$ 105,890**	**$ -**	**$ -**		**$15,884**		

Camp and Related Facilities	Year	Labor				Equipment				Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency (%)	Contingency	Basis for 2012 Contingency	Basis for 2012 Estimate
		Units	Person	Unit Rate	Cost	Units	Equip Hrs	Unit Rate	Cost										
Nuna	2	Person Day	42	$958	$40,236	Hours	72	$67	$4,824	$45,060	$ -	$ 45,060	$ -	$ -	$ -	15%	$6,759	Individual equipment & material were estimated based on detailed material balance of volumes shipped to, consumed at and backhauled from Milne Inlet camp and cost estimates developed. Although the scope of work is very well defined, there is some risk to the estimate in terms of the productivity estimate (time requirements). Hence a 15% contingency is warranted to cover a potentially larger number of hours to complete the work.	Package Nuna containers, & miscellaneous material for shipping . Assume 1 warehousemen 6 weeks. Labour & Equipment rates updated. Equipment assumes 50/50 use of bobcat & 930 loader. Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
BIM Barge Loader	2	Person Day	12	$958	$11,496	Hours	24	$166	$3,984	$15,480	$ -	$ 15,480	$ -	$ -	$ -	15%	$2,322		Requires Vendor to supply 2 persons for 4 days + 1 mobile equipment operator & Crane. Apply the Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Decommission/Package 1 shops	2	Person Day	20	$600	$12,000	Hours	48	$78	$3,744	$15,744	$ -	$ 15,744	$ -	$ -	$ -	15%	$2,362		Assume manpower & equipment hours to decommission shop & lined floor. Assume 4 men for 5 days with 4days loader support. Equipment rate revised to reflect use of contractor owned bob cat for disassembly and 12 hours use of Nuna loader to remove sand cover & liner. Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Decommission/Package related infrastructure (lines, piping, associated small buildings)	2	Person Day	38	$505	$19,190	Hours	48	$217	$10,416	$29,606	$ -	$ 29,606	$ -	$ -	$ -	15%	$4,441		Shanco camp genset isolated. No permanent Water lines. Sewage lines disassembled and land filled. No water lines. Excavator required to trench for cable recovery. Electrical cables land filled. . All small buildings demolished in bulk and shipped to landfill. Labour revised to 3 labourers for 10 days and equipment remains the same as costed, description changed to match costing - 4 days excavator Additional hours to decommission the extra incinerator at the site. Based on the labour costs for Mid Rail camp (~$2000). Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
General site cleanup	**3**		**31**		**$16,394**				**$6,900**	**$23,294**	**$ -**	**$ -**	**$ 23,294**	**$ -**	**$ -**		**$3,494**		
Loader use for redirecting coarse clean up streams	3	Person Day	5	$996	$4,980	Hours	60	$115	$6,900	$11,880	$ -	$ -	$ 11,880	$ -	$ -	15%	$1,782	Individual facilities were identified at the Milne Inlet camp and cost estimates developed. Although the scope of work is well defined, there is some risk to the estimate in terms of the productivity estimate (time requirements). Hence a 15% contingency is warranted to cover a potentially larger number of hours to complete the work.	Use loader to clean up coarse waste steams (burn/landfill). Assume 5 days of loader time to clean up coarse waste. Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Clean up residual fine waste on ground	3	Person Day	26	$439	$11,414	Hours	0	$0	$0	$11,414	$ -	$ -	$ 11,414	$ -	$ -	15%	$1,712		Use Bull gang (labourers) to walk the entire site with half ton truck support to hand pick fine waste from ground and move to landfill. Assume 10 labourers walking + 3 driving + 3 half tons. 2 days. Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Contouring & grading	**3**		**12**		**$10,368**				**$21,120**	**$31,488**	**$ -**	**$ -**	**$ 31,488**	**$ -**	**$ -**		**$4,723**		
Coarse contouring - Dozer	3	Person Day	4	$996	$3,984	Hours	48	$149	$7,152	$11,136	$ -	$ -	$ 11,136	$ -	$ -	15%	$1,670	Individual facilities were identified at the Mary River camp and cost estimates developed. Although the scope of work is well defined, there is some risk to the estimate in terms of the productivity estimate (time requirements). Hence a 15% contingency is warranted to cover a potentially larger number of hours to complete the work.	Dozer work for camp roads & other minor work. Assume 4 days. Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Coarse contouring - loader & excavator	3	Person Day	4	$996	$3,984	Hours	48	$166	$7,968	$11,952	$ -	$ -	$ 11,952	$ -	$ -	15%	$1,793		Loader & excavator hours - Contour camp roads & other minor work. Assume2 man days each. Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Final grading	3	Person Day	4	$600	$2,400	Hours	48	$125	$6,000	$8,400	$ -	$ -	$ 8,400	$ -	$ -	15%	$1,260		Assume 4 days of grader operation. Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Decommission Mid - Rail Camp (14 days @ 6 man camp)	**3**		**76**		**$33,364**				**$95,400**	**$128,764**	**$ -**	**$ -**	**$ 128,764**	**$ -**	**$ -**		**$19,315**		
Decommission/Package stand alone accommodation/work tent camp	3	Person Day	36	$439	$15,804	Hours			$0	$15,804	$ -	$ -	$ 15,804	$ -	$ -	15%	$2,371	Individual facilities were identified at the Milne Inlet camp and cost estimates developed. Although the scope of work is very well defined, there is some risk to the estimate in terms of the productivity estimate (time requirements). Hence a 15% contingency is warranted to cover a potentially larger number of hours to complete the work.	(18 wood structure tents) Assumes 6 man crew 6 days to completely decommission the camp. Assume 1 working supervisor & 5 labourers. General labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Decommission/Package genset and incinerator	3	Person Day	4	$439	$1,756	Hours			$0	$1,756	$ -	$ -	$ 1,756	$ -	$ -	15%	$263		
Decommission tent camp and related infrastructure (lines, piping, associated buildings)	3	Person Day	8	$439	$3,512	Hours			$0	$3,512	$ -	$ -	$ 3,512	$ -	$ -	15%	$527		
Decommission lay down areas	3	Person Day	2	$439	$878	Hours			$0	$878	$ -	$ -	$ 878	$ -	$ -	15%	$132		
General site cleanup	3	Person Day	6	$439	$2,634	Hours			$0	$2,634	$ -	$ -	$ 2,634	$ -	$ -	15%	$395		
Fly waste from Mid Rail Camp to Mary River Camp for landfilling	3	Person Day	20	$439	$8,780	Hours	60	$1,590	$95,400	$104,180	$ -	$ -	$ 104,180	$ -	$ -	15%	$15,627		
Decommission Steensby Inlet Camp (14 Days @ 6 man camp)	**3**		**86**		**$38,500**				**$66,612**	**$105,112**	**$ -**	**$ -**	**$ 105,112**	**$ -**	**$ -**		**$15,767**		

Camp and Related Facilities	Year	Labor				Equipment				Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency (%)	Contingency	Basis for 2012 Contingency	Basis for 2012 Estimate
		Units	Person	Unit Rate	Cost	Units	Equip Hrs	Unit Rate	Cost										
Decommission/Package stand alone accommodation/work tent camp (25 wood structure tents)	3	Person Day	48	$439	$21,072	Hours	36	$66	$2,376	$23,448	$ -	$ -	$ 23,448	$ -	$ -	15%	$3,517	Individual facilities and materials were identified at the Steensby camp and cost estimates developed. Although the scope of work is well defined, there is some risk to the estimate in terms of the productivity estimate (time requirements). Hence a 15% contingency is warranted to cover a potentially larger number of hours to complete the work.	Assume 6 man operation for 8 days . Equipment costed at 3rd party contractor rate. Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Decommission/package genset and incinerator	3	Person Day	4	$439	$1,756	Hours	4	$66	$264	$2,020	$ -	$ -	$ 2,020	$ -	$ -	15%	$303		Assume 4 persons 1 day, general labour and equipment cost. Equipment costed at 3rd party contractor rate. General labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Decommission related infrastructure (lines, piping, associated buildings)	3	Person Day	6	$439	$2,634	Hours	0	$66	$0	$2,634	$ -	$ -	$ 2,634	$ -	$ -	15%	$395		Assume 3 persons for 2 days. Equipment costed at 3rd party contractor rate. General labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Decommission lay down areas	3	Person Day	12	$439	$5,268	Hours	36	$66	$2,376	$7,644	$ -	$ -	$ 7,644	$ -	$ -	15%	$1,147		Assume 4 persons for 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 & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Decommission fuel storage (200 drums of fuel)	3	Person Day	2	$439	$878	Hours	12	$66	$792	$1,670	$ -	$ -	$ 1,670	$ -	$ -	15%	$251		Only 180 drums remain at the camp. Assume 2 man days labour, & equipment to re-strap partial pallets Equipment costed at 3rd party contractor rate. Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
General site cleanup	3	Person Day	6	$439	$2,634	Hours	24	$66	$1,584	$4,218	$ -	$ -	$ 4,218	$ -	$ -	15%	$633		Assume 3 persons 2 days. Equipment costed at 3rd party contractor rate. Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Decommission remaining mobile equipment (4 pieces)	3	Person Day	2	$812	$1,624	Hours	6	$66	$396	$2,020	$ -	$ -	$ 2,020	$ -	$ -	15%	$303		Assume 1 mechanic and one operator for 1 day to drain fuel tanks - This is the only requirement for sealift. Equipment costed at 3rd party contractor rate. Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Organize material for shipment and sealift support	3	Person Day	6	$439	$2,634	Hours	24	$66	$1,584	$4,218	$ -	$ -	$ 4,218	$ -	$ -	15%	$633		Assume 2 person for sealift support for 3 days. Assume Labour and equipment cost. Equipment costed at 3rd party contractor rate. Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Steensby Port resupply by Helicopter	3	Person Day	0	$0	$0	Hours	36	$1,590	$57,240	$57,240	$ -	$ -	$ 57,240	$ -	$ -	15%	$8,586		Hours are for removal of the floating dock and water line (12) + 12 hours/week *2 week demob+sealift support. See helicopter rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .

Roads and Airstrips	Year	Labor				Equipment													
		Units	Person	Unit Rate	Cost	Units	Equip Hrs	Unit Rate	Cost	Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency	Contingency	Basis for 2012 Contingency	Basis for 2012 Estimate
Grand Total					***$2,043,465***				***$1,126,200***	***$3,169,665***	***$0***	***$356,384***	***$604,091***	***$746,870***	***$1,462,320***	***12%***	***$380,360***		
Year 2 Freshet Management Field Activities 2		**480**			**$356,384**				**$0**	**$356,384**	**$0**	**$356,384**	**$0**	**$0**	**$0**		**$17,819**		
Direct Freshet Management Cost	2	Lot	1	$356,384	$356,384	Hours			$0	$356,384	$0	$356,384	$0	$0	$0	5%	$17,819	Includes significant culvert and road upgrades completed during the freshet period to reduce future maintenance requirements thus contains significant contingency. A 5% contingency has been applied	Cost estimate based on the highest annual total contractor expenditure for complete freshet management from the two documented and completed years (2009 & 2010). 2009 was the highest year and the contractor invoices for May ($175,808) + and June ($180,576) are attached are attached. Direct Freshet Management Cost includes: - Single lane snow removal from the Milne Inlet Tote Road. - Snow removal from the inlet and outlet of culverts as required - Steam cleaning of culverts as required. - Monitoring of drainage water flows throughout the freshet period and response to identified drainage issues - Road repairs as required. These annual expenditures included significant road upgrades and is thus considered an ultra conservative cost estimate for Freshet Management Only. This budget covers the period from the road being opened May 1 until Freshet ended on June 15 . 3rd party contractor all inclusive freshet costs for May and June are included in Appendix G-4, 2012 A&R Plan Estimating Docs\Roads & Airstrips\ Files - 2009 June Freshet invoice cost from 3rd party contractor and 2009 May Freshet invoice cost from 3rd party contractor
Year 3 Freshet Management Field Activities 3		**480**			**$356,384**				**$0**	**$356,384**	**$0**	**$0**	**$356,384**	**$0**	**$0**		**$17,819**		
Direct Freshet Management Cost	3	Lot	1	$356,384	$356,384	Hours			$0	$356,384	$0	$0	$356,384	$0	$0	5%	$17,819	Includes significant culvert and road significant culvert and road upgrades completed during the freshet period to reduce future maintenance requirements thus contains significant contingency. A 5% contingency has been applied	Cost estimate based on the highest annual total contractor expenditure for complete freshet management from the two documented and completed years (2009 & 2010). 2009 was the highest year and the contractor invoices for May ($175,808) + and June ($180,576) are attached are attached. Direct Freshet Management Cost includes: - Single lane snow removal from the Milne Inlet Tote Road. - Snow removal from the inlet and outlet of culverts as required - Steam cleaning of culverts as required. - Monitoring of drainage water flows throughout the freshet period and response to identified drainage issues - Road repairs as required. These annual expenditures included significant road upgrades and is thus considered an ultra conservative cost estimate for Freshet Management Only. This budget covers the period from the road being opened May 1 until Freshet ended on June 15 . 3rd party contractor all inclusive freshet costs for May and June are included in Appendix G-4, 2012 A&R Plan Estimating Docs\Roads & Airstrips\ Files - 2009 June Freshet invoice cost from 3rd party contractor and 2009 May Freshet invoice cost from 3rd party contractor
Year 4 Freshet Management Field Activities 4		**480**			**$356,384**				**$0**	**$356,384**	**$0**	**$0**	**$0**	**$356,384**	**$0**		**$17,819**		
Direct Freshet Management Cost	4	Lot	1	$356,384	$356,384	Hours			$0	$356,384	$0	$0	$0	$356,384	$0	5%	$17,819	Includes significant culvert and road upgrades completed during the freshet period to reduce future maintenance requirements thus contains significant contingency. A 5% contingency has been applied	Cost estimate based on the highest annual total contractor expenditure for complete freshet management from the two documented and completed years (2009 & 2010). 2009 was the highest year and the contractor invoices for May ($175,808) + and June ($180,576) are attached are attached. Direct Freshet Management Cost includes: - Single lane snow removal from the Milne Inlet Tote Road. - Snow removal from the inlet and outlet of culverts as required - Steam cleaning of culverts as required. - Monitoring of drainage water flows throughout the freshet period and response to identified drainage issues - Road repairs as required. These annual expenditures included significant road upgrades and is thus considered an ultra conservative cost estimate for Freshet Management Only. This budget covers the period from the road being opened May 1 until Freshet ended on June 15 . 3rd party contractor all inclusive freshet costs for May and June are included in Appendix G-4, 2012 A&R Plan Estimating Docs\Roads & Airstrips\ Files - 2009 June Freshet invoice cost from 3rd party contractor and 2009 May Freshet invoice cost from 3rd party contractor

Roads and Airstrips	Year	Labor				Equipment													
		Units	Person	Unit Rate	Cost	Units	Equip Hrs	Unit Rate	Cost	Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency	Contingency	Basis for 2012 Contingency	Basis for 2012 Estimate
MI Tote Road Operation					**$23,904**				**$31,680**	**$55,584**	**$0**	**$0**	**$55,584**	**$0**	**$0**		**$5,558**		
Operate Tote road for shipments	3	Person Day	24	$996	$23,904	Hours	288	$110	$31,680	$55,584	$0	$0	$55,584	$0	$0	10%	$5,558	The tote road operating grading requirements are based on 2 years of well established maintenance. A moderate contingency has been applied.	Basis for estimate revised based on 2009/2010 operating experience. Assume Road maintenance required for 10 weeks from June 30 until Sept 30 . 24 hours grading/week for 12 weeks.
#1 Deposit Haul Roads					**$64,242**				**$106,650**	**$170,892**	**$0**	**$0**	**$170,892**	**$0**	**$0**		**$25,602**		
Inspect and repair any erosion on #1 Deposit Rd. and cross grade road	3	Person Day	10	$996	$9,960	Hours	240	$138	$33,120	$43,080	$0	$0	$43,080	$0	$0	15%	$6,462	Scope is well defined with supporting as built drawings and documentation. A 15% contingency is deemed appropriate to address productivity estimates.	Assume grader hours to cross grade slope of road in to mountain side to prevent water flow to the outside of the road and control erosion. A conservative productivity estimate of the blended equipment use has been applied to the estimate. Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Stabilize inside ditches with cobble	3	Person Day	30	$996	$29,880	Hours	240	$138	$33,120	$63,000	$0	$0	$63,000	$0	$0	15%	$9,450		Majority of the ditches sections of the haul road have been stabilized. Stabilization of 500 meters of ditch with coarse and cobble have been costed. A conservative productivity estimate of the blended equipment use has been applied to the estimate. Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Remove round culverts, install water bars and stabilize water crossings	3	Person Day	20	$996	$19,920	Hours	240	$138	$33,120	$53,040	$0	$0	$53,040	$0	$0	15%	$7,956		Execute and remove the thirteen round culverts and cut road embankment down to the coarse road bed. Apply cobble and coarse material as required to stabilize water crossings. Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table. As built and culvert details are identified in Appendix B-4 and B-5.
Install safety berms restricting vehicle access at the location where the haul road enters the bulk sample pit	3	Person Day	0.5	$996	$498	Hours	1	$138	$138	$636	$0	$0	$636	$0	$0	10%	$64		Install to safety berms. A conservative productivity estimate of the blended equipment use has been applied to the estimate. Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Regrade pad & repair any erosion at #1 deposit salt station	3	Person Day	4	$996	$3,984	Hours	48	$149	$7,152	$11,136	$0	$0	$11,136	$0	$0	15%	$1,670		Grade road with crown to promote drainage. A conservative productivity estimate of the blended equipment use has been applied to the estimate. Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Milne Inlet Tote Road					**$854,568**				**$965,448**	**$1,820,016**	**$0**	**$0**	**$0**	**$357,696**	**$1,462,320**		**$346,118**		
Inspect and repair any erosion on Tote Road	4	Person Day	20	$996	$19,920	Hours	240	$138	$33,120	$53,040	$0	$0	$0	$53,040	$0	15%	$7,956	Scope is well defined with supporting as built drawings and documentation. A 15% contingency is deemed appropriate to address productivity estimates.	Assume Milne InletTote road includes road from Milne to base of deposit #1 haul road. The Milne Inlet Tote road has been generally stable since it was upgraded in 2008 as part of the Bulk Sample Program. A small number of very small unstable areas were identified in 2009 and repairs executed under the direction of a professional engineer. Otherwise, the road had been stable since its construction. In both cases the tote road has been stable in all non-water crossing areas for over 2 years. Assume scope of work generally includes grading a 1-2% crown the length of the road to promote drainage. No other major work is required. Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Remove all box culvert crossings and stabilize slopes	4	Person Day	108	$996	$107,568	Hours	1296	$138	$178,848	$286,416	$0	$0	$0	$286,416	$0	15%	$42,962		Assume removal of box culverts and abutments, removal of fill to back the high water mark and regraded to the natural slope as described in the A&R Plan report technical spec. Km 80 box culvert crossing (up to the abutments) was removed in 2009 without damaging any steel in 3 shifts with a crew of six operators. In a reclamation scenario work could be completed in 1.5 days. Assume an average of another 4 days on average to remove abutments and fill back to high water mark days. Assume 2 pieces of equipment operating for removal of box culvers and 6 for each of the 4 days that the abutment and fill is being removed. See the following references for scope (Figures 8.10 and 8.11) and as-built detail (Appendices B-4, B-5 and B-6) See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .

Roads and Airstrips	Year	Labor				Equipment													
		Units	Person	Unit Rate	Cost	Units	Equip Hrs	Unit Rate	Cost	Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency	Contingency	Basis for 2012 Contingency	Basis for 2012 Estimate
Install water bars (road embankment cross cuts) at locations where the road tote road is constructed in to an embankment to prevent erosion	4	Person Day	10	$996	$9,960	Hours	60	$138	$8,280	$18,240	$0	$0	$0	$18,240	$0	15%	$2,736	Scope is well defined with supporting as built drawings and documentation. A 15% contingency is deemed appropriate to address productivity estimates.	Assume installation of water bars at designated locations where the road is built in to the embankment and the combination of snow accumulation and road grade could cause water volume & velocity increasing the potential for erosion. Estimate 11 locations requiring 2 water bars each as described in Figure 8.11. Assume a two person crew with one excavator would take 5 days. Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Scope is well defined with supportding as built drawings and documentation. A 15% contingency is deemed appropriate to address productivity estimates. Labour, Equipment & Charter Rates Table .
Remove all round culvert crossings and stabilize slopes.	6	Person Day	720	$996	$717,120	Hours	5400	$138	$745,200	$1,462,320	$0	$0	$0	$0	$1,462,320	20%	$292,464		Remove all round culvert installations Assume removal of fill back to the high water mark and regraded to the natural slope as described in Figure 8.10. Round culvert crossing s-built detail provided in Appendices B-4, B-5 and B-6). Based on Figure 8.10. Assumes removal of all culverts by a 8 person crew with blended equipment rate and 5 pieces of equipment operating continuously for 90 days. Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
General access Roads					**$19,920**				**$12,870**	**$32,790**	**$0**	**$0**	**$0**	**$32,790**	**$0**		**$4,919**		
Grade and contour road surfaces and remove culverts from access roads (Explosives, landfill, sewage lagoon and water intake access roads)	4	Person Day	20	$996	$19,920	Hours	117	$110	$12,870	$32,790	$0	$0	$0	$32,790	$0	15%	$4,919	Scope is well defined with supporting as built drawings and documentation. A 15% contingency is deemed appropriate to address productivity estimates.	Remove all round culver installations Assume removal of fill back to the high water mark and regraded to the natural slope as described in the A&R Plan report technical spec. There are only 4 culverts, grading and berm construction Assume 15 man days labour. See the following references for scope (Figures 8.1, 8.10 and 8.11) and as-built detail (Appendices B-4, B- 5 and B-6) See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Airstrips					**$11,679**				**$9,552**	**$21,231**	**$0**	**$0**	**$21,231**	**$0**	**$0**		**$2,123**		
Remove Mary River airstrip lighting (there is currently no lighting present at Milne Inlet)	3	Person Day	15	$513	$7,695	Hours	24	$100	$2,400	$10,095	$0	$0	$10,095	$0	$0	10%	$1,010	The airstrip lighting & cable system is surveyed and the scope for removal well understood. A moderate contingency has been applied.	2 days of excavator work & labor crew to remove cable, pulpits & lights. See the following references for scope (Figures 8.1 and 8.2) and as-built detail (Appendices B-1) See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Fill in airstrip lighting ditches & regrade at Milne Inlet and Mary River	3	Person Day	4	$996	$3,984	Hours	48	$149	$7,152	$11,136	$0	$0	$11,136	$0	$0	10%	$1,114		2 days of dozer to refill & grade. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .

Borrow and Quarry Areas	Year	Labor				Equipment													
		Units	Person	Unit Rate	Cost	Units	Equip Hrs	Unit Rate	Cost	Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency (%)	Contingency	Basis for 2012 Contingency	Basis for 2012 Estimate
Grand Total					***$197,428***				***$284,158***	***$481,586***	***$0***	***$55,000***	***$426,586***	***$0***	***$0***	***22%***	***$104,873***		
Geotechnical monitoring of permitted & road side borrow area reclamation	2	Person Day	55	$1,000	$55,000				0	$55,000	$0	$55,000	$0	$0	$0	10%	$5,500	Estimate based on Geotechnical assessment completed in 2009 - cost assessments is well understood. A moderate contingency has been applied.	Assume a geotechnical inspection in Year 2 to further develop post completion of EBA recommendations and in subsequent year to confirm feature stability.
Grade and contour primary borrow sites at Milne Inlet, Mary River, Midway and quarry	3	Person Day	60	$996	$59,760	Hours	720	$138	$99,360	$159,120	$0	$0	$159,120	$0	$0	15%	$23,868	A well defined technical scope completed to confirm estimate made for final reclamation of borrow and quarry areas. A conservative estimate has been made given partial reclamation. A contingency of 15% has been applied.	Geotechnical inspection and report defining criteria and scope for reclamation completed by EBA engineering in 2009. Areas requiring immediate attention were addressed in 2009. Three of the four permitted borrow areas have been partially reclaimed -The estimate has not included any partial reclamation activities. These only required dozer and grading. Estimate based on the scope of work developed in the EBA report. See the following references for scope (Appendix D) See Operator labour & equipment rates - Appendix G-3, , 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Grade and contour road side borrow areas within alignment	3	Person Day	83	$996	$82,668	Hours	996	$138	$137,448	$220,116	$0	$0	$220,116	$0	$0	30%	$66,035	A well defined technical scope completed to confirm estimate for final reclamation of road side borrow areas. Given the large number of road side borrows and the distance of the Milne Inlet Tote Road. A conservative contingency of 30% has been applied to cover potential shortfalls in equipment productivity.	
Borrow materials from permitted borrow areas (m3)	3					Hours	18,940	2.5	$47,350	$47,350	$0	$0	$47,350	$0	$0	20%	$9,470	Quantities are well understood as they are derived from surveyed volumes & as built drawings. A moderate contingency has been applied	See Appendix G-3, Estimate of A & R Borrow Area Material requirements Table for detailed estimate

Fuel Storage Facilities	Year		Labor			Equipment													Basis for 2012 Contingency	Basis for 2012 Estimate
		Units	Person	Unit Rate	Cost	Units	Equip Hrs	Unit Rate	Cost	Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency (%)	Contingency		
Grand Total					***$513,254***				***$216,632***	***$729,886***	***$0***	***$491,238***	***$238,648***	***$0***	***$0***	***22%***	***$161,227***		
Mary River Fuel Farm					**$69,160**				**$92,802**	**$161,962**	**$0**	**$22,638**	**$139,324**	**$0**	**$0**		**$37,765**		
Return excess fuel at Mary River to Milne Inlet	2	Person Day	9	$996	$8,964	Hours	106	$129	$13,674	$22,638	$0	$22,638	$0	$0	$0	10%	$2,264	The scope of work is well defined and the hypothetical abandonment scenario occurs at time of maximum fuel inventory. Abandonment at almost any other time would have a lower inventory of fuel at Mary River. Hence a 10% contingency has been applied	Assume excess fuel returned occurs after Mary River had been restocked with bulk fuel. As of Oct 1 2011 Fuel balance of approximate 887,000 L Haul hours = 887,000 l / 50,000 l/trip / 2 trips/shift * 12 hours/shift = 106 hours and 9 working days.See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Drain, fold, and containerize Mary River bladder tanks	3	Person Day	9	$800	$7,200	Hours	36	$66	$2,376	$9,576	$0	$0	$9,576	$0	$0	10%	$958	Scope is well defined and manufacturer productivity based on same task completed in 2008 at Milne Inlet. A 10% contingency has been applied in the event of lower productivity.	11 bladders at Mary is one seventh the number at Milne. Assume cost is 1/7 Milne * Estimate from manufacturer: 7 man crew for 3 days (fold) = 21 man days + 3 man crew for 12 days (drain, remove pipe & package) =9 man days. Bob cat Equipment hours = 3 days* 12 hours = 36. Scope based on as-built (See Appendix G-4, 2011A&R Plan Estimating Docs\Fuel Storage Facilities\Mary River Bulk Fuel Farm as built Reports. . See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Remove all geomembrane fuel liners, package and transport to Milne Inlet for sea - lift backhaul	3	Person Day	10	$718	$7,180	Hours	60	$136	$8,160	$15,340	$0	$0	$15,340	$0	$0	10%	$1,534	All secondary containment has been surveyed. Productivities are based upon recent operating experience. A contingency of 10% is considered adequate.	Assume 4 days of dozer work to expose all the liner and package for shipping and 1 day to ship it to Milne Inlet by flat deck. Assume 5 labour days to prepare & package. Scope based on as built drawings (See Appendix B-1). See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Execute civil works to transport potential hydrocarbon contaminated soil form the Mary River bulk fuel farm to the Milne Inlet land farm	3	Person Day	21	$996	$20,916	Hours	252	$126	$31,752	$52,668	$0	$0	$52,668	$0	$0	30%	$15,800	Although the scope will not be confirmed until completion of the phase 1-3 environmental assessment and engineering design, a worse case scenario has been used for the estimate. A 30% contingency has been applied against the potential for additional civil work resulting from current uncertainty in scope.	Estimate of civil work requirements based on worse case scenario of entire fuel farm base above the liner requiring land farming and to be moved to a location 300 meters from water. Consultant preferred suitable location 1.5 km from fuel farm in permitted borrow area south of Milne Inlet. Assume Milne Inlet fuel farm base above liner = 96 m x 25m x 0.30m = 720 m3. Labour & equipment estimates = 720 cubes /27 cubes/truck W no pup = 27 Trips 27rips/2trips/day(1Mary River to Milne Inlet= 14 truck days @ 4 trucks hauling =3.5 days required for other equipment including 1 Dozers 1 loader = 6 pieces of equipment * 3.5 days = 21 person days. Scope based on as built drawings (See Appendix B-1). See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Execute civil works to transport potential hydrocarbon contaminated soil from Mary River non-bulk fuel farm lined containment areas to the Milne Inlet land farm	3	Person Day	22	$996	$21,912	Hours	264	$126	$33,264	$55,176	$0	$0	$55,176	$0	$0	30%	$16,553	Although the scope will not be confirmed until completion of the phase 1-3 environmental assessment and engineering design, a worse case scenario has been used for the estimate. A 30% contingency has been applied against the potential for additional civil work resulting from current uncertainty in scope.	Estimate of civil work requirements based on worse case scenario of entire secondary containment base above liners to be moved to Milne Inlet land farm proposed for the bulk fuel farm. . Assume generic secondary containment berm volume above liner = 23m x 12m x 0.30m =82 m3. Labour & equipment estimates =82 cubes /27 cubes/truck W no pup = 6Trips 6 trips/2trips/day/truck(Round trip Mary River to Milne Inlet = 3days/berm. There are 5 lined berms at Mary River = 15 days with one truck hauling. @ 4 trucks hauling =3.75 days required for other equipment including 1 Dozers 1 loader = 6 pieces of equipment * 3.75 days = 22 person days. Scope based on as built drawings (See Appendix B-1). See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Recontour surface	3	Person Day	3	$996	$2,988	Hours	24	$149	$3,576	$6,564	$0	$0	$6,564	$0	$0	10%	$656	All secondary containment has been surveyed. Productivities are based upon recent operating experience. A contingency of 10% is considered adequate.	Assume 3 dozer days recontour all lined berms. All lined berms are indicated on the MR as-built drawing. Scope based on as built drawings (See Appendix B-1). See Operator labour & equipment rates - Appendix G- 3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Milne Inlet Fuel Farm					**$444,094**				**$123,830**	**$567,924**	**$0**	**$468,600**	**$99,324**	**$0**	**$0**		**$123,462**		
Milne Inlet fuel farm Oil Water Separation Operation	2	Person Day	180	$996	$179,280	Lot	1	$20,000	$20,000	$199,280	$0	$199,280	$0	$0	$0	30%	$59,784	The estimate is based upon Historical labour & material requirements for operation of the oil-water separation process. However, it is possible that technical support or that the volume requiring treatment may be under estimated. A contingency of 30% is included to cover these possibilities.	2012 estimate based on a single season of treatment prior to converting the fuel farm to a soil remediation land farm. Once converted to a land farm, no further treatment is required. Assume 45 days of operation of oil water separation/activated carbon prior to starting tilling of soil. Labour based on 2 person/shift operation for 45 days and consumables (absorbent material and activated carbon) of $20,000 season.
Dismantle and remove 5 ML fuel storage tank	2	Person Day	360	$439	$158,040	Lot	60	$217	$13,020	$171,060	$0	$171,060	$0	$0	$0	20%	$34,212	Although a issued for construction drawings have, no specfications or manufacturering productivies have been included. A large 20% contingency has been applied to account for any additional potential requirements.	Assume 6 person crew 5 days to remove and breakdown tank. Equipment hours = 5 days * 12 hours = 60 hours.

Fuel Storage Facilities	Year		Labor			Equipment													
		Units	Person	Unit Rate	Cost	Units	Equip Hrs	Unit Rate	Cost	Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency (%)	Contingency	Basis for 2012 Contingency	Basis for 2012 Estimate
Recontour surface impacted by 5 ML fuel storage tank	2	Person Day	2	$996	$1,992	Lot	24	$149	$3,576	$5,568	$0	$5,568	$0	$0	$0	15%	$835	Scope is well defined and Productivities are based upon recent operating experience. A contingency of 15% is applied in the event additional hours are required to complete the work	2012 Estimate assumed 2 dozer days based on surface areas Drawing H337697-4020-10-014-0001.
Milne Inlet Bulk Fuel Sealift Backhaul Support	2	Person Day	12	$800	$9,600	Hours	66	$129	$8,514	$18,114	$0	$18,114	$0	$0	$0	15%	$2,717	Fuel transfer rate is well defined based on two previous bulk fuel transfers at Milne Inlet. Fuel inventory is projected based on budgeted consumptions. A contingency of 15% is applied in the event of below planned fuel consumption.	As of Oct 1st , 2011 Fuel balance approximately 3.97 ML. Assume fuel transfer time of 6000L/hour for transfer time of 66 hours for a 2 person crew (6 days equipment 2 required). Missing equipment cost estimate. Assume hourly costs similar to transporting from Mary River Camp with above time requirements. Baffinland bulk fuel transfer procedure for safely discharging attached (See Appendix G-4, 2012 A&R Plan Estimating Docs\Fuel Storage Facilities\Milne Inlet Bulk Fuel Unloading Procedure. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Drain, fold, and containerize Milne bladder tanks	2	Person Day	57	$800	$45,600	Hours	144	$66	$9,504	$55,104	$0	$55,104	$0	$0	$0	10%	$5,510	Scope is well defined and manufacturer productivity based on same task completed in 2008 at Milne Inlet. A 10% contingency has been applied in the event of lower productivity.	Estimate from manufacturer: 7 man crew for 3 days (fold) = 21 man days + 3 man crew for 12 days (drain, remove pipe & package) = 36 man days. Equipment hours = 12 days* 12 hours = 143 hrs. Scope based on as-built (See Appendix G-4, 2012 A&R Plan Estimating Docs\Fuel Storage Facilities\Milne Inlet Bulk Fuel Farm as Built drawings. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Remove Piping associated with fuel farm and 5 ML fuel tank	2	Person Day	12	$439	$5,268	Hours	48	$91	$4,368	$9,636	$0	$9,636	$0	$0	$0	10%	$964	Scope is well defined and manufacturer productivity based on same task completed in 2008 at Milne Inlet. A 10% contingency has been applied in the event of lower productivity.	Estimate from manufacturer: 3 man crew for 4 days to disassemble all piping. Requires a loader/skid steer for 48 hours. Scope based on as-built (See Appendix G-4, 2012 A&R Plan Estimating Docs\Fuel Storage Facilities\Milne Inlet Bulk Fuel Farm as Built drawings. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Remove Piping from 5 ML Fuel Storage Tank	2	Person Day	6	$439	$2,634	Hours	24	$91	$2,184	$4,818	$0	$4,818	$0	$0	$0	20%	$964	Scope is moderately defined and based on same task completed for removal of the fuel farm piping. A 20% contingency has been applied in the event of lower productivity.	Estimate from manufacturer: 3 man crew for 4 days to disassemble all piping. Requires a loader/skid steer for 48 hours. Scope based on as-built (See Appendix G-4, 2012 A&R Plan Estimating Docs\Fuel Storage Facilities\Milne Inlet Bulk Fuel Farm as Built drawings. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Regrading pipeline area	2	Person Day	4	$439	$1,756	Hours	24	$136	$3,264	$5,020	$0	$5,020	$0	$0	$0	20%	$1,004	Scope is defined based on approximate surface area of pipeline and cross sections shown in drawngs H337697-4020-10-042-0001 and H337697-4020-30-035-0001. A contingency of 20% has been included to account for any increase in overburden and labour hours	Any exposed concrete and rebar from dismantled pipeline infrastructure will be covered with a minimum of 0.2 m of overburden. Assumed volume of 750 m3. KP calcs - 500 m3/32.52 cubes/truck = 23 trips/17 trips/day (@40 minutes per trip) = 1 man days. Assume 2 people and 1 trucks and 1 dozer =2 days total
Remove all hazardous material/fuel storage geomembrane fuel liners and package for sea - lift backhaul. (All lined berms except Milne Inlet Fuel Farm)	3	Person Day	10	$606	$6,060	Hours	36	$149	$5,364	$11,424	$0	$0	$11,424	$0	$0	10%	$1,142	All secondary containment has been surveyed. Productivities are based upon recent operating experience. A contingency of 10% is considered adequate.	Assume 3 days of dozer work to expose all four of the hazardous material lined berms and 3 days x 2 person labour to package for shipping. All lined berms are indicated on the MI as-built drawing. Scope based on as-built (See Appendix G-4, \2012 A&R Plan Estimating Docs\Fuel Storage Facilities\General design drawing for all lined earthed berms used for secondary containment. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Execute civil works to convert the fuel farm to hydrocarbon impacted soil land farm	3	Person Day	21	$996	$20,916	Hours	252	$133	$33,516	$54,432	$0	$0	$54,432	$0	$0	30%	$16,330	Although the scope will not be confirmed until completion of the phase 1-3 environmental assessment and engineering design, a worse case scenario has been used for the estimate. A 30% contingency has been applied against the potential for additional civil work resulting from current uncertainty in scope.	Estimate of civil work requirements based on worse case scenario of entire fuel farm base above the liner requiring land farming and to be moved to a location 300 meters from water. Consultant preferred suitable location 1.5 km from fuel farm in permitted borrow area south of Milne Inlet. Assume Milne Inlet fuel farm base above liner = 250 m x 50m x 0.30m = 3500 m3. Labour & equipment estimates = 3500 cubes /27 cubes/truck W no pup = 110 Trips 110 trips/20trips/day(10 hr@30 min/trip)== 7 truck days @ 4 trucks hauling =3 days required for other equipment including 2 Dozers 1 loader = 7 pieces of equipment * 3 days = 21 person days.

Fuel Storage Facilities	Year		Labor			Equipment													
		Units	Person	Unit Rate	Cost	Units	Equip Hrs	Unit Rate	Cost	Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency (%)	Contingency	Basis for 2012 Contingency	Basis for 2012 Estimate
Execute civil works to transport potential hydrocarbon contaminated soil from Milne Inlet non - bulk fuel farm lined containment areas	3	Person Day	3	$996	$2,988	Hours	36	$110	$3,960	$6,948	$0	$0	$6,948	$0	$0	30%	$2,084	Although the scope will not be confirmed until completion of the phase 1-3 environmental assessment and engineering design, a worse case scenario has been used for the estimate. A 30% contingency has been applied against the potential for additional civil work resulting from current uncertainty in scope.	Estimate of civil work requirements based on worse case scenario of entire secondary containment base above liners to be moved to land farm proposed for the bulk fuel farm. Consultant preferred suitable location 1.5 km from fuel farm in permitted borrow area south of Milne Inlet. Assume generic secondary containment berm volume above liner = 23m x 12m x 0.30m =82 m3. Labour & equipment estimates =82 cubes /27 cubes/truck W no pup = 6Trips 6 trips/20trips/day/truck(10 hr@30 min/trip)== 0.3days/berm. There are 5 lined berms at Milne = 2.0 days with one truck hauling. To make the process efficient, assume 1 day with two trucks and an operator for the dozer and one for the loader operation support = 3 man days. Scope based on asbuilt (See Appendix B-2 and Appendix G-4, 2012 A&R Plan Estimating Docs\Fuel Storage Facilities\Milne Inlet Bulk Fuel Farm as Built drawings. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
Recontour surface	3	Person Day	10	$996	$9,960	Hours	120	$138	$16,560	$26,520	$0	$0	$26,520	$0	$0	10%	$2,652	Scope is well defined and Productivities are based upon recent operating experience. A contingency of 10% is applied in the event additional hours are required to complete the work	Assume entire Milne Inlet fuel farm base and berm walls to be leveled and contoured . Scope based on asbuilt (See Appendix B-2 and Appendix G-4, 2012 A&R Plan Estimating Docs\Fuel Storage Facilities\Milne Inlet Bulk Fuel Farm as Built drawings. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table

Explosives	Year	Labor				Equipment													
		Units	Person	Unit Rate	Cost	Units	Equip Hrs	Unit Rate	Cost	Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency (%)	Contingency	Basis for 2012 Contingency	Basis for 2012 Estimate
Grand Total					***$0***				***$0***	***$0***	***$0***	***$0***	***$0***	***$0***	***$0***	***0%***	***$0***		All explosives, cord and detonators were destroyed in August, 2010. No outstanding decommissioning liabilities currently exist with regard to explosives. Zero cost has been applied in 2012. Task maintained for 1 year after work is no longer required
Prepare explosives for shipping			Person Day		$0	Hours			$0	$0	$0					0%	$0		
Ship explosives to Milne Inlet			Person Day		$0				$0	$0					$0	0%			
Ship explosives via land to Milne Inlet			Person Day		$0	Hours			$0	$0	$0					0%	$0		

Waste Management	Year	Labor				Equipment													
		Units	Person	Unit Rate	Cost	Units	Equip Hrs	Unit Rate	Cost	Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency (%)	Contingency	Basis for 2012 Contingency	Basis for 2012 Estimate
Grand Total					***$137,217***				***$422,076***	***$559,293***	***$0***	***$203,142***	***$356,151***	***$0***	***$0***	***19%***	***$108,265***		
Operate Landfill					**$111,552**				**$185,472**	**$297,024**	**$0**	**$0**	**$297,024**	**$0**	**$0**		**$57,283**		
Construct Access Road to Landfill including haulage		Person Day	0	$0	$0	Hours	0	$0	$0	$0	$0	$0	$0	$0	$0	0%	$0		Access road to landfill was constructed in 2010 and as built drawings and report completed. This task is no longer required.
Expand Landfill Berms including haulage	3	Person Day	32	$996	$31,872	Hours	384	$138	$52,992	$84,864	$0	$0	$84,864	$0	$0	30%	$25,459	Scope is well defined and design drawings completed. Equipment estimates based on historical productivity. A 30 % contingency has been applied against the potential reduced civil work productivity.	2012 basis same as 2009 - 9216 cubes /32.52 cubes/truck W no pup = 283Trips. 283 trips/16 trips/day(11 hr@40 min/trip)== 17 truck days @ 4 trucks hauling =5 days required for other equipment including Dozer, loader, excavator = 15 equipment days. Scope based on landfill design and as-built (See Appendix B-7 and Appendix G-4, \2012 A&R Plan Estimating Docs\Waste Mngmt\Mary River Landfill As built Report. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Borrow Haulage required for operation of land fill to capacity	3	Person Day	27	$996	$26,892	Hours	324	$138	$44,712	$71,604	$0	$0	$71,604	$0	$0	15%	$10,741	Scope is well defined and design drawings completed. Equipment estimates based on historical productivity. A 15 % contingency has been applied against the potential reduced civil work productivity.	2012 basis same as 2009 - 8668 cubes /32.52 cubes/truck W no pup =555Trips. 555 trips/16 trips/day(11 hr@40 min/trip)== 34 truck days @ 4 trucks hauling =9 days required for other equipment including Dozer, loader = 19 equipment days Scope based on landfill design and as-built (See Appendix B-7 and Appendix G-4, \2012 A&R Plan Estimating Docs\Waste Mngmt\Mary River Landfill As built Report. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Borrow Haulage required for capping landfill	3	Person Day	53	$996	$52,788	Hours	636	$138	$87,768	$140,556	$0	$0	$140,556	$0	$0	15%	$21,083	Scope is well defined and design drawings completed. Equipment estimates based on historical productivity. A 15 % contingency has been applied against the potential reduced civil work productivity.	2012 basis same as 2009 - 18060 cubes /32.52 cubes/truck W no pup = 283 trips. 283 trips/16 trips/day(11 hr@40 min/trip) = 17 truck days @ 4 trucks hauling =5 days required for other equipment including Dozer, loader, excavator = 15 equipment days Scope based on landfill design and as-built (See Appendix B-7 and Appendix G-4, \2012 A&R Plan Estimating Docs\Waste Mngmt\Mary River Landfill As built Report. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Ship waste by land Mary River to Milne Inlet					**$5,337**				**$31,662**	**$36,999**	**$0**	**$0**	**$36,999**	**$0**	**$0**		**$7,400**		
Prepare chemicals for shipping	3	Person Day	9	$593	$5,337	Hours	3	$66	$198	$5,535	$0	$0	$5,535	$0	$0	20%	$1,107	The scope is well defined - All of the historical waste has been demobilized and individual waste type production has been estimated from recent site generation rates. The preparation estimate rates is based on 2010 contractor invoiced rates & productivity . A 20% contingency has been applied to cover potential excess hazardous waste generation upon completion of A & R plan.	Scope based on volume estimates contained Appendix G-3, 2012 Mary River Project A & R Plan Material Balance table and 2012 - Hazardous and Non-Hazardous Material requiring disposal Inventory = 76 m3 estimate. Packaging of 76m3, based 2009 productivity require 3 days of QE representation and 2 labourers with the use of a skid steer for 12 hours/day. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Disposal cost of hazardous material in the South (except bulk contaminated soil)	3	Person Day		$0	$0	Cube	76	$414	$31,464	$31,464	$0	$0	$31,464	$0	$0	20%	$6,293	The scope is well defined - All of the historical waste has been demobilized and individual waste type production has been estimated from recent site generation rates. Disposal estimates are based on 2009 invoiced rates. A 20% contingency has been applied to cover potential excess hazardous waste disposal that would occur upon completion of a final A & R plan.	Scope based on volume estimates contained Appendix G-3, 2012 Mary River Project A & R Plan Material Balance table and 2012 - Hazardous and Non-Hazardous Material requiring disposal Inventory = 76 m3 estimate. Average disposal cost based on 2010 blended hazardous material weighted cost - See Appendix G-3, Hazardous Material Disposal Cost in the South Packaging which was used to calculate disposal cost in the south= $414 $/m3. 3rd party vendor quote supporting Units costs from 2010 are in Appendix G-4, 2012 A&R Plan Estimating Docs\Waste Mngmt\QE 2010 proposal disposal rates for hazardous material. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table

Waste Management	Year	Labor				Equipment													
		Units	Person	Unit Rate	Cost	Units	Equip Hrs	Unit Rate	Cost	Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency (%)	Contingency	Basis for 2012 Contingency	Basis for 2012 Estimate
Sewage - Mary River					**$13,944**				**$198,918**	**$212,862**	**$0**	**$203,142**	**$9,720**	**$0**	**$0**		**$41,600**		
Decant sewage lagoons	2	Person Day	0	$0	$0	Lot	1	$192,504	$192,504	$192,504	$0	$192,504	$0	$0	$0	20%	$38,501	The technical treatment process of lagoon sewage was confirmed and executed in 2009. The operating and maintenance unit cost are well defined based on invoiced cost. The quantity of sewage requiring treatment is based on surveyed inventory and estimated production based on budgeted person days through to planned execution date for A & R. A 20% estimate has been applied to cover potential increase in person days and the resulting increase in sewage.	Based on actual 2009 invoiced unit treatment costs, surveyed sewage inventory post 2009 treatment. No treatment in 2010. Scope based Mary River sewage lagoon engineered treatment process design. Operations manuals been included. No additional basic engineering required to develop a treatment process. See Appendix G-4, 2012 A&R Plan Estimating Docs\Waste Mngmt\Mary Rives Sewage Lagoon Treatment Process Design.
Sludge removal & transfer to landfill	2	Person Day	10	$996	$9,960	Hours	6	$113	$678	$10,638	$0	$10,638	$0	$0	$0	20%	$2,128	The estimate is based upon well defined sewage and sludge quantities and treatment and disposal process are technically well understood. A 20% estimate has been applied to cover potential increase in person days and the resulting increase in sewage.	Based on use of geotube technology in year 2. Allowance made for pumping Sludge through geotube and letting tube free drain on lagoon berm wall. Year involves transport to landfill for permanent disposal. Process approved my Province of Ontario for treatment of sewage sludge. Sludge estimate based on current measured solids of 0.5% and projected A & R sewage inventory of 6520 m3 = 32.6 m3 solids. This is equivalent to 2 Kenworth truck load to the landfill - Assume half day An allowance of $10,000 has been made for the geotube filter & 10 days labour to pump our the 32 cubes of solids.pumping. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Liner removal & berm reclamation	3	Person Day	3	$996	$2,988	Hours	36	$130	$4,680	$7,668	$0	$0	$7,668	$0	$0	10%	$767	All civil work requiring the lagoon fill for A & R is estimated in those tasks. Final grading & contouring civil work is minor. Assume a 10% contingency.	Assume berm fill is used in reclamation projects and haulage estimates are included in those tasks. Labour & equipment is for liner removal and final grading and contouring of areas with a dozer & grader. See Figure 8.2 for reclamation detail and Appendix B-1 and Appendix G-4, 2012 A&R Plan Estimating Docs\Waste Mngmt\Mary River Sewage Lagoons design and asbuilts for berm design and as-built used to determine scope. See Operator labour & equipment rates - Appendix G- 3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Liner disposal	3	Person Day	1	$996	$996	Hours	12	$88	$1,056	$2,052	$0	$0	$2,052	$0	$0	10%	$205	Scope is well defined and Labour & Equipment productivity well established. A 10% contingency is deemed adequate.	Assume 2 persons for half a day with skid steer and flat deck for transporting liner for disposal in landfill. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table

Waste Management	Year	Labor				Equipment													
		Units	Person	Unit Rate	Cost	Units	Equip Hrs	Unit Rate	Cost	Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency (%)	Contingency	Basis for 2012 Contingency	Basis for 2012 Estimate
Sewage - Milne					**$6,384**				**$6,024**	**$12,408**	**$0**	**$0**	**$12,408**	**$0**	**$0**		**$1,981**		
Decant sewage lagoons	3	Person Day	3	$800	$2,400	Hours	0	$0	$0	$2,400	$0	$0	$2,400	$0	$0	20%	$480	The technical treatment process of lagoon sewage was confirmed and executed in 2009. The operating and maintenance unit cost are well defined based on invoiced cost. The quantity of sewage requiring treatment is based on surveyed inventory and estimated production based on budgeted person days through to planned execution date for A & R. A 20% estimate has been applied to cover potential increase in person days and the resulting increase in sewage.	Sewage Lagoon current in compliance with discharge criteria and was partially discharged in 2009. Remaining sewage inventory of 114m3. At a discharge rate of 30 l/m, 3 days is required to decant the treated sewage. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Sludge removal & transfer to landfill	3	Person Day	1	$996	$996	Hours	12	$138	$1,656	$2,652	$0	$0	$2,652	$0	$0	15%	$398	The estimate is based upon well defined sewage and sludge quantities and treatment and disposal process are technically well understood. A 15% has been applied to cover potential short fall in equipment productivity.	Sludge removal from MI Lagoon(Assume filtering of sludge added to task of decanting the sewage lagoons) Assume natural decantation followed by loader/truck removal to landfill . Based on 0.5% solids, it is expected less that 1 truck load sludge required for disposal to landfill. The one time cost of the sludge filter was included in the Mary River sludge removal cost. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Liner removal & berm reclamation	3	Person Day	2	$996	$1,992	Hours	24	$138	$3,312	$5,304	$0	$0	$5,304	$0	$0	15%	$796	All civil work requiring the lagoon fill for A & R is estimated in those tasks. Final grading & contouring civil work is minor. Assume a 15% contingency.	Assume berm fill is used in reclamation projects and haulage estimates are included in those tasks. Labour & equipment is for liner removal and final grading and contouring of areas with a dozer & grader. Scope based on Figure 8.4 and Appendix G-4, Baffinland\2012 A&R Plan Estimating Docs\Waste Mngmt\Milne Inlet Sewage lagoon as built survey\Milne Inlet 100_06_01_sewage lagoon as built .dwg. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Liner disposal	3	Person Day	1	$996	$996	Hours	12	$88	$1,056	$2,052	$0	$0	$2,052	$0	$0	15%	$308	Scope is well defined and Labour & Equipment productivity well established. A 15% contingency has been applied to cover potential shortfall in equipment productivity.	Assume 2 persons for half a day with skid steer and flat deck for transporting liner for disposal in landfill. Based on current truck haulage productivity between Milne Inlet and Mary River. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table

Hydrocarbon Impacted Soils	Year	Labor				Equipment				Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency (%)	Contingency	Basis for 2012 Contingency	Basis for 2012 Estimate
		Units	Person	Unit Rate	Cost	Units	Equip Hrs	Unit Rate	Cost										
Grand Total					***$543,000***				***$190,080***	***$733,080***	***$0***	***$75,000***	***$658,080***	***$0***	***$0***	***16%***	***$116,412***		
Complete phase 1 to phase 3 environmental assessment to identify hydrocarbon contaminated soil and to develop soil remediation criteria and land farm design	2	Lot	1	$75,000	$75,000	Hours	0	0	$0	$75,000	$0	$75,000	$0	$0	$0	30%	$22,500	Estimate based on maximum upset price. However, proposal and quote was provided in 2009. A 30% contingency has applied to cover inflation as the quote is 2 years old and to cover additional potential assessment requirements.	Estimate based on EBA engineering proposal develop criteria, complete phase I to phase III assessment & land farm design proposal (See Appendix G-4, 2012 A&R Plan Estimating Docs\Hydrocarbon Imp Soil\EBA Phase I-3 EA and land farm design) with maximum upset price of $70K.
Land farm Operation			**140**		**$158,600**				**$158,600**	**$317,200**	**$0**	**$0**	**$658,080**	**$0**	**$0**				
Milne Inlet - Till hydrocarbon impacted soil - Land farm operation	3	Person Day	400	$1,090	$436,000	Hours	1440	$132	$190,080	$626,080	$0	$0	$626,080	$0	$0	15%	$93,912	Land farming technology for treating hydrocarbon impacted soil in the arctic is proven and the techniques and scope well established. A full 12 hours/day equipment use has been applied to cost estimate which is a very conservative estimate. A general 15% Contingency has been applied to cover undefined detailed scope.	Conversion for fuel farm to land farm estimated in 'fuel storage facilities' worksheet. Year 4 basis assumes mechanic and operator execute the work required to till the hydrocarbon impacted soil work. Assume practical length of tilling season is June 15-Aug 31st or 10 weeks . Engineering design to determine detailed tilling execution strategy. Assume labour & equipment resourced at site for entire operational period. Cost out 2 persons on site for 10 weeks per year for 4 years) . Task will require a dozer & loader. Convention land farming has material tilled once/wee. Assume a third party contractor loader & dozer required for 36 hours /week to complete tilling of land farm . Blended Labour and equipment rates applied. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Food & accommodations	3	Person Day	$0	$0	$0					$0	$0	$0	$0	$0	$0				Year 3 cost for food and accommodations included in general "camp operation" worksheet
Year 4 - 6 commercial flights for labour	3	Person Day	$0	$0	$0	Person Flights				$0	$0	$0	$0	$0	$0				Year 3 cost for food and accommodations included in general "camp operation" worksheet
Fixed wing support (note: equip hrs refer to statute miles)	3	Person Day	$0	$0	$0	statute miles				$0	$0	$0	$0	$0	$0				Year 3 cost for food and accommodations included in general "camp operation" worksheet
Third Party Consultant to monitor and support land farm operations	3	Person Day	32	$1,000	$32,000	hours				$32,000	$0	$0	$32,000	$0	$0				Year 3 cost for food and accommodations included in general "camp operation" worksheet. To occur every 4 years, 6 days on site, 2 days travel

General Site Area	Year	Labor				Equipment												Basis for 2012 Contingency	Basis for 2012 Estimate
		Units	Person	Unit Rate	Cost	Units	Equip Hrs	Unit Rate	Cost	Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency (%)	Contingency		
Grand Total					***$1,561,800***				***$0***	***$1,561,800***	***$0***	***$480,600***	***$600,600***	***$480,600***	***$0***	***10%***	***$156,180***		
Project Management &					**$480,600**				**$0**	**$480,600**	**$0**	**$480,600**	**$0**	**$0**	**$0**		**$48,060**		
Third party Contractor - Admin & supervisory staff	2	Person days	300	1202	$360,600	Hours			$0	$360,600	$0	$360,600	$0	$0	$0	10%	$36,060	This level of project management and third party staff levels is considered adequate for the execution of this A&R plan scope and a contingency of 10% is sufficient.	Assumes third party contractor requires the following three staff management roles - one site superintendent and one supervisor from May 1 to Sept. 30th. A blended rate reflecting the average of the three roles has been used. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Project Management Supervision	2	Person days	150	800	$120,000	Hours			$0	$120,000	$0	$120,000	$0	$0	$0	10%	$12,000		Assumes project management/engineering/technical support of 1 staff at site through the execution of the A&R plan from May 1 to Sept 30th. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Project Management &					**$600,600**				**$0**	**$600,600**	**$0**	**$0**	**$600,600**	**$0**	**$0**		**$60,060**		
Third party Contractor - Admin & supervisory staff	3	Person days	300	1202	$360,600	Hours			$0	$360,600	$0	$0	$360,600	$0	$0	10%	$36,060	This level of project management and third party staff levels is considered adequate for the execution of this A&R plan scope and a contingency of 10% is sufficient.	Assumes third party contractor requires the following three staff management roles - one site superintendent and one supervisor from May 1 to Sept. 30th. A blended rate reflecting the average of the three roles has been used. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Project Management Supervision	3	Person days	300	800	$240,000	Hours			$0	$240,000	$0	$0	$240,000	$0	$0	10%	$24,000		Assumes project management/engineering/technical support of 2 staff at site through the execution of the A&R plan from May 1 to Sept 30th. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Project Management &					**$480,600**				**$0**	**$480,600**	**$0**	**$0**	**$0**	**$480,600**	**$0**		**$48,060**		
Third party Contractor - Admin & supervisory staff	4	Person days	300	1202	$360,600	Hours			$0	$360,600	$0	$0	$0	$360,600	$0	10%	$36,060	This level of project management and third party staff levels is considered adequate for the execution of this A&R plan scope and a contingency of 10% is sufficient.	Assumes third party contractor requires the following three staff management roles - one site superintendent and one supervisor from May 1 to Sept. 30th. A blended rate reflecting the average of the three roles has been used. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Project Management Supervision	4	Person days	150	800	$120,000	Hours			$0	$120,000	$0	$0	$0	$120,000	$0	10%	$12,000		Assumes project management/engineering/technical support of 1 staff at site through the execution of the A&R plan from May 1 to Sept 30th. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table

Sealift Materials	Year	Labor				Equipment				Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency (%)	Contingency	Basis for 2012 Contingency	Basis for 2012 Estimate
		Units	Person	Unit Rate	Cost	Units	Equip Hrs	Unit Rate	Cost										
Grand Total					***$35,088***				***$4,322,624***	***$4,357,712***	***$0***	***$3,086,004***	***$575,726***	***$629,916***	***$66,066***	***10%***	***$447,581***		
Freight Sealift Milne Inlet to Valleyfield Year 2	**2**				**$11,952**				**$2,837,852**	**$2,849,804**	**$0**	**$2,849,804**	**$0**	**$0**	**$0**		**$284,980**		
Shipment, loading and off loading	2	Person Day	12	$996	$11,952	Hours	144	$115	$16,560	$28,512	$0	$28,512	$0	$0	$0	10%	$2,851	Ship loading times are based on historical Milne Inlet ship loading times. A 10% contingency has been applied in the event of weather delays.	Loading from beach to ship & ship to dock included in vessel cost. 6 days to load ship. Support provided by Nuna 1 operator two shifts/day to feed the beach with loader support. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Land freight for 3rd party A&R contractor equipment and supplies from mobilization location to port in Valleyfield (Year 2)	2				$0	Cubic meters	4569	$38	$173,622	$173,622	$0	$173,622	$0	$0	$0	10%	$17,362	10 % contingency is appropriate given the mobilization point is likely to be closer than Edmonton, Alberta to the Port of Valleyfield , thus the land freight estimate is at the high end of potential land freight unit cost.	Unknown mobilization area for third part contractor. Assume lowest bidder will be located closer to Valleyfield than Edmonton, Alberta. Apply the $38/cubes quoted price obtained for hauling heavy equipment to Edmonton as a maximum upset price. 3rd party equipment volume required for execution of the A&R plan estimated at 4569 cubes. Estimate based on list or 3rd part equipment and material and calculated volumes(See Appendix G-4, 2012 A&R Plan Estimating Docs\Sealift\Estimate of 3rd party list of equipment required for A&R.)
Dedicated Charter Freight Sealift of 3rd party contractor equipment and supplies to Milne Inlet, and to demobilize contractor equipment currently located at MR and MI,	2				$0	Rev. Tonnes	2492	$305	$760,060	$760,060	$0	$760,060	$0	$0	$0	10%	$76,006	10% Contingency established to cover potential rate increase resulting from increase in Bunker C ship fuel and higher than predicted volume	Estimate based on Estimate based on list or 3rd party equipment and material required and corresponding calculated volumes(See Appendix G-4, 2012 A&R Plan Estimating Docs\Sealift\Estimate of 3rd party list of equipment required for A&R.) and all the fuel for the execution of the A&R plan to be sealift in, in year 2 = 6230 cubes * 0.4 = 2492 Revenue Tonnes. (See Appendix G-3, Mary River and Milne Inlet - Sealift volumes (m3)) & rates include provided by sealift vendor quote of $305/Rev Tonne. (See Appendix G-4, 2012 A&R Plan Estimating Docs\Sealift\2011 Sealift Vendor Quotes\2011 Milne Inlet Sealift Quotes.
Demobilize by sealift site contractor and specified BIM equipment currently located at MR and MI,	2				$0	Rev. Tonnes	6455	$198	$1,278,090	$1,278,090	$0	$1,278,090	$0	$0	$0	10%	$127,809	10% Contingency established to cover potential rate increase resulting from increase in Bunker C ship fuel and higher than predicted volume	See detailed sealift backhaul volume for Year 2 in Appendix G-3, Mary River and Milne Inlet - Sealift volumes (m3). = 16139 cubes * 0.4 = 6455 Revenue Tonnes @ NEAS quoted backhaul rate of $198/Rev Tonne. (See Appendix G-4, 2012 A&R Plan Estimating Docs\Sealift\2011 Sealift Vendor Quotes\2011 Milne Inlet Sealift Quotes.)
Land freight for site contractor and BIM owned equipment currently located at MR and Milne Inlet	2				$0	Cubic meters	16040	$38	$609,520	$609,520	$0	$609,520	$0	$0	$0	10%	$60,952	10% contingency is appropriate to cover volume estimating error	Land freight based on quotes provide for hauling Nuna heavy equipment backhaul to Edmonton, Alberta. This is a longer haul than all other contractor delivery sites. (Boart Longyear - Hailebury, Ontario and Powder magazines, Valleyfield Que. Assume the $38/cubes quote is applied to the entire volume of contractor owned freight = Nuna (1772), Boart (199) & Dyno Nobel (800) Baffinland (3269). See Appendix G-4, 2011A&R Plan Estimating Docs\Sealift\Land freight backhaul quotes
Freight Sealift Milne Inlet to Valleyfield Year 3	**3**				**$0**				**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**		**$0**		
Dedicated Charter Freight Sealift for supply of year 4 material & supplies, and for the backhaul of MI Tote Road Culverts and remaining material and 3rd party contractor equipment from M	3				$0				$0	$0	$0	$0	$0	$0	$0		$0	No freight sealift schedule for Year 3	
Freight Sealift Milne Inlet to Valleyfield Year 4	**4**				**$11,952**				**$617,964**	**$629,916**	**$0**	**$0**	**$0**	**$629,916**	**$0**		**$62,992**		
Shipment, loading and off loading	4	Person Day	12	$996	$11,952	Hours	144	$165	$23,760	$35,712	$0	$0	$0	$35,712	$0	10%	$3,571	Ship loading times are based on historical Milne Inlet ship loading times. A 10% contingency has been applied in the event of weather delays.	Loading from beach to ship & ship to dock included in vessel cost. 6 days to load ship. Support provided by 3rd party contractor 1 operator two shifts/day to feed the beach with loader support. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Land freight for material & supplies from mobilization location to Port of Valleyfield	4				$0				$0	$0	$0	$0	$0	$0	$0		$0		No mobilization sealift planned in Year 4. All material accounted for in Year 2 Estimate. No allowance made for land freight

Sealift Materials	Year	Labor				Equipment				Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency (%)	Contingency	Basis for 2012 Contingency	Basis for 2012 Estimate
		Units	Person	Unit Rate	Cost	Units	Equip Hrs	Unit Rate	Cost										
Dedicated Charter Freight Sealift for supply of year 5 & 6 material & supplies.	4				$0				$0	$0	$0	$0	$0	$0	$0		$0		No mobilization sealift planned in Year 4. All material accounted for in Year 2 Estimate
Demobilize decommissioned material and 3rd party contractor equipment from MI	4				$0	tevenue tones	2028	$198	$401,544	$401,544	$0	$0	$0	$401,544	$0	10%	$40,154	10% Contingency established to cover potential rate increase resulting from increase in Bunker C ship fuel and higher than predicted volume	See detailed sealift volume in worksheet estimating Volume of Year 4 backhaul in Appendix G-3, Mary River and Milne Inlet - Sealift volumes (m3). = 5070 cubes * 0.4 = 2028 Revenue Tonnes @ NEAS quoted backhaul rate of $198/Rev Tonne. (See Appendix G-4, 2012 A&R Plan Estimating Docs\Sealift\2011 Sealift Vendor Quotes\2011 Milne Inlet Sealift Quotes.)
Land freight for decommissioned material and equipment from Port of Valleyfield	4				$0	Cubes	5070	$38	$192,660	$192,660	$0	$0	$0	$192,660	$0	10%	$19,266	10% Contingency established to cover potential rate increase from higher than predicted volume	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. 5070 cubes backhauled at $38/cubes. Volume calculated in Appendix G-3, Mary River and Milne Inlet - Sealift volumes (m3). Land freight rate provided by vendor quote(See Appendix G-4, 2012 A&R Plan Estimating Docs\Sealift\Land freight backhaul quotes)
Bulk Fuel Demobilization Sealift - Milne Inlet Year 2	**2**				**$7,200**				**$229,000**	**$236,200**	**$0**	**$236,200**	**$0**	**$0**	**$0**		**$35,430**		
Dedicated charter - Bulk Fuel Tanker to backhaul bulk fuel to refinery for disposal	2	Person Day	12	$600	$7,200	Sailing	1	$229,000	$229,000	$236,200	$0	$236,200	$0	$0	$0	15%	$35,430	Estimate contains significant allowances due to the method used for the basis of the estimate. An additional 15% contingency has been applied	Estimate based on 1 bulk fuel for demobilization charter of Jan 31, 2001 bulk fuel inventor or 2.89 million liters of bulk fuel (See Appendix G-4, \2012 A&R Plan Estimating Docs\Camp Ops\2011 A&R Plan forecast Fuel Requirements and assumptions). Direct quote not available from Woodward's. Estimate based on Government of Nunavut sealift freight cost of shipping fuel to Pond Inlet of $0.07/liter. Backhaul sealift cost expected to be <50% of the cost hauling North. However, for purpose of estimate and smaller volume assume 140% of full cost for backhaul or $0.10/liter. Discussions with Eastern Seaborne refineries indicates they will take all fuel providing a minimum credit of 80% of the value of the fuel - this has not been included into he cost. Assume an additional $10,000 demurrage. Day for loading. 2011 freight cost = $0.10*2,890,000 liters+ 3 day demurrage ($30,000)
Salvage of Baffinland owned fuel 2	2				$0				$0		$0	$0	$0	$0	$0		$0		No allowance made for salvage value
Demobilize Freight Sealift Steensby Port to Port of Valleyfield - Year 3	**3**				**$0**				**$575,726**	**$575,726**	**$0**	**$0**	**$575,726**	**$0**	**$0**		**$57,573**		
Shipment, loading and off loading	3	Person Day	0	$600	$0	Hours	0		$0	$0	$0	$0	$0	$0	$0	0%	$0	This task is already costed in the "camp & related facilities" demobilization of Steensby	
Vessel Costs Steensby - 1 freight backhaul sealift in Year 3	3	Person Day		$0	$0	Rev Tonne	1965	$198	$389,070	$389,070	$0	$0	$389,070	$0	$0	10%	$38,907	10% Contingency established to cover potential rate increase resulting from increase in Bunker C ship fuel and higher than predicted volume	See detailed sealift backhaul volume for Year 3 Steensby backhaul sealift in Appendix G-3, Mary River and Milne Inlet - Sealift volumes (m3). = 4912 cubes / 2.5 = 1966 Revenue Tonnes. Rate is based Sealift vendor quote =$198/rev Tonne. . (See Appendix G-3, 2012 A&R Plan Estimating Docs\Sealift\2011 Sealift Vendor Quotes\2011 Steensby Inlet Sealift Quotes.)
Land Freight	3				$0	Cubes	4912	$38	$186,656	$186,656	$0	$0	$186,656	$0	$0	10%	$18,666	Volumes are based upon detailed material balance estimates. The majority of large pieces have quotes for land freight shipping and a unit cost developed from 2009 invoices have been applied to the remainder of the freight. . Accordingly, Baffinland considers a 10% contingency for excess volume to be appropriate.	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 . Volume calculated in Appendix G-3, Mary River and Milne Inlet - Sealift volumes (m3). Land freight rate provided by vendor quote(See Appendix G-4, 2012 A&R Plan Estimating Docs\Sealift\Land freight backhaul quotes)

Sealift Materials	Year	Labor				Equipment				Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency (%)	Contingency	Basis for 2012 Contingency	Basis for 2012 Estimate
		Units	Person	Unit Rate	Cost	Units	Equip Hrs	Unit Rate	Cost										
Freight Sealift Milne Inlet to Port of Valleyfield Year 6					**$3,984**				**$62,082**	**$66,066**	**$0**	**$0**	**$0**	**$0**	**$66,066**		**$6,607**		
Shipment, loading and off loading	6	Person Day	4	$996	$3,984	Hours	30	$115	$3,450	$7,434	$0	$0	$0	$0	$7,434	10%	$743	Ship loading times are based on historical Milne Inlet ship loading times. A 10% contingency has been applied in the event of weather delays.	Loading from beach to ship & ship to dock included in vessel cost. 2 days to load ship. Support provided by 3rd party contractor 1 operator two shifts/day to feed the beach with loader support. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Vessel & stevedoring costs for backhaul of land farm timer, tilling equipment (i.e. loader with tiller drag), accommodation trailer and residual Milne Inlet camp & support supplies and equipment. Milne Inlet to Port of Valleyfield	6	Person Day			$0	Rev Tonne	198	$185	$36,630	$36,630	$0	$0	$0	$0	$36,630	10%	$3,663	10% Contingency established to cover potential rate increase resulting from increase in Bunker C ship fuel and higher than predicted volume	See detailed sealift volume in worksheet estimating Volume of Year 6 backhaul in Appendix G-3, Mary River and Milne Inlet - Sealift volumes (m3). = 579 cubes * 0.4 = 232 Revenue Tonnes @ NEAS quoted backhaul rate of $198/Rev Tonne. (See Appendix G-4, 2012 A&R Plan Estimating Docs\Sealift\2011 Sealift Vendor Quotes\2011 Milne Inlet Sealift Quotes.)
Land freight cost for Year 6 backhaul sealift	6	Person Day			$0	Cubic meters	579	$38	$22,002	$22,002	$0	$0	$0	$0	$22,002	10%	$2,200	Volumes are based upon detailed material balance estimates. The majority of large pieces have quotes for land freight shipping and a unit cost developed from 2009 invoices have been applied to the remainder of the freight. Accordingly, Baffinland considers a 10% contingency for excess volume to be appropriate.	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. 579 cubes backhauled at $38/cubes Volume calculated in Appendix G-3, Mary River and Milne Inlet - Sealift volumes (m3). Land freight rate provided by vendor quote(See Appendix G-4, 2012 A&R Plan Estimating Docs\Sealift\Land freight backhaul quotes)

Camp Operations	Year	Labor				Equipment													
		Units	Person	Unit Rate	Cost	Units	Equip Hrs	Unit Rate	Cost	Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency (%)	Contingency	Basis for 2012 Contingency	Basis for 2012 Estimate
Grand Total					***$1,402,545***				***$5,627,091***	***$7,029,636***	***$0***	***$4,252,211***	***$1,536,308***	***$1,241,117***	***$0***	***12%***	***$866,142***		
A&R Fuel Purchase	**2**				**$0**				**$2,900,091**	**$2,900,091**	**$0**	**$2,900,091**	**$0**	**$0**	**$0**		**$375,358**		
Cash cost of fuel & barrel deposit	2				$0	Lot	1	$1,535,691	$1,535,691	$1,535,691	$0	$1,535,691	$0	$0	$0	20%	$307,138	Although a detailed fuel balance was completed for the execution of the entire 6 year A&R plan, a large 20% contingency has been applied to account additional potential requirements.	Assumes use of on-site fuel for reclamation purposes is not accepted. See Appendix G-4, 2012 A&R Plan Estimating Docs\Camp Ops\2011 A&R Plan Forecast Fuel Requirements &Assumptions File for detailed fuel balance. Total fuel requirements = 1,202,409 liters to execute A&R Plan. Cash cost = $1,535,691. Based on vendor quote and detailed 6 year fuel balance (See Appendix G-4, 2012 A&R Plan Estimating Docs\Camp Ops\2011 barreled fuel quotation Assumes mobilization of fuel by Hercules aircraft and Sealift and is costed in separate tasks.
Hercules Aircraft mobilization from Yellowknife to Mary River	2				$0	Hercules Charter	12	$113,700	$1,364,400	$1,364,400	$0	$1,364,400	$0	$0	$0	5%	$68,220	A small 5% has been applied to this cost for the following reason: 1. Cost base on firm vendor quote. 2. Vendor quote based on single flight. A 12 flight quote would reduce the unit price significantly. 3. The 12th flight is only 20% full and has excess capacity.	See Appendix G-4, 2012 A&R Plan Estimating Docs\Camp Ops\2011 A&R Plan Forecast Fuel Requirements &Assumptions File for detailed estimate of pre-sealift fuel required to be mobilized by Hercules. Assume required Hercules to mobilize all pre sealift fuel to Mary River. Total volume of pre-sealift fuel = 1120 barrels. A Hercules can fly 100/flight. Required flights = 12 See Appendix G-4, 2012 A&R Plan Estimating Docs\Camp Ops\2011 A&R Plan forecast Fuel Requirements and assumptions for quantity details and file See Appendix G-4, 2012 A&R Plan Estimating Docs\Camp Ops\2011 Hercules Aircraft Quote for firm Hercules quote
Mary River Camp Operation Yr 2	**2**				**$381,280**				**$731,720**	**$1,113,000**	**$0**	**$1,113,000**	**$0**	**$0**	**$0**		**$117,395**		Based on A& R plan man days/over 4 months=1152/4 months /30 days/month= 13 person at camp each day Fixed wing 2 pilots + engineer = 3 Camp support 2 cooks + 3 dishwashers/labourers Total camp = 21
Helicopter support	2	Person Day		$0	$0	Hours	18	$1,590	$28,620	$28,620	$0	$28,620	$0	$0	$0	10%	$2,862	Helicopter hours for year 2 are based on an inspection requirements only. A 10% contingency is justified as execution of tasks is planned.	No continuous helicopter support required in year 2. Effective 2011, helicopters are positionned in Hall Beach available for general charter. Assume one mobilization & demob (5 hours return to hall beach for the purpose of a general inspection of remote camps and for planning for Year 3 activities. Assume 2 hours (Steensby inspection) + 1 hours (mid rail inspection)+6 hours (geotech hole inspection along rail route)+ 4 hours misc remote inspections. = 18 hours. See charter rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Fixed wing Charter Support	2	Person Day		$0	$0	Number of round trip charters	48	$11,900	$571,200	$571,200	$0	$571,200	$0	$0	$0	10%	$57,120	The fixed wing estimate is very conservative and already has built in contingency as described in the basis for the estimate. Given the detailed historical costs experience for complete seasonal operation of similar scope and the conservative estimate, a 10% contingency is considered adequate.	On average 3 charter flights/week will meet the needs of a 21 man camp over 4 months. Assume 3 charters/ week to move passengers and freight. See charter rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Commercial flights for25 person camp (MR & MI)	2	Person Day		$0	$0	Flights	53	$2,300	$121,900	$121,900	$0	$121,900	$0	$0	$0	15%	$18,285	Assume a 15% contingency is appropriate to cover annual variability in percentage of contractors from the south	Estimate revised to reflect updated A & R Plan requirements - Assume 25 person camp operating for 16 weeks on 4 & 2 crew rotation. =4 months* 4 weeks/month/6 weeks/flight*25 persons=66 flights. The average travel expense including flight cost from Southern Canada to Iqaluit in 2009 was $2300/rotation. Assume conservative estimate that 80% of contractors or 53 flights are from southern Canada. See commercial rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
21 person camp operation	2	Person Day	620	$512	$317,440	Hours			$0	$317,440	$0	$317,440	$0	$0	$0	10%	$31,744	This estimate is reflective of camp support staff experienced at Mary River. A contingency of 10% is appropriate to compensate for additional labour.	Estimate assumes 5 support staff (2 cooks/3dishwashers/ labourers) in addition to all contractors. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Camp Operating Overhead	2	Person Day	0	$0	$0	Monthly Lot	4	$2,500	$10,000	$10,000	$0	$10,000	$0	$0	$0	10%	$1,000	Camp overhead budgeted based on actual invoice cost in 2009. A contingency of 10% for unspecified overhead is appropriate.	Estimate (Monthly costs): - Telephone & communications = 2 HSE dish at $500/month each + 4 satellite phones ($400) = $1400 - Office Supplies $300/month - Permits & licenses - Aerodrome communication & Handheld radio frequencies = $4000 annual = $800/ mth - Total monthly lot cost = $2100

Camp Operations	Year	Labor				Equipment				Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency (%)	Contingency	Basis for 2012 Contingency	Basis for 2012 Estimate
		Units	Person	Unit Rate	Cost	Units	Equip Hrs	Unit Rate	Cost										
Food	2	Person Day	3360	$19	$63,840				$0	$63,840	$0	$63,840	$0	$0	$0	10%	$6,384	Food unit cost/person day based on 2009 actual invoice costs including shipping. The estimate already contains a 25% allowance for a larger camp than required by labour estimate. A contingency of 10% for additional potential food cost is appropriate.	Assume average number of 21 person/day for 4 months. See food estimate based on 2010 actual costs - Appendix G-3, 2012 Mary River Average Food Cost / Person Day Table
Mary River Camp Operation Yr 3	**3**				**$179,400**				**$1,168,880**	**$1,348,280**	**$0**	**$0**	**$1,348,280**	**$0**	**$0**		**$185,333**		Based on A& R plan average crew size = 3688 /4 months /30 days/month= 21 person at camp each day Fixed wing 2 pilots + engineer = 3 Camp support 2 cooks + 3 dishwashers/labourers Total camp = 29
Helicopter support	3	Person Day		$0	$0	Hours	92	$1,590	$146,280	$146,280	$0	$0	$146,280	$0	$0	10%	$14,628	Helicopter estimates for the entire A & R plan have been recalculated based on known task productivity derived from 2009 work or distances. In addition to the helicopters hours costed for each task, an allowance of 62 hours of miscellaneous helicopter support (27% of task costed hours) has been included. Given the high certainty of the cost estimate and the large helicopter allowance already included, a contingency of 10% is considered adequate. This is a very conservative as it is a contingency on contingency.	Estimate revised based the following: - Maximum 4 month operating requirement - All task requiring helicopter use already budgeted elsewhere - As a comparison - In 2009, entire ops, drill, reclamation program and general helicopter support only averaged 3 hrs/day Therefore undefined general helicopter support reduced to 0.30 hrs/day + 15 hrs mobilization from Goose Bay and 15 hrs demobilization to Goose Bay Reduced from $675K in 2009. See charter rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Fixed wing support (note: units under Equip Hrs refers to statue miles)	3	Person Day		$0	$0	Number of round trip charters	70	$11,900	$833,000	$833,000	$0	$0	$833,000	$0	$0	15%	$124,950	The fixed wing estimate is very conservative and already has built in contingency as described in the basis for the estimate. Given the detailed historical costs experience for complete seasonal operation of similar scope and the conservative estimate, a 10% contingency is considered adequate.	On average 3.5 charter flights/week will meet the needs of a 219 man camp over 4 months. Assume 4 charters/ week to move passengers and freight. See charter rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Commercial flights for 29 person camp (MR & MI)	3	Person Day		$0	$0	Flights	77	$2,300	$177,100	$177,100	$0	$0	$177,100	$0	$0	15%	$26,565	Commercial flights estimate was based on a 2011 actual prices, a contingency of 15% is applied to address additional flights beyond the average calculation .	Estimate revised to reflect updated A & R Plan requirements - Assume 29 person camp operating for 50 weeks on 4 & 2 crew rotation. =5 months* 4 weeks/month/6 weeks/flight*29 persons=96 flights. The average travel expense including flight cost from Southern Canada to Iqaluit in 2009 was $2300/rotation. Assume conservative estimate that 80% of contractors or flights are from southern Canada. See commercial air flight rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
29 person camp operation	3	Person Day	750	$129	$96,750	Hours			$0	$96,750	$0	$0	$96,750	$0	$0	10%	$9,675	This is the exact number of support staff used during 2009 when the camp size was 36 persons. A contingency of 10% is appropriate to compensate for additional labour.	Assumes 5 support staff (2 cooks/3dishwashers/ labourers) in addition to all contractors. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Camp Operating Overhead	3	Person Day	0	$0	$0	Monthly Lot	5	$2,500	$12,500	$12,500	$0	$0	$12,500	$0	$0	10%	$1,250	Camp overhead budgeted based on actual invoice cost in 2009. A contingency of 10% for unspecified overhead is appropriate.	Estimate based on (Monthly costs): - Telephone & communications = 2 HSE dish at $500/month each + 4 satellite phones ($400) = $1400 - Office Supplies $300/month - Permits & licenses - Aerodrome communication & Handheld radio frequencies = $4000 annual = $800/ mth - Total monthly lot cost = $2100
Food	3	Person Day	4350	$19	$82,650				$0	$82,650	$0	$0	$82,650	$0	$0	10%	$8,265	Food unit cost/person day based on 2009 actual invoice costs including shipping. The estimate already contains a 25% allowance for a larger camp than required by labour estimate. A contingency of 10% for additional potential food cost is appropriate.	Assume average number of 29 person/day for 5 months. See food estimate based on 2010 actual costs - Appendix G-3, 2012 Mary River Average Food Cost / Person Day Table
Steensby Inlet Camp Operation	**3**				**$18,104**				**$200**	**$18,304**	**$0**	**$0**	**$18,304**	**$0**	**$0**		**$1,830**		
6 person camp operation - Decommissioning	3	Person Day	24	$530	$12,720	Hours			$0	$12,720	$0	$0	$12,720	$0	$0	10%	$1,272	Detailed camp operating labour costs have been estimated based on historical small camp requirements. A contingency of 10% is appropriate to compensate for additional labour.	Requires 1 cook and a bear monitor/labourer. Last two days the camp is supported from Mary River by helicopter. See labour rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
2 person camp operation - Sealift	3	Person Day	6	$530	$3,180	Hours			$0	$3,180	$0	$0	$3,180	$0	$0	10%	$318	Detailed camp operating labour costs have been estimated based on historical small camp requirements. A contingency of 10% is appropriate to compensate for additional labour.	Estimate for 3 day sealift. 3 Day temporary tent operation for sea lift support - Requires 1 cook & 1 bear monitors. Sealift labour budgeted at 2 since all the material is packaged and the sealift company has the equipment. Additional labour as support only. See labour rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Camp Operating Overhead	3	Person Day	0	$0	$0	Monthly Lot	1	$200	$200	$200	$0	$0	$200	$0	$0	10%	$20	Camp overhead budgeted based on actual invoice cost in 2009. A contingency of 10% for unspecified overhead is appropriate.	Estimate based on (Monthly costs): - Telephone & communications = 1satelite phone ($100) = $100 - Office Supplies $100/month - Total monthly lot cost = $200

Camp Operations	Year	Labor				Equipment				Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency (%)	Contingency	Basis for 2012 Contingency	Basis for 2012 Estimate
		Units	Person	Unit Rate	Cost	Units	Equip Hrs	Unit Rate	Cost										
Food	3	Person Day	116	$19	$2,204				$0	$2,204	$0	$0	$2,204	$0	$0	10%	$220	Food unit cost/person day based on 2009 actual invoice costs including shipping. A contingency of 10% for additional potential food cost is appropriate.	Estimate based on Total Steensby Man days @ $19 / person day food . See food estimate based on 2010 actual costs - Appendix G-3, 2012 Mary River Average Food Cost / Person Day Table
Milne Inlet Year 2 - Operate avg 5 - person camp (16 person peak for 2 weeks)	**2**				**$235,520**				**$3,600**	**$239,120**	**$0**	**$239,120**	**$0**	**$0**	**$0**		**$23,912**		Assume total labour requirements (334 man hours) over June-mid Sept = 4 man camp. However peak personnel will occur when demobing bladders at 16 for 2 weeks
6 person camp operation (Support Labour)	2	Person Day	368	$621	$228,528	Hours		$0	$0	$228,528	$0	$228,528	$0	$0	$0	10%	$22,853	Detailed camp operating labour costs have been estimated based on historical small camp requirements. A contingency of 10% is appropriate to compensate for additional labour.	Assume 1 cooks & 1 labourer support for camp = Total of 5 person avg. Person days reduced to 2*2 months*31 days =120 days. Add and additional cook and labourer for two months = 4 * 2 months*31 days = 248 for a total of 368 person days. See labour rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Camp Operating Overhead	2	Person Day	0	$0	$0	Monthly Lot	4	$900	$3,600	$3,600	$0	$3,600	$0	$0	$0	10%	$360	Camp overhead budgeted based on actual invoice cost in 2009. A contingency of 10% for unspecified overhead is appropriate	Estimate based on (Monthly costs): - Telephone & communications = 1 HSE dish at $500/month each + 2 satellite phones ($200) = $700 - Office Supplies $200/month - Permits & licenses - Aerodrome communication & Handheld radio frequencies = Included in Mary River Cost - Total monthly lot cost = $900
Food	2	Person Day	368	$19	$6,992	Hours		$0	$0	$6,992	$0	$6,992	$0	$0	$0	10%	$699	Food unit cost/person day based on 2010 actual invoice costs including shipping. A contingency of 10% for additional potential food cost is appropriate.	2012 estimated contains revised person days based on Milne Inlet reclamation work and camp operations support. See food estimate based on 2010 actual costs - Appendix G-3, 2012 Mary River Average Food Cost / Person Day Table
Milne Inlet Year 3 - Operate avg 5 - person camp	**3**				**$158,720**				**$3,600**	**$162,320**	**$0**	**$0**	**$162,320**	**$0**	**$0**		**$16,232**		Assume total labour requirements (334 man hours) over June-mid Sept = 4 man camp.
6 person camp operation (Support Labour)	3	Person Day	248	$621	$154,008	Hours		$0	$0	$154,008	$0	$0	$154,008	$0	$0	10%	$15,401	Detailed camp operating labour costs have been estimated based on historical small camp requirements. A contingency of 10% is appropriate to compensate for additional labour.	Assume 1 cooks and 1 labourer/dishwasher support for camp = Total of 5 person avg. fro 4 months. No sealift planned. Person days = 2 persons* 4 months*31 days = 248 days.
Camp Operating Overhead	3	Person Day	0	$0	$0	Monthly Lot	4	$900	$3,600	$3,600	$0	$0	$3,600	$0	$0	10%	$360	Camp overhead budgeted based on actual invoice cost in 2009. A contingency of 10% for unspecified overhead is appropriate.	Estimate based on (Monthly costs): - Telephone & communications = 1 HSE dish at $500/month each + 2 satellite phones ($200) = $700 - Office Supplies $200/month - Permits & licenses - Aerodrome communication & Handheld radio frequencies = Included in Mary River Cost - Total monthly lot cost = $900
Food	3	Person Day	248	$19	$4,712	Hours		$0	$0	$4,712	$0	$0	$4,712	$0	$0	10%	$471	Food unit cost/person day based on 2009 actual invoice costs including shipping. A contingency of 10% for additional potential food cost is appropriate.	2012 estimated contains revised person days based on Milne Inlet reclamation work and camp operations support. See food estimate based on 2010 actual costs - Appendix G-3, 2012 Mary River Average Food Cost / Person Day Table
Milne Inlet Year 4 = Operate 14 person camp	**4**				**$422,317**				**$818,800**	**$1,241,117**	**$0**	**$0**	**$0**	**$1,241,117**	**$0**		**$145,621**		Milne Inlet will be the primary camp and assume 3rd party contractor has a mobile trailer camp to support road reclamation activity when at the Mary River end of the road. Cost camp cost under the Milne Inlet Year 4 estimate. Assume total labour requirements (1343 man hours) over May to Sept = This equivalent to 10 person days for 5 months + 2 cooks and 2 dishwasher/labourers = 14 person camp. See labour rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
14 person camp operation (Support Labour)	4	Person Day	620	$621	$385,020	Hours		$0	$0	$385,020	$0	$0	$0	$385,020	$0	5%	$19,251	Detailed camp operating labour costs have been estimated based on historical small camp requirements. A contingency of 5% is appropriate to compensate for additional labour.	Assume 2 cooks and 2 labourers support for camp = Total of 4 person for 5 months Person days=4 persons*5 months*31 daysmonth =620 days. See labour rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates
Camp Operating Overhead	4	Person Day	0	$0	$0	Monthly Lot	4	$900	$3,600	$3,600	$0	$0	$0	$3,600	$0	10%	$360	Camp overhead budgeted based on actual invoice cost in 2009. A contingency of 10% for unspecified overhead is appropriate.	Estimate based on (Monthly costs): - Telephone & communications = 1 HSE dish at $500/month each + 2 satellite phones ($200) = $700 - Office Supplies $200/month - Permits & licenses - Aerodrome communication & Handheld radio frequencies = Included in Mary River Cost - Total monthly lot cost = $900
Fixed wing support (note: units under Equip Hrs refers to statue miles)	4	Person Day		$0	$0	Number of round trip charters	60	$11,900	$714,000	$714,000	$0	$0	$0	$714,000	$0	15%	$107,100	The fixed wing estimate is very conservative and already has built in contingency as described in the basis for the estimate. Given the detailed historical costs experience for complete seasonal operation of similar scope and the conservative estimate, a 10% contingency is considered adequate.	On average 3 charter flights/week will meet the needs of a 15 man camp over5 months. Assume charters/ week to move passengers and freight. See charter aircraft rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table

Camp Operations	Year	Labor				Equipment				Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency (%)	Contingency	Basis for 2012 Contingency	Basis for 2012 Estimate
		Units	Person	Unit Rate	Cost	Units	Equip Hrs	Unit Rate	Cost										
Commercial flights for Milne Inlet camp	4	Person Day		$0	$0	Flights	44	$2,300	$101,200	$101,200	$0	$0	$0	$101,200	$0	15%	$15,180	Commercial flights estimate was based on a 2011 actual prices, a contingency of 15% is applied to address additional flights beyond the average calculation .	2012 estimate revised to reflect updated A & R Plan requirements - Assume 15 person camp operating for 50 weeks on 4 & 2 crew rotation. =5 months* 4 weeks/month/6 weeks/flight*15 persons=50 flights. The average travel expense including flight cost from Southern Canada to Iqaluit in 2009 was $2300/rotation. Assume conservative estimate that 80% of contractors or flights are from southern Canada or 40 flights. See commercial air flight rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Food	4	Person Day	1963	$19	$37,297	Hours		$0	$0	$37,297	$0	$0	$0	$37,297	$0	10%	$3,730	Food unit cost/person day based on 2009 actual invoice costs including shipping. A contingency of 10% for additional potential food cost is appropriate.	2012 estimated based on all manpower costed at Milne Inlet. Estimated total man days in year 4 = 1343(A&R plan execution)+(camp ops) 620= 1963. See food estimate based on 2010 actual costs - Appendix G-3, 2012 Mary River Average Food Cost / Person Day Table
MidRail Operate 7 person camp	**3**				**$7,204**				**$200**	**$7,404**	**$0**	**$0**	**$7,404**	**$0**	**$0**		**$461**		
6 person camp operation (Support Labour)	3	Person Day	9	$621	$5,589	Hours			$0	$5,589	$0	$0	$5,589	$0	$0	5%	$279	Detailed camp operating labour costs have been estimated based on historical small camp requirements. A contingency of 5% is appropriate to compensate for additional labour.	2012 estimate basis - 9 days living at site requires 1 cook. Last 5 days are fly in. See labour rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Camp Operating Overhead	3	Person Day	0	$0	$0	Monthly Lot	1	$200	$200	$200	$0	$0	$200	$0	$0	10%	$20	Camp overhead budgeted based on actual invoice cost in 2009. A contingency of 10% for unspecified overhead is appropriate.	2012 estimate basis (Monthly costs): - Telephone & communications = 1satelite phone ($100) = $100 - Office Supplies $100/month - Total monthly lot cost = $200
Food	3	Person Day	85	$19	$1,615				$0	$1,615	$0	$0	$1,615	$0	$0	10%	$162	Food unit cost/person day based on 2009 actual invoice costs including shipping. A contingency of 10% for additional potential food cost is appropriate. 2012 estimated contains revised person days based on Mid-Rail reclamation work and camp operations support. See food estimate based on 2010 actual costs - Appendix G-3, 2012 Mary River Average Food Cost / Person Day Table	2012 estimated contains revised person days based on Mid-Rail reclamation work and camp operations support. See food estimate based on 2010 actual costs - Appendix G-3, 2012 Mary River Average Food Cost / Person Day Table

Environmental Monitoring	Year	Labor				Equipment												Basis for 2012 Contingency	Basis for 2012 Estimate
		Units	Person	Unit Rate	Cost	Units	Equip Hrs	Unit Rate	Cost	Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency (%)	Contingency		
Grand Total					***$241,000***				***$64,500***	***$305,500***	***$0***	***$21,100***	***$21,100***	***$21,100***	***$242,200***	***24%***	***$73,950***		
Environmental supervision & reporting during ongoing monitoring	6	Person Day	200	$1,000	$200,000	Hours	0	$0	$0	$200,000	$0	$0	$0	$0	$200,000	25%	$50,000	The Environmental monitoring & reporting estimate is based upon detailed assumptions concerning analysis & reporting requirements. However, a relatively high contingency of 25% is considered appropriate to allow for possible underestimation of monitoring effort & unit costs given the long time frame to completion of the task.	Assumes one third party consultant retained for of monitoring associated abandonment and reclamation project. 40 days per year for 5 years of ongoing monitoring for professional consultant site supervision and reporting. See Operator labour & equipment rates Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Environmental Monitoring Year 2					**$8,200**				**$12,900**	**$21,100**	**$0**	**$21,100**	**$0**	**$0**	**$0**		**$4,790**		
Annual site visits - preparation/consumables	2	Person Day	3	$600	$1,800	Hours	5	$1,000	$5,000	$6,800	$0	$6,800	$0	$0	$0	30%	$2,040	Scope of work and materials developed for task. However, a relatively high contingency of 30% is considered appropriate to allow for possible underestimation of preparation time given the long time frame to completion of the task.	3 days at site per year with $1,000 consumables while at site. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Annual site visits - water sampling (note: units under Equip Hrs refers to # samples)	2	Person Day	0	$600	$0	Samples	43	$100	$4,300	$4,300	$0	$4,300	$0	$0	$0	30%	$1,290	Detailed sampling scope developed. However, a relatively high contingency of 30% is considered appropriate to allow for possible underestimation of sampling time & unit costs given the long time frame to completion of the task.	Annual samples: Milne - 8 metal, 5 hydrocarbon, 3 sewage: MR - 12 metal, 5 salt, 5 hydrocarbon, 5 sewage. 2 people, 1 sample per hour average cost of $100/sample. Total Sample Samples 43 = 43 person hours
Annual site visit - site overview	2	Person Day	8	$800	$6,400	Hours	0	$0	$0	$6,400	$0	$6,400	$0	$0	$0	20%	$1,280	A 20% contingency has been applied for unforesee	2012 estimate based on 2 person,2 days per year to complete inspection & sampling and 1 day travel on either side. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
commercial flights for labour	2	Person Day		$0	$0	Person Flights	2	$1,800	$3,600	$3,600	$0	$3,600	$0	$0	$0	5%	$180	Estimate based on average 2011 quote for commercial flights A 5% contingency has been applied	Quote based on Canadian North from Ottawa to Iqualuit round trip price. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Annual site visit - helicopter support	2	Person Day	0	$0	$0	Hours	0	$1,590	$0	$0	$0	$0	$0	$0	$0	0%	$0		Requirement for helicopter eliminated. All sample points are accessible a the camps or by light vehicle to the top of Deposit #1.
Environmental Monitoring Year 3					**$8,200**				**$12,900**	**$21,100**	**$0**	**$0**	**$21,100**	**$0**	**$0**		**$4,790**		
Annual site visits - preparation/consumables	3	Person Day	3	$600	$1,800	Hours	5	$1,000	$5,000	$6,800	$0	$0	$6,800	$0	$0	30%	$2,040	Scope of work and materials developed for task. However, a relatively high contingency of 30% is considered appropriate to allow for possible underestimation of preparation time given the long time frame to completion of the task.	3 days at site per year with $1,000 consumables while at site. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Annual site visits - water sampling (note: units under Equip Hrs refers to # samples)	3	Person Day	0	$600	$0	Samples	43	$100	$4,300	$4,300	$0	$0	$4,300	$0	$0	30%	$1,290	Detailed sampling scope developed. However, a relatively high contingency of 30% is considered appropriate to allow for possible underestimation of sampling time & unit costs given the long time frame to completion of the task.	Annual samples: Milne - 8 metal, 5 hydrocarbon, 3 sewage: MR - 12 metal, 5 salt, 5 hydrocarbon, 5 sewage. 2 people, 1 sample per hour average cost of $100/sample. Total Sample Samples 43 = 43 person hours
Annual site visit - site overview	3	Person Day	8	$800	$6,400	Hours	0	$0	$0	$6,400	$0	$0	$6,400	$0	$0	20%	$1,280	A 20% contingency has been applied for unforeseen delays during site visits	2012 estimate based on 2 person,2 days per year to complete inspection & sampling and 1 day travel on either side. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Post 2011 commercial flights for labour	3	Person Day		$0	$0	Person Flights	2	$1,800	$3,600	$3,600	$0	$0	$3,600	$0	$0	5%	$180	Estimate based on average 2011 quote for commercial flights A 5% contingency has been applied	Quote based on Canadian North from Ottawa to Iqualuit round trip price. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Annual site visit - helicopter support	3	Person Day	0	$0	$0	Hours	0	$1,590	$0	$0	$0	$0	$0	$0	$0	0%	$0		Requirement for helicopter eliminated. All sample points are accessible a the camps or by light vehicle to the top of Deposit #1.
Environmental Monitoring Year 4					**$8,200**				**$12,900**	**$21,100**	**$0**	**$0**	**$0**	**$21,100**	**$0**		**$4,790**		
Annual site visits - preparation/consumables	4	Person Day	3	$600	$1,800	Hours	5	$1,000	$5,000	$6,800	$0	$0	$0	$6,800	$0	30%	$2,040	Scope of work and materials developed for task. However, a relatively high contingency of 30% is considered appropriate to allow for possible underestimation of preparation time given the long time frame to completion of the task.	3 days at site per year with $1,000 consumables while at site. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table

Environmental Monitoring	Year	Labor				Equipment													
		Units	Person	Unit Rate	Cost	Units	Equip Hrs	Unit Rate	Cost	Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency (%)	Contingency	Basis for 2012 Contingency	Basis for 2012 Estimate
Annual site visits - water sampling (note: units under Equip Hrs refers to # samples)	4	Person Day	0	$600	$0	Samples	43	$100	$4,300	$4,300	$0	$0	$0	$4,300	$0	30%	$1,290	Detailed sampling scope developed. However, a relatively high contingency of 30% is considered appropriate to allow for possible underestimation of sampling time & unit costs given the long time frame to completion of the task.	Annual samples: Milne - 8 metal, 5 hydrocarbon, 3 sewage: MR - 12 metal, 5 salt, 5 hydrocarbon, 5 sewage. 2 people, 1 sample per hour average cost of $100/sample. Total Sample Samples 43 = 43 person hours
Annual site visit - site overview	4	Person Day	8	$800	$6,400	Hours	0	$0	$0	$6,400	$0	$0	$0	$6,400	$0	20%	$1,280	A 20% contingency has been applied for unforesee	2012 estimate based on 2 person,2 days per year to complete inspection & sampling and 1 day travel on either side.
Post 2011 commercial flights for labour	4	Person Day		$0	$0	Person Flights	2	$1,800	$3,600	$3,600	$0	$0	$0	$3,600	$0	5%	$180	Estimate based on average 2011 quote for commercial flights A 5% contingency has been applied	Quote based on Canadian North from Ottawa to Iqualuit round trip price. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Annual site visit - helicopter support	4	Person Day	0	$0	$0	Hours		$1,590	$0	$0	$0	$0	$0	$0	$0	0%	$0		Requirement for helicopter eliminated. All sample points are accessible at the camps by foot. At the end of year 3 there will be a minimum of 6 years post activity environmental monitoring at Deposit #1. No monitoring planned for Deposit #1 beyond year 3
Environmental Monitoring Year 5					**$8,200**				**$12,900**	**$21,100**	**$0**	**$0**	**$0**	**$0**	**$21,100**		**$4,790**		
Annual site visits - preparation/consumables	5	Person Day	3	$600	$1,800	Hours	5	$1,000	$5,000	$6,800	$0	$0	$0	$0	$6,800	30%	$2,040	Scope of work and materials developed for task. However, a relatively high contingency of 30% is considered appropriate to allow for possible underestimation of preparation time given the long time frame to completion of the task.	3 days at site per year with $1,000 consumables while at site. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Annual site visits - water sampling (note: units under Equip Hrs refers to # samples)	5	Person Day	0	$600	$0	Samples	43	$100	$4,300	$4,300	$0	$0	$0	$0	$4,300	30%	$1,290	Detailed sampling scope developed. However, a relatively high contingency of 30% is considered appropriate to allow for possible underestimation of sampling time & unit costs given the long time frame to completion of the task.	Annual samples: Milne - 8 metal, 5 hydrocarbon, 3 sewage: MR - 12 metal, 5 salt, 5 hydrocarbon, 5 sewage. 2 people, 1 sample per hour average cost of $100/sample. Total Sample Samples 43 = 43 person hours
Annual site visit - site overview	5	Person Day	8	$800	$6,400	Hours	0	$0	$0	$6,400	$0	$0	$0	$0	$6,400	20%	$1,280	A 20% contingency has been applied for unforeseen delays during site visits	2012 estimate based on 2 person,2 days per year to complete inspection & sampling and 1 day travel on either side. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Post 2011 commercial flights for labour	5	Person Day		$0	$0	Person Flights	2	$1,800	$3,600	$3,600	$0	$0	$0	$0	$3,600	5%	$180	Estimate based on average 2011 quote for commercial flights A 5% contingency has been applied	Quote based on Canadian North from Ottawa to Iqualuit round trip price. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Annual site visit - helicopter support	5	Person Day	0	$0	$0	Hours	0	$1,590	$0	$0	$0	$0	$0	$0	$0	0%	$0		Requirement for helicopter eliminated. All sample points are accessible at the camps by foot. At the end of year 3 there will be a minimum of 6 years post activity environmental monitoring at Deposit #1. No monitoring planned for Deposit #1 beyond year 3
Environmental Monitoring Year 6					**$8,200**				**$12,900**	**$21,100**	**$0**	**$0**	**$0**	**$0**	**$21,100**		**$4,790**		
Annual site visits - preparation/consumables	6	Person Day	3	$600	$1,800	Hours	5	$1,000	$5,000	$6,800	$0	$0	$0	$0	$6,800	30%	$2,040	Scope of work and materials developed for task. However, a relatively high contingency of 30% is considered appropriate to allow for possible underestimation of preparation time given the long time frame to completion of the task.	3 days at site per year with $1,000 consumables while at site. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Annual site visits - water sampling (note: units under Equip Hrs refers to # samples)	6	Person Day	0	$600	$0	Samples	43	$100	$4,300	$4,300	$0	$0	$0	$0	$4,300	30%	$1,290	Detailed sampling scope developed. However, a relatively high contingency of 30% is considered appropriate to allow for possible underestimation of sampling time & unit costs given the long time frame to completion of the task.	Annual samples: Milne - 8 metal, 5 hydrocarbon, 3 sewage: MR - 12 metal, 5 salt, 5 hydrocarbon, 5 sewage. 2 people, 1 sample per hour average cost of $100/sample. Total Sample Samples 43 = 43 person hours
Annual site visit - site overview	6	Person Day	8	$800	$6,400	Hours	0	$0	$0	$6,400	$0	$0	$0	$0	$6,400	20%	$1,280	A 20% contingency has been applied for unforeseen delays during site visits	2012 estimate based on 2 person,2 days per year to complete inspection & sampling and 1 day travel on either side. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
Post 2011 commercial flights for labour	6	Person Day		$0	$0	Person Flights	2	$1,800	$3,600	$3,600	$0	$0	$0	$0	$3,600	5%	$180	Estimate based on average 2011 quote for commercial flights A 5% contingency has been applied	Quote based on Canadian North from Ottawa to Iqualuit round trip price. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table

Environmental Monitoring	Year	Labor				Equipment													
		Units	Person	Unit Rate	Cost	Units	Equip Hrs	Unit Rate	Cost	Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency (%)	Contingency	Basis for 2012 Contingency	Basis for 2012 Estimate
Annual site visit - helicopter support	6	Person Day	0	$0	$0	Hours	0	$1,590	$0	$0	$0	$0	$0	$0	$0	0%	$0		Requirement for helicopter eliminated. All sample points are accessible at the camps by foot. At the end of year 3 there will be a minimum of 6 years post activity environmental monitoring at Deposit #1. No monitoring planned for Deposit #1 beyond year 3

List of Baffinland Equipment To Be Salvaged **2012 A & R Plan**

	Net Book Value at end 2010	Salvage Value	2011 Salvage Value (Year 1)	2012 Salvage Value (Year 2)	2013 Salvage Value (Year 3)	2014 Salvage Value (Year 4)	>2014 Salvage Value (>Year 4)	Basis for 2012 Estimate
Total Salvage	**$ 7,996,573**	**$ 2,824,697**	**$ -**	**$ 1,460,032**	**$ 1,364,665**	**$ -**	**$ -**	
Sub-Total Fixed Assets	**$ 2,927,216**	**$ 1,463,608**	**$ -**	**$ 98,943**	**$ 1,364,665**	**$ -**	**$ -**	
Mary River/Milne Inlet Sealift								
PO10056 Toromont-generator	$ 407,835	$ 203,917			$ 203,917			
PO10007 S Huot bardge loader	$ 197,886	$ 98,943		$ 98,943				
Cover All North	$ 197,012	$ 98,506			$ 98,506			
Steensby Inlet Sealift								
Anmar - used camp	$ 1,595,000	$ 797,500			$ 797,500			
Toromont Arctic - road handler	$ 299,629	$ 149,815			$ 149,815			
Battlefield Equipment Rentals - CAT277C	$ 84,000	$ 42,000			$ 42,000			
Battlefield Equipment Rentals - Telehandler	$ 112,000	$ 56,000			$ 56,000			
Toromont Arctic - fork extension-950H 8' wit	$ 8,000	$ 4,000			$ 4,000			
Herbs welding PO50048 sled deck	$ 25,855	$ 12,928			$ 12,928			
Sub-Total Fuel Assets	**$ 5,069,356**	**$ 1,361,089**		**$ 1,361,089**				
Fuel Inventory + Barrel Deposit	**$ 5,069,356**	**$ 1,361,089**		**$ 1,361,089**				- 25% Salvage Value overall for fuel. **Barelled Fuel** - 2011 Book value of fuel = $1.38/l (purchase price) + $50 drum deposit - Total number barrels at Mary Rive, Milne Inlet and Steensby on Dec 2011= 2500 barrels = 4.22 ML (Bulk Fuel) - 2011 book value of 2500 ba (As provided by BIM)

The following criteria have been used to determine assets to be included in salvage - Equipment and supplies are ready to demob and are high value assets not requiring any significant labour cost/demob cost.

Mary River and Milne Inlet - Sealift volumes (m3)

Material & Equipment In	2006	2007	2008	2009	2010	A&R Year 2	Total	2006-2008 Consumed	2009 Consumed	2010 Consumed	A & R Final Destination: Completed 2008 Backhaul	Completed 2009 Backhaul	Completed 2010 Backhaul	Planned Milne Backhaul: Year 2	Year 3	Year 4	Year 5	Year 6	Landfill	Burn	A& R Outstanding Total
Freight Sealift 1	4046	17104	9497	80	382	6230.1					-72	-5168									
Freight Sealift 2		13039									-2823										
Freight Sealift 3		3849																			
A&R 3rd party Contractor																					
Total volumes	**4046**	**33992**	**9497**	**80**	**382**	**6230.1**	**54227.1**														
Salt	1808	1755	2467				**6030**	-4883	893	-200				1840							1840
Drills	209	100	80				**389**				-190	-152		199							199
Drill Steel	1089	100	652		15		**1856**	-200	-20	-100		-48							1488		1488
Tanks A Lot Sewage	154						**154**												154		154
Food	38	300	308				**646**	-338	-80	-30										198	198
BIM Mobile Equipment	382		28				**410**							410							410
QC Mobile Equipment	589						**589**				-38	-379	-172								0
Wood	61	230	232				**523**												73	450	523
Nuna Mobile Equipment		14480	443		39		**14962**				-190	-3000		11772	0						11772
Logistec		3036	281				**3317**				-2368	-949									0
Geotextile		500					**500**	-500													0
100 man camp + Gensets		1963					**1963**							190					1773		1963
Box Culvert Crossings		2580					**2580**									670					670
Fuel		2382	1149			1661.1	**5192.1**	-2532	-527					425							425
RBCs		259	62				**321**												321		321
BIM Barge loader		360					**360**							360							360
Rigmats		80					**80**												80		80
Foam Insulation		70					**70**												70		70
Water/sewage line		108					**108**												108		108
Hazguard berm liners		108	91				**199**												199		199
Oil/Lubrican		110	94				**204**	-130	-15					59							59
Steel		110	14				**124**												124		124
Core Boxes		350	60				**410**														0
Anmar		120	40				**160**				-27	-20	-66						47		47
Explosives		722					**722**	-640													0
Powdermags		800					**800**							800							800
Round Culverts			1664		7		**1671**	-1336.8								267			334.2		601.56
Salvage drums			246				**246**								0						0
O2/acetylene/propane			112				**112**				-38	-30		44							44
Toromont parts			152				**152**			-50									152		152
3rd Party Contractor						4569										4000		569			4569
Miscellaneous equp. (landfill)			706	80	321		**1107**												706		706
Sum of Individual Volumes Shipped to Mary River/Milne	4330	30623	8881	80	382	6230.1	45957.1														
Unaccounted Minor Volumes	-284	3369	616	0	0	0	8270												4080		4080
Hazardous Waste	0	0	0	0	0	0	0					-642	-84	40	0	80		10			40
Sum of Volumes for A& R								-10559.8	251	-380	-2851	-5220	-322	16139	0	5017	0	579	9709	648	

Sum of Volume Current at Project effective Dec 31, 2008	**32804.8**
Sum of Volume Current at Project effective Jan 31, 2011	**26875.3**

Sum of Volume to be Backhauled from Milne effective Jan 1, 2009	19111.6	19111.6	19111.6	19111.6
Sum of Volume to be Backhauled from Milne effective Jan 31,2011	16139	0	5017	0	579

Other Mary River Volumes

Equivalent Hercules Air Lifts	910	1010	1010	1010	1010	**1920**

Details of contents of loads is unknown. Assume this volume is equivalent to current estimated volume of Domestic non-hazardous waste in inventory at Mary River. This volume is counted on the Waste worksheet

Mary River and Milne Inlet - Sealift volumes (m3)

Material & Equipment In		2006	2007	2008	2009	2010	A&R Year 2	Total		2006-2008 Consumed	2009 Consumed	2010 Consumed	A & R Final Destination: Completed 2008 Backhaul	Completed 2009 Backhaul	Completed 2010 Backhaul	Planned Milne Backhaul: Year 2	Year 3	Year 4	Year 5	Year 6	Landfill	Burn	A& R Outstanding Total
Steensby Inlet Sealift Volume Calculations																							
Material & Equipment In		2006	2007	2008				Total		2006-2008 Consumed	2009 Consumed		A & R Final Destination: Completed 2008 Backhaul	Completed 2009 Backhaul	Completed 2009 Backhaul	Planned Steensby Backhaul:	Year 2				Landfill	Burn	A& R Outstanding Total
Steensby Inlet																							
Fuel (sealift volume cube)				2815				2815						2760	-55		55						55
Materials (cubic meters)				1563				1563									1563						1563
Equipment (cubic meters)				3523				3523						229	229		3294						3294
Total				**7901**				**7901**						**2989**	**174**		**4912**						**4912**

2012 A & R Plan Helicopter Hour Summary

Area/Task	Hours	Unit Rate	Cost	Execution Year	Basis for 2012 estimate
Mary River					
General Camp Operation & site Inspections	92	$1,590	$146,280	3	Assume Helicopter only required for 4 months and number of hours required reduced based on last years utilization (3hrs/day for entire program) and the fact that all the individual tasks are budgeted separately below. 4 mts*31 days* 0.5hr/day + 30 hours total for mob/demob from Goose Bay, Nfld.
Mineral Exploration Areas		$1,590			
Drills are removed from exploration areas	0	$1,590	$0	3	Operational requirement for all drill to be removed form the exploration area following completion of the annual drill program
Remove water lines from exploration areas	6	$1,590	$9,540	3	See details estimate worksheet
Drill holes filled and residual casings cut	18	$1,590	$28,620	3	See details estimate worksheet
Old drill camp & access road material removed	0	$1,590	$0	3	Work completed in 2009
Inspection and final reclamation of exploration drill hole locations	4	$1,590	$6,360	3	See details estimate worksheet
Miscellaneous exploration decommissioning	18	$1,590	$28,620	3	See details estimate worksheet
Milne Inlet		$1,590			See details estimate worksheet
Decommission Salt Mixing Station	2	$1,590		3	Remove material from along Mary River
Steensby		$1,590			See details estimate worksheet
Decommission Steensby Inlet Camp	36	$1,590	$57,240	3	See details estimate worksheet
Remote Locations		$1,590			See details estimate worksheet
Inspection and final reclamation of geotechnical drill holes and test pit locations	33	$1,590	$52,470	3	50% of holes completed in 2009 with 23 hrs of helicopter time. Assume 50 hours required to complete remaining 50% of holes.
Removal of casing/thermistors	16.2	$1,590	$25,758	3	Estimate reduced based on Geotech hole reclamation productivity & helicopter requirements from 2009
Decommissioning of meteorological stations (3)	3	$1,590	$4,770	3	See details estimate worksheet
Decommissioning of hydrology stations (4)	3	$1,590	$4,770	3	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
Decommission Mid-Rail Camp	60	$1,590	$95,400	3	See details estimate worksheet
Totals	**291.2**	$1,590	**$459,828**		

Available helicopter hours in 10 weeks (Assume Helicopter required July 1-Sept 15)	**840**	**All tasks requiring helicopter support will be executed between July 1-and Sept 15th Year 3.**
Helicopter utilization	**35%**	**Very low utliization. There will be adequate hours available o cover all helicopte support work**
Avg. Hours /day	4.2	**3 hour daily minimum contracts are standard. At 4.2 hours there should be no extra hours charged under any potential contract.**

Borrow Area Material Requirements Summary

Estimate of A & R Borrow Area Material requirements

	Labor				Equipment										
	Units	# Units	Unit Rate	Cost	Units	# Units	Unit Rate	Cost	Total cost	Year 1	Year 2	Year 3	Year 4	> Year 4	Basis for 2012 Estimate
TOTALS				$ -	Cubic Meters	18940		$ -	$ -	$ -	$ -	$ -	$ -	$ -	Borrow material may be available from the decommissioning of the Mary River & Milne inlet fuel farm & sewage lagoon berms. This has not been discounted at this time.
Stockpiles				$ -		3202		$ -	$ -	$ -	$ -	$ -	$ -	$ -	
0.3 meter cap on Milne Inlet contoured ore pads				$ -	Cubic Meters	3202		$ -	$ -		$ -	$ -	$ -		Assume .3m cover. Stockpile will be graded to maximum height of 4m with side slopes of 2:1.. Volume fill required = 8674 m {surface area}* .33 meter + (551 m {perimeter length}*1.7 meter wide face on slope (2:1 slope with avg height = .3 meter)* .33 meter fill=3202 cubes fill required to cap ore pads
				$ -				$ -	$ -		$ -	$ -	$ -		
				$ -				$ -	$ -		$ -	$ -	$ -		
				$ -				$ -	$ -		$ -	$ -	$ -		
				$ -				$ -	$ -		$ -	$ -	$ -		
Landfill				$ -		36840		$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Borrow required for access road construction				$ -	Cubic Meters	3200		$ -	$ -		$ -	$ -	$ -		Access road constructed in 2010. Borrow no longer required
Borrow required for complete construction of landfill for 5000 cubes landfill				$ -	Cubic Meters	6912		$ -	$ -		$ -	$ -	$ -		See detailed landfill volume calculations file. 25% of landfill constructed and borrow volume requirements reduced by corresponding volume.
Borrow required for operation of land fill to capacity				$ -	Cubic Meters	8668		$ -	$ -		$ -	$ -	$ -		Assume complete operating volume required. See detailed landfill volume calculations file
Borrow required for capping landfill				$ -	Cubic Meters	18060		$ -	$ -		$ -	$ -	$ -		Assume complete operating volume required. See detailed landfill volume calculations file
				$ -				$ -	$ -		$ -	$ -	$ -		
Road maintenance				$ -		0		$ -	$ -	$ -	$ -	$ -	$ -	$ -	
				$ -				$ -	$ -		$ -	$ -	$ -		
				$ -				$ -	$ -		$ -	$ -	$ -		
				$ -				$ -	$ -		$ -	$ -	$ -		
				$ -				$ -	$ -		$ -	$ -	$ -		
				$ -				$ -	$ -		$ -	$ -	$ -		
Borrow available from existing earthworks to be decommissioned				$ -		-21102		$ -	$ -	$ -	$ -	$ -	$ -	$ -	Total available
Milne - available for capping ore pads				$ -	Cubic Meters	-3202		$ -	$ -		$ -	$ -	$ -		Milne Tank Farm= 13 000m3 & Milne Lagoon 4 000m3
Mary River - Available for operating & capping landfill				$ -	Cubic Meters	-17900		$ -	$ -		$ -	$ -	$ -		Mary Tank Farm= 4 400m3 & Mary Sewage(double pond) 13 500m3
				$ -				$ -	$ -		$ -	$ -	$ -		
				$ -				$ -	$ -		$ -	$ -	$ -		
				$ -				$ -	$ -		$ -	$ -	$ -		

2012 A&R Schedule of Labour, Equipment & Charter Rates

Labour	Daily Rate	Basis for Rate	Comments
Supervisor	$ 1,241	Contractor adminstrator rate = $83.56/hour or $1241/day including weekly OT	Based on current site contractor January 2011 rates. Current contractor is positioned at the high end of the wage scale as such accurately reflects expected labour costs. See 3rd Party site labour & equipment rates quote and in place January 31, 2011. (See Appendix G-4, 2012A&R Plan Estimating Docs\Labour equipment charter rates\3rd party Contractor_Labour_Equip Rates - current Jan 31 2011 file)
Contractor Superintendent	$ 1,495	Third party contract superintendent wage rate = $100.55/hour or $1495/day including weekly OT.	
Equipment Operator	$ 996	Multi- Equipment Operator rate = $67.02/hour or $996/day including weekly OT.	
Certified Diesel Mechanic	$ 1,184	Site contractor mechanic = $79.73/hour or $1184/day including weekly OT	
Warehouse man	$ 958	Site contractor warehouseman rate = $64.46/hour	
Administrator	$ 871	Contractor adminstrator rate = $65.33/hour or $871/day including weekly OT	
Engineering & science support	$ 800	Average technician rate for technical support at Mary River in 2011	
General Labourer Rate	$ 439	Avg. QL Labourer rate = $439/day including weekly OT	Based on January 2011 rates. Assume QL Labours used to maximize local employee content. (See Appendix G-4,2011A&R Plan Estimating Docs\Labour equipment charter rates\2011 QL Contractor Rates file)
Cook	$ 621	Avg. QL cook rate = $609/day including weekly OT	
Equipment	**Hourly Rate**	**Basis for Rate**	**Comments**
Helicopter	$ 1,590	2011 contract rate with helicopter service provider	See Appendix G-4,2012A&R Plan Estimating Docs\Labour equipment charter rates\2011 Charter Helicopter Quote
Cat 966 Loader	$ 115	Based on current site contractor January 2011 rates. Current contractor is positioned at the high end of the wage scale as such accurately reflects expected labour costs. See 3rd Party site labour & equipment rates quote and in place January 31, 2011. (See Appendix G-4,2011A&R Plan Estimating Docs\Labour equipment charter rates\3rd party Contractor_Labour_Equip Rates - current Jan 31 2011 file)	
Cat 980H Loader	$ 165		
Cat 930G Loader	$ 68		
Cat D8T Dozer	$ 176		
Cat D7 Dozer	$ 149		
Cat 14H Grader	$ 110		
Cat 345 Excavator	$ 217		
Kenworth Truck (W/O pup)	$ 111		
Kenworth Truck (C/W pup)	$ 138		Same rate applies to Tractor with Scissor Deck
Bobcat	$ 66		
Blended Road Work Equipment Rate	$ 138		Calculated blended rate based on 2011 equipment contractor rates -1 dozer, 3 kenworths, 1 excavator
Kenworth with Fuel Tanker	$ 129		
Miscellaneous	**Rate**	**Basis for Rate**	**Comments**
Fixed wing charter quote	$ 11,900	Based on 2011 quote. Rate based on Iqaluit positioned aircraft for a Iqaluit - Mary River - Milne Inlet - Mary River - Iqaluit charter	See electronic quote in Appendix G-4, 2012A&R Plan Estimating Docs\Labour equipment charter rates\2011 Charter Helicopter Quote
Round trip flight Ottawa to Iqaluit.	$ 1,664	Based on Canadian North Posted Rates Feb 20, 2010	See electronic quote Appendix G-4, 2012A&R Plan Estimating Docs\Labour equipment charter rates\Cdn North Ottawa Iqaluit quote

Note:

All labour rates include employee payroll deductoins, WCB, Insurance , overhead, Administation and Profit.

All Equipment rates include insurance, maintenance, overhead, adminstration and profit.

2012 A & R Plan Labour Summary by Worksheet (Person Days)

	Year 1	Year2	Year 3	Year 4	Year 5	Year 6	**Total**	**%**
Project Site Abandonement	35						35	1%
Bulk Sample Pit							0	0%
Mineral Exploration Areas (Deposits No. 1, 2, 3)			37				37	1%
Remote Sites			26				26	0%
Stockpiles			16				16	0%
Camps & Related Facilities		473	1716	4			812	12%
Roads & Airstrips		480	578	738			2,064	30%
Borrow Quarry Areas			143				188	3%
Fuel Storage Facilities (Bulk and Drums)		88	289				377	5%
Explosives							0	0%
Waste Management		10	132				142	2%
Hydrocarbon Impacted Soil			140	140	140	140	580	8%
General Site Area		450	600	450			1,500	22%
Sealift							36	1%
Camp Operation							1,027	15%
Environmental Monitoring		11	11	11	11	11	55	1%
Total	**35**	**1512**	**3688**	**1343**	**151**	**151**	**6,895**	**100%**
Estimated No. of Operating months annually	**0.25**	**4**	**5**	**5**	**2.5**	**2.5**		
avg monthly number of people on site over work period		**378**	**737.6**	**268.6**	**60.4**	**60.4**	**46.0**	
Average crew size		13	25	9	2	2		

Sum of All Task Mobile Equipment Hours Requirements (For fuel estimating purposes)

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	60	0	0	0
	0	0	0	0	0	0
	0	0	372	0	0	0
	0	1058	3855	24	0	0
	0	0	1169	4416	0	0
	0	0	1716	0	0	0
	0	297	1080	0	0	0
	0	0	0	0	0	0
	0	6	1141	0	0	0
	0	0	720	720	720	720
	0	0	0	0	0	0
	0	144	0	144	0	30
Total	**0**	**1505**	**10113**	**5304**	**720**	**750**

Fuel Requirements For Mobile Equipment Operation (Not including Freshet Operation)

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Total	Comments
Annual Equipment Hours	**0**	**1505**	**10113**	**5304**	**720**	**750**	**18392**	
Pre Year 2 Sealift Equipment Hours		510	0	0		0	**510**	
Post Year 2 sealift Equipment Hours	0	995	10113	5304	720	750	**17882**	
arithmetic average of the manufacturers projected fuel use at a medium load factor for Heavy Equipment	31.4	31.4	31.4	31.4	31.4	31.4		**For the purpose of estimating fuel consumption, assume the use of the arithmetic average of the manufacturers projected fuel use at a medium load factor. This estimate is conservative, as it provides a higher fuel consumption than the actual weighted average. Arithmetic average derived form the 2011 A&R Plan forecast fuel requirements & assumptions file**
Annual Heavy Equipment Fuel requirements Post year 2 sealift	**0**	**31257**	**317548**	**166545.6**	**22608**	**23550**	**561509**	

2012 Mary River Average Food Cost / Person Day

Week	Food Order Weight (kg/order)	Invoice cost/order ($)	CN frieght cost (Val D'Or - Iqaluit) ($)	BBE Freight Handling (Iqaluit) ($)	Total Cost ($)	Person Days	Total Food Cost per Person day ($/Person day)
June	1,794	6,898.37	6,789.37	121.99	13,809.74	1,189	11.6145799
July	2,857	22,571.56	10,395.09	194.28	33,160.93	1,209	27.42839578
August	4,725	9,982.98	16,288.78	321.30	26,593.06	1,450	18.34003862
Total	9,376	39,452.91	33,473.24	637.57	73563.72	3848	

Average Food Cost/Person Day= $ 19.12

BBE Total fright Handling Cost/kg= 0.068

2012 ABANDONMENT AND RECLAMATION PLAN
FOR ADVANCED EXPLORATION ACTIVITIES

Appendix G-4
Supporting Documentation
(Included with Electronic Version Only)

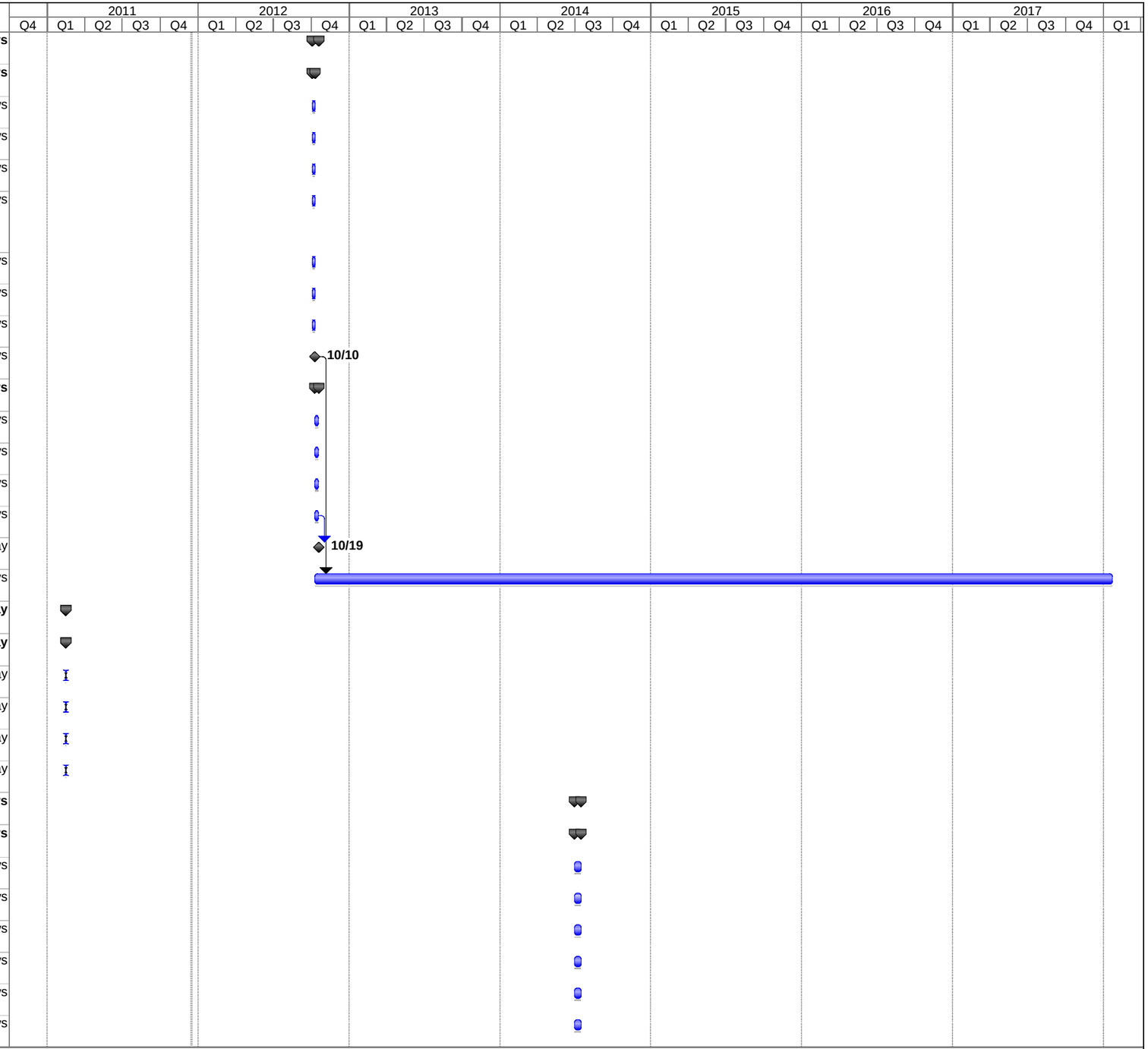
2012 ABANDONMENT AND RECLAMATION PLAN
FOR ADVANCED EXPLORATION ACTIVITIES

Appendix H
Abandonment &Reclamation Schedule

2012 ABANDONMENT AND RECLAMATION PLAN
FOR ADVANCED EXPLORATION ACTIVITIES

Appendix H
Abandonment &Reclamation Schedule

ID	Task Name	Duration
1	**PROJECT SITE ABANDONMENT**	**12 days**
2	**Pre-abandonment shutdown**	**5 days**
3	Drain, isolate and secure camp water systems	5 days
4	Drain, isolate and secure camp sewage treatment plant, lines and lagoons	5 days
5	Drain, isolate and secure all fuel storage supply systems	5 days
6	Isolate and secure all bulk fuel storage systems such that tanks and bladders are isolated and contained within secondary containment	5 days
7	Secure all barreled fuel in secondary containment	5 days
8	Secure all hazardous waste in secondary containment	5 days
9	Isolate and safely secure all mechanical and electrical elements	5 days
10	BIMC declares bankruptcy and abandon (Oct 10, 2012)	0 days
11	**Post-Abandonment Inspection by QIA**	**8 days**
12	Commercial Flights (Ottawa - Iqaluit x2)	7 days
13	Charter flight (Iqaluit - MR-MI-MR-Iqaluit)	7 days
14	Inspection and secure critical areas at Mary River and Milne Inlet	7 days
15	Preliminary assessment to support closure design and future A&R execution	7 days
16	Seasonal shutdown at Mary River	1 day
17	Engineering Design and Execution Planning	1386 days
18	**BULK SAMPLE PIT**	**1 day**
19	**Decommission bulk sample pit**	**1 day**
20	Remedial blasting for stability	1 day
21	Remedial excavation for stability	1 day
22	Runoff diversion around top of pit	1 day
23	Decommission explosives magazine	1 day
24	**MINERAL EXPLORATION AREAS (DEPOSITS NO. 1, 2, 3)**	**12 days**
25	**Decommission mineral exploration areas**	**12 days**
26	Remove water lines from exploration areas	12 days
27	Drill holes filled and residual castings cut	12 days
28	Level pads, backfill sumps and grade to natural contours	12 days
29	Prepare core for long-term site storage adjacent to airstrip	12 days
30	Inspection and final reclamation of exploration drill hole locations	12 days
31	Decommission salt mixing stations	12 days



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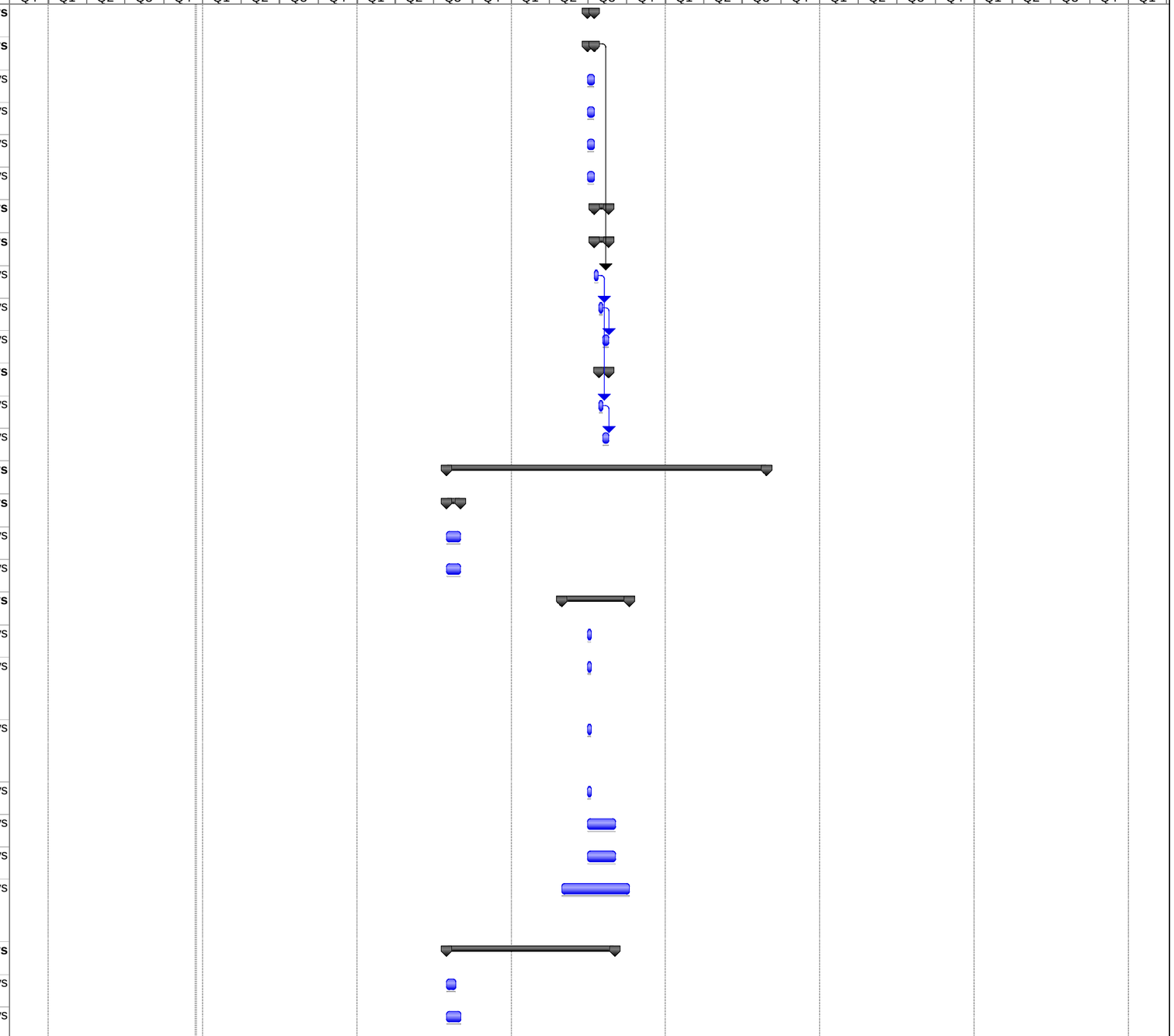
Task | Milestone | Project Summary | External Milestone | Deadline
Split | Summary | External Tasks | Progress

ID	Task Name	Duration
32	**REMOTE SITES**	**12 days**
33	**Remote Sites**	**12 days**
34	Inspection and final reclamation of geotechnical drill holes and test pit locations	12 days
35	Removal of casing/thermistors	12 days
36	Decommissioning of meteorological stations (3)	12 days
37	Decommissioning of hydrology stations (4)	12 days
38	**STOCKPILES**	**24 days**
39	**Mary River Stockpiles**	**24 days**
40	Contour weathered ore stockpile and pit access road on Deposit No. 1	7 days
41	Grade weathered ore stockpiles at crusher area	7 days
42	Haul and place cover on ore pad area at Mary River	10 days
43	**Milne Inlet Stockpiles**	**17 days**
44	Grade residual ore stockpiles at Milne Inlet	7 days
45	Haul and place cover on ore pad area at Milne Inlet	10 days
46	**CAMPS AND RELATED FACILITIES**	**547 days**
47	**Site Contractor Decommissioning and Demobilization Mary River Camp**	**23 days**
48	Decommission/Package mobile equipment	23 days
49	Ship material by land to Milne Inlet for shipment Yr. 2	23 days
50	**Decommissioning Mary River Camp**	**116 days**
51	Decommission 100 man Weatherhaven camp	7 days
52	Decommission stand alone accommodation / work tent camp (26 Weatherhaven tents)	7 days
53	Decommission stand alone accommodation / work tent camp (11 Norseman tents)	7 days
54	Decommission concrete sewage tanks	7 days
55	Burn appropriate materials or Landfill	48 days
56	Ship material by land to Milne Inlet for shipment Yr. 3	48 days
57	Electronic support for all decommissioning work at Mary River and Milne Inlet	116 days
58	**Organize material for shipment Mary River Camp**	**288 days**
59	Boart	16 days
60	Nuna	24 days



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Task | Milestone | Project Summary | External Milestone | Deadline
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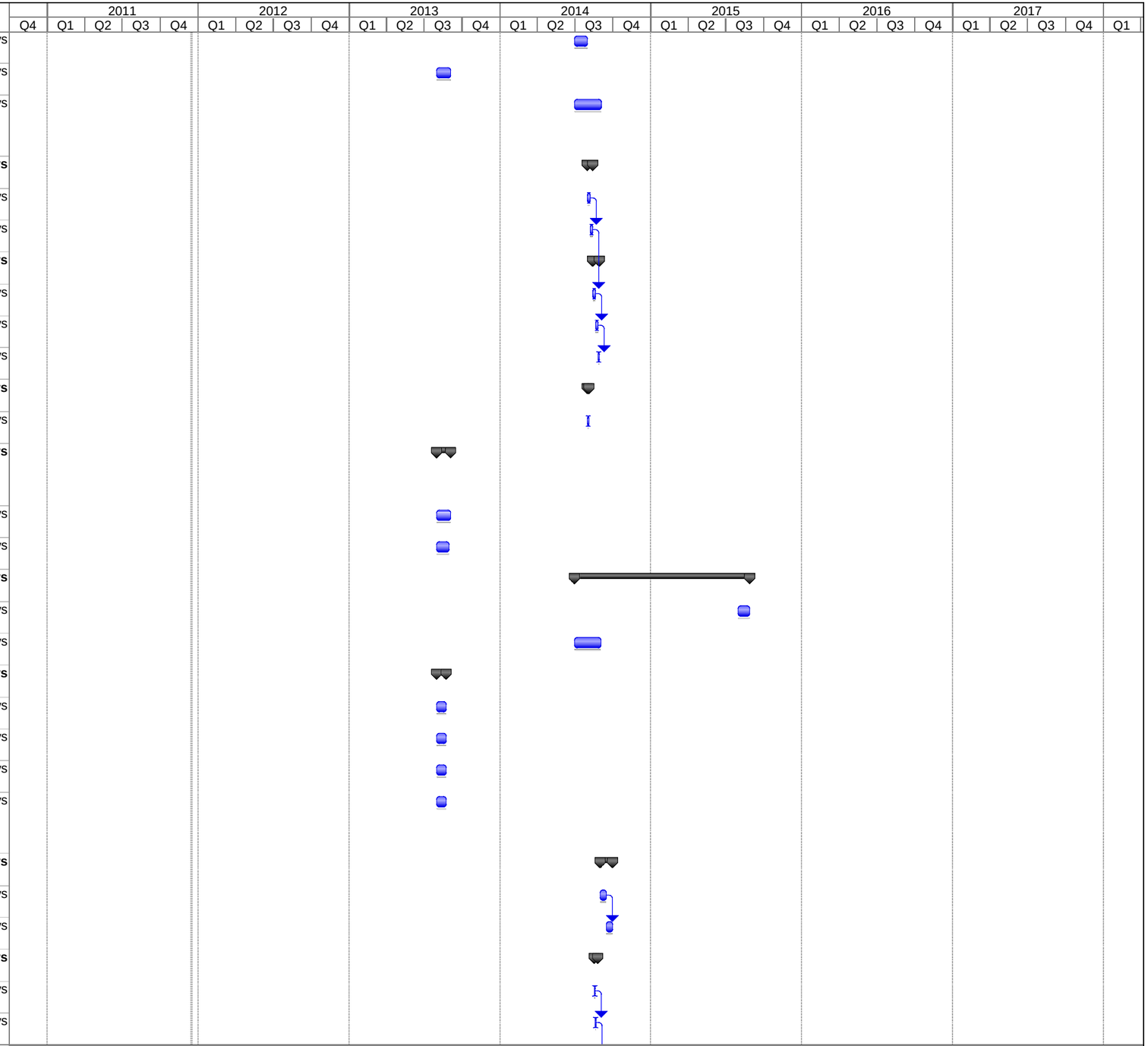
ID	Task Name	Duration
61	Package BIM sea cans for backhaul	23 days
62	Decommission/Package 3 shops	24 days
63	Decommission/Package related infrastructure (lines, piping, associated small buildings)	47 days
64	**General site cleanup Mary River Camp**	**9 days**
65	Loader use for redirecting coarse clean up streams	5 days
66	Clean up residual fine waste on ground	4 days
67	**Contouring & grading Mary River Camp**	**12 days**
68	Coarse contouring - Dozer	5 days
69	Coarse contouring - loader and excavator	4 days
70	Final grading	3 days
71	**Decommission Refuge Sites Mary River Camp**	**2 days**
72	Decommission refuge sites	2 days
73	**Site Contractor Decommissioning and Demobilization Milne Inlet Camp**	**24 days**
74	Decommission/Package Shanco Camp (10 trailers)	24 days
75	Decommission remaining mobile equipment	22 days
76	**Decommission Milne Inlet Camp**	**306 days**
77	Decommission/Package other stand alone work tents (9 wood structure tents)	22 days
78	Truck waste from Milne Inlet Camp to Mary River Camp for land filling	46 days
79	**Organize material for shipment Milne Inlet Camp**	**17 days**
80	Nuna	17 days
81	BIM Barge Loader	17 days
82	Decommission/Package 1 shops	17 days
83	Decommission/Package related infrastructure (lines, piping, associated small buildings)	17 days
84	**General site cleanup Milne Inlet Camp**	**22 days**
85	Loader use for redirecting coarse clean up streams	11 days
86	Clean up residual fine waste on ground	11 days
87	**Contouring & grading Milne Inlet Camp**	**6 days**
88	Coarse contouring - Dozer	2 days
89	Coarse contouring - loader and excavator	2 days



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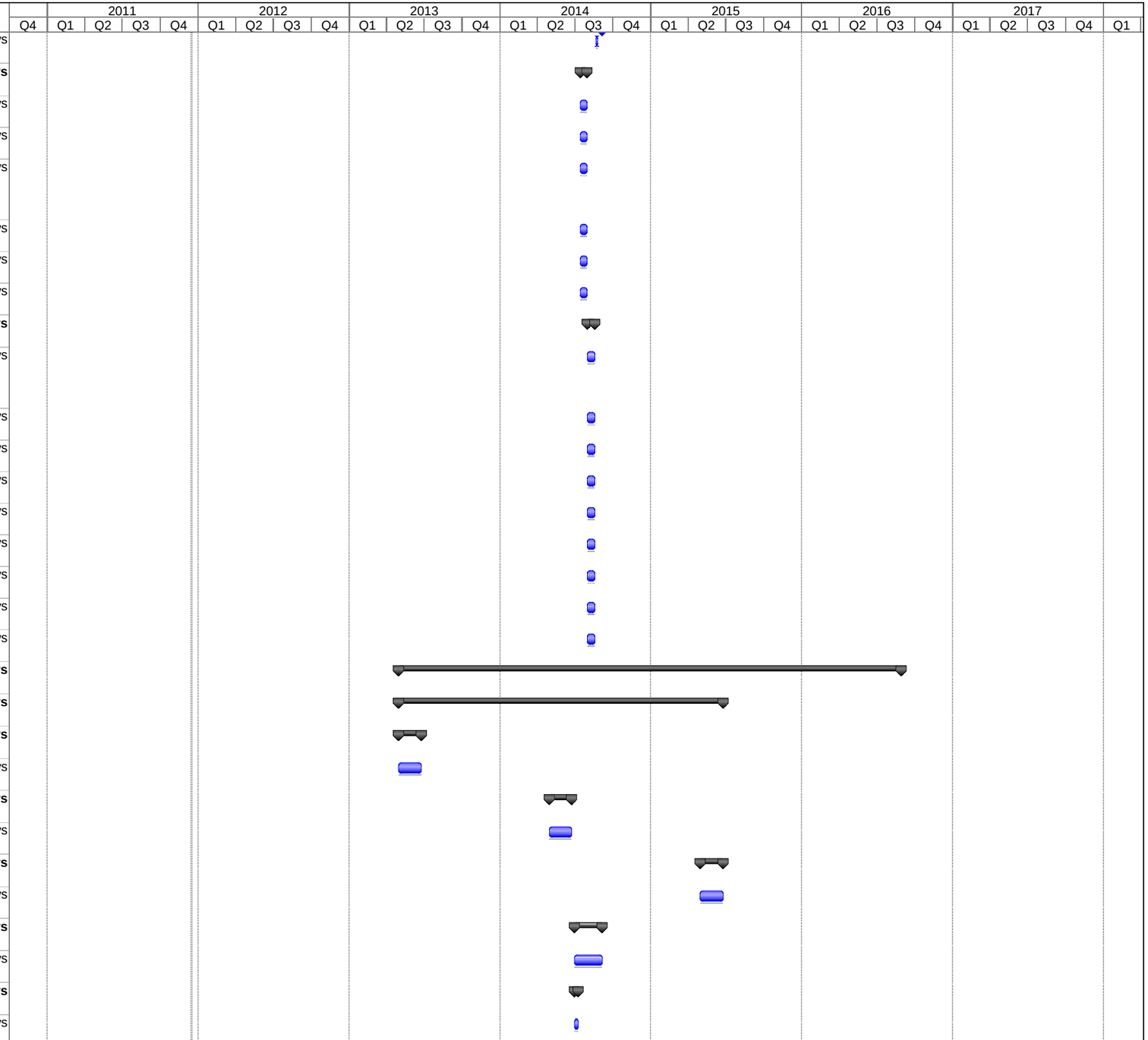
Task | Milestone | Project Summary | External Milestone | Deadline
Split | Summary | External Tasks | Progress

ID	Task Name	Duration
90	Final grading	2 days
91	**Decommission Mid-Rail Camp**	**12 days**
92	Decommission stand alone accommodation / work tent camp	12 days
93	Decommission genset and incinerator	12 days
94	Decommission tent camp and related infrastructure (lines, piping, associated buildings)	12 days
95	Decommission lay down areas	12 days
96	General site cleanup	12 days
97	Fly waste from Mid Rail Camp to Mary River Camp for landfilling	12 days
98	**Decommission Steensby Inlet Camp**	**12 days**
99	Decommission/Package stand alone accommodation / work tent camp (25 wood structure tents)	12 days
100	Decommission/Package genset and incinerator	12 days
101	Decommission related infrastructure (lines, piping, associated buildings)	12 days
102	Decommission lay down areas	12 days
103	Decommission fuel storage	12 days
104	General site cleanup	12 days
105	Decommission remaining mobile equipment	12 days
106	Organize material for shipment and sealift support	12 days
107	Steensby Port resupply by Helicopter	12 days
108	**ROADS AND AIRSTRIPS**	**875 days**
109	**Freshet Management**	**566 days**
110	**Year 2 Field Activities**	**40 days**
111	Direct Freshet Management Cost	40 days
112	**Year 3 Field Activities**	**40 days**
113	Direct Freshet Management Cost	40 days
114	**Year 4 Field Activities**	**40 days**
115	Direct Freshet Management Cost	40 days
116	**Milne Inlet Tote Road Operation**	**49 days**
117	Operate Tote Road for shipments	49 days
118	**#1 Deposit Haul Roads**	**7 days**
119	Inspect and repair any erosion on #1 Deposit Rd. and cross grade road	7 days



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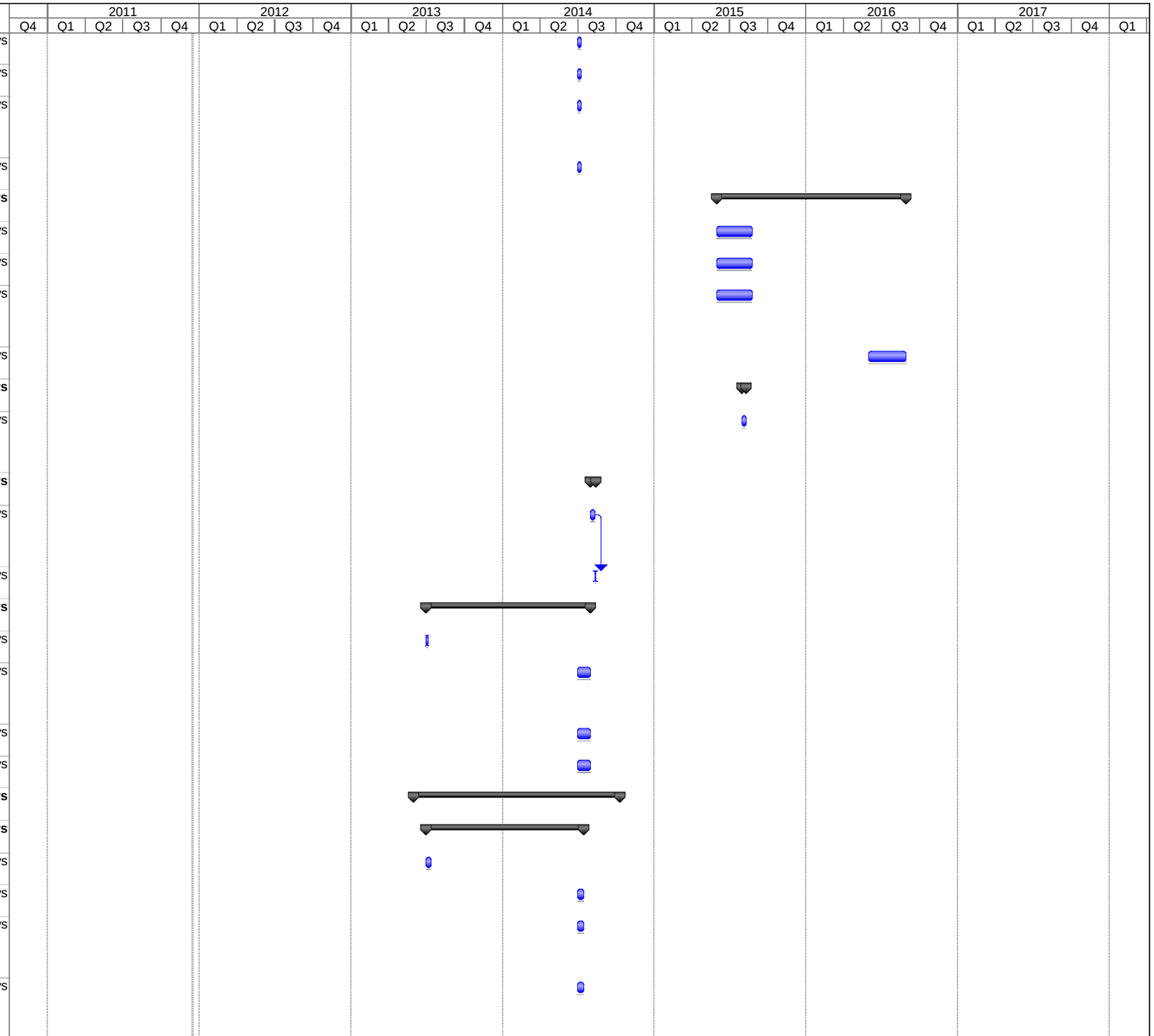
Task | Milestone | Project Summary | External Milestone | Deadline
Split | Summary | External Tasks | Progress

ID	Task Name	Duration
120	Stabilize inside ditches with cobble	7 days
121	Remove round culverts, install water bars and stabilize water crossings	7 days
122	Install safety berms restricting vehicle access at the location where the haul road enters the bulk sample pit	7 days
123	Re-grade pad & repair any erosion at #1 Deposit salt station	7 days
124	**Milne Inlet Tote Road**	**328 days**
125	Inspect and repair any erosion on Tote Road	64 days
126	Remove all box culvert crossings and stabilize slopes	64 days
127	Install water bars (road embankment cross cuts) at locations where the Tote Road is constructed into an enbankment to prevent erosion	64 days
128	Remove all round culvert crossings and stabilize slopes	64 days
129	**General Access Roads**	**7 days**
130	Grade and contour road surfaces and remove culverts from access roads (explosives, landfill, sewage lagoon and water intake access road)	7 days
131	**Airstrips**	**9 days**
132	Remove Mary River airstrip lighting (there is currently no lighting present at Milne Inlet)	7 days
133	Fill in airstrip lighting ditches & regrade at Milne Inlet and Mary River	2 days
134	**BORROW/QUARRY AREAS**	**287 days**
135	Geotechnical monitoring of permitted and road side borrow area reclamation	5 days
136	Grade and contour primary borrow sites at Milne Inlet, Mary River, Midway and quarry	23 days
137	Grade and contour road side borrow areas within alignment	23 days
138	Borrow materials from permitted borrow areas (m3)	23 days
139	**FUEL STORAGE FACILITIES (BULK AND DRUMS)**	**359 days**
140	**Mary River Fuel Farm**	**275 days**
141	Return excess fuel at Mary River to Milne Inlet	10 days
142	Drain, fold, and containerize Mary River bladder tanks	11 days
143	Remove all geomembrane fuel liners, package and transport to Milne Inlet for sea-lift backhaul	11 days
144	Execute civil works to transport potential hydrocarbon contaminated soil from the Mary River bulk fuel farm to the Milne Inlet landfarm	11 days



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Task | Milestone | Project Summary | External Milestone | Deadline
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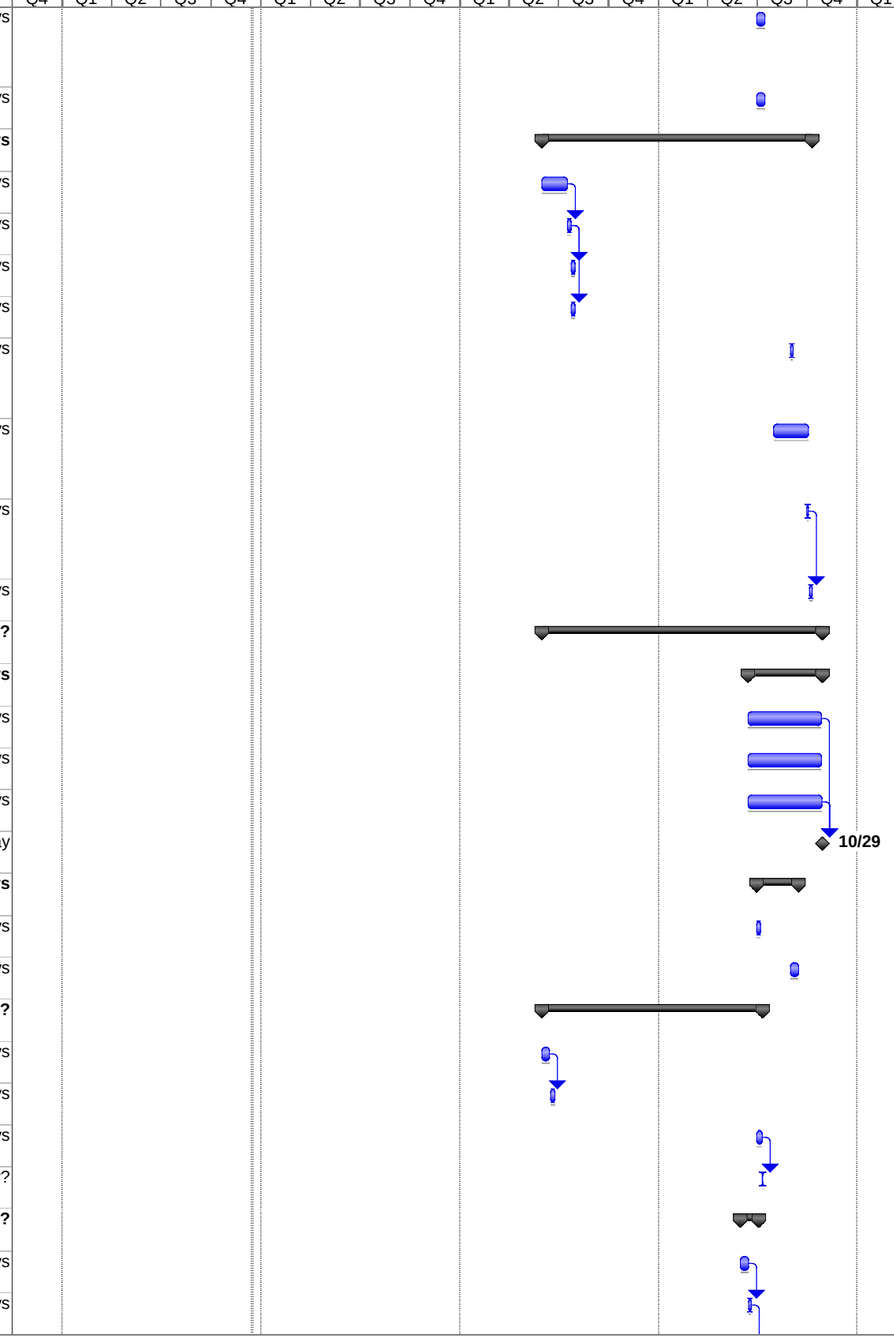
ID	Task Name	Duration
145	Execute civil works to transport potential hydrocarbon contaminated soil from Mary River non-bulk fuel farm lined containment areas to the Milne Inlet landfarm	11 days
146	Recontour surface	11 days
147	**Milne Inlet Fuel Farm**	**359 days**
148	Milne Inlet - Operate Oil water separation operation	34 days
149	Milne Inlet Bulk Fuel Sealift Backhaul Support	5 days
150	Drain, fold, and containerize Milne bladder tanks	5 days
151	Remove piping from fuel farm	5 days
152	Remove all hazardous material/fuel storage geomembrane fuel liners and package for sea-lift backhaul. (All lined berms except Milne Inlet Fuel Farm).	5 days
153	Execute civil works to convert the fuel farm to hydrocarbon impacted soil landfarm	46 days
154	Execute civil works to transport potential hydrocarbon contaminated soil from Milne Inlet non-bulk fuel farm lined containment areas	3 days
155	Recontour surface	5 days
156	**WASTE MANAGEMENT**	**372 days?**
157	**Operate landfill**	**99 days**
158	Expand existing landfill Berms including haulage	97 days
159	Borrow Haulage required for operation of landfill to capacity	97 days
160	Borrow Haulage required for capping landfill	98 days
161	Close Landfill	1 day
162	**Ship waste by land Mary River to Milne Inlet**	**55 days**
163	Prepare chemicals for shipping	5 days
164	Disposal cost of hazardous material in the South (except bulk contaminated soil)	11 days
165	**Sewage - Mary River**	**294 days?**
166	Decant sewage lagoons	11 days
167	Sludge removal & transfer to landfill	6 days
168	Liner removal & berm reclamation	8 days
169	Liner disposal	1 day?
170	**Sewage - Milne**	**27 days?**
171	Decant sewage lagoons	12 days
172	Sludge removal & transfer to landfill	5 days



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Task | Milestone | Project Summary | External Milestone | Deadline
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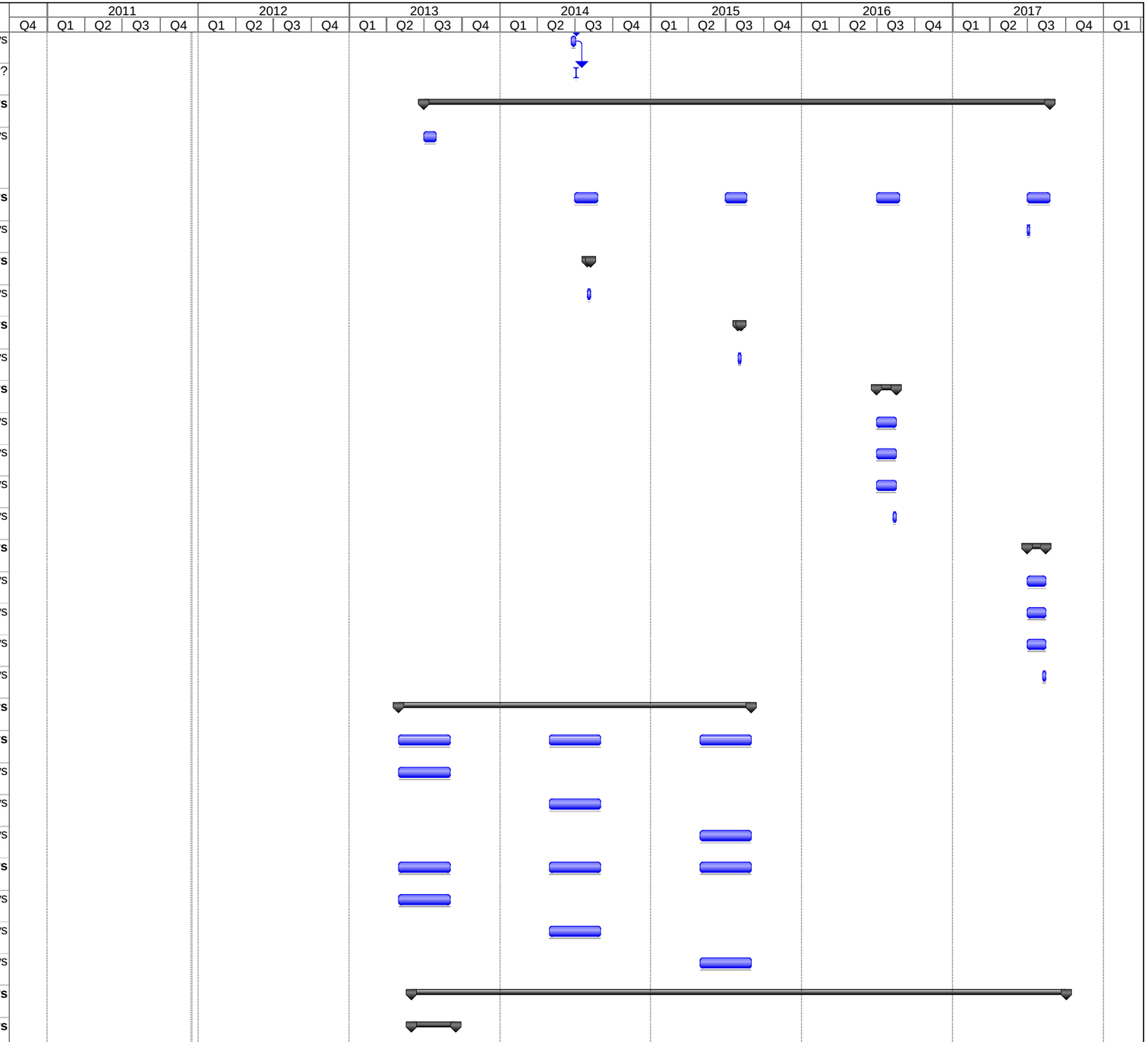
ID	Task Name	Duration
173	Liner removal & berm reclamation	9 days
174	Liner disposal	1 day?
175	**CONTAMINATED SOIL**	**1090 days**
176	Complete Phase 1 to Phase 3 Environmental Assessment for hydrocarbon contaminated soil	22 days
177	**Milne Inlet - Till hydrocarbon impacted soil each year for 4 years**	**826 days**
182	Land freight cost for Year 6 backhaul sealift	5 days
183	**Support for landfarm operation Year 3**	**6 days**
184	Third Party Consultant to verify site and landfarm clean up completion	6 days
185	**Support for landfarm operation Year 4**	**6 days**
186	Third Party Consultant to verify site and landfarm clean up completion	6 days
187	**Support for landfarm operation Year 5**	**34 days**
188	Food and accommodations	34 days
189	Year 4-6 commercial flights for labour	34 days
190	Fixed wing support	34 days
191	Third Party Consultant to verify site and land farm clean up completion	6 days
192	**Support for landfarm operation Year 6**	**32 days**
193	Food and accommodations	32 days
194	Year 4-6 commercial flights for labour	32 days
195	Fixed wing support	32 days
196	Third Party Consultant to verify site and land farm clean up completion	6 days
197	**GENERAL SITE AREA**	**616 days**
198	**Civil contractor - Admin & Supervisory manpower**	**616 days**
199	Civil contractor - Admin & Supervisory manpower 1	90 days
200	Civil contractor - Admin & Supervisory manpower 2	90 days
201	Civil contractor - Admin & Supervisory manpower 3	90 days
202	**Site Management Supervision**	**616 days**
203	Site Management Supervision 1	90 days
204	Site Management Supervision 2	90 days
205	Site Management Supervision 3	90 days
206	**SEALIFT MATERIALS**	**1139 days**
207	**Freight Sealift Milne Inlet to Valleyfield Year 2**	**78 days**



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Task | Milestone | Project Summary | External Milestone | Deadline
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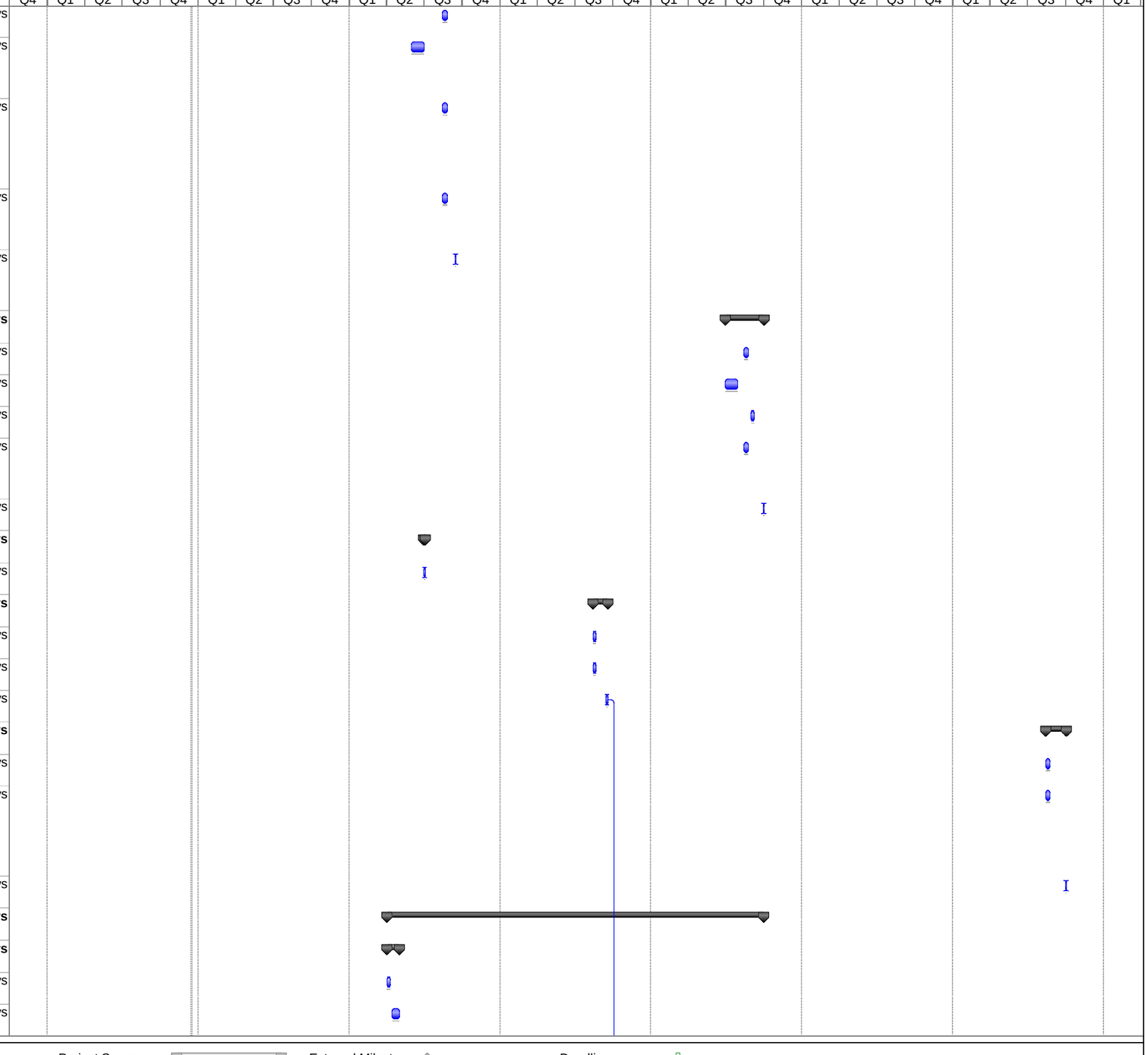
ID	Task Name	Duration
208	Shipment, loading and off loading	8 days
209	Land freight for 3rd party A&R contractor equipment and supplies from mobilization location to port of Valleyfield	22 days
210	Dedicated Charter Freight Sealift of 3rd part contractor equipment and supplies to Milne Inlet, and to demobilize contractor equipment currently located at MR and MI	8 days
211	Demobilize site by sealift contractor and specified BIM equipment currently located at Mary River and Milne Inlet	8 days
212	Land freight for site contactor and BIM owned equipment currently located at Mary River and Milne Inlet	2 days
213	**Freight Sealift Milne Inlet to Valleyfield Year 4**	**70 days**
214	Shipment, loading and off loading	8 days
215	Land freight for material and supplies from mobilization location port in Valleyfield	22 days
216	Dedicated Charter Freight Sealift for supply of year 5 and 6 material and supplies	6 days
217	Demobilize decommissioned material and 3rd party contractor equipment from Milne Inlet	8 days
218	Land freight for decommissioned material and equipment from Valleyfield	2 days
219	**Bulk Fuel Demobilization Sealift - Milne Inlet Year 2**	**4 days**
220	Dedicated charter - Bulk Fuel Tanker to backhaul bulk fuel to refinery for disposal	4 days
221	**Demobilize Freight Sealift Steensby Port to Valleyfield Year 3**	**26 days**
222	Shipment, loading and off loading	5 days
223	Vessel Costs Steensby - 1 freight backhaul sealift in 3	5 days
224	Land Freight	5 days
225	**Freight Sealift Milne Inlet to Valleyfield Year 6**	**36 days**
226	Shipment, loading and off loading	8 days
227	Vessel & steveforing costs for backhaul of landfarm liner, tilling equipment (i.e. loader with tiller drag), accommodation trailer and residual Milne Inlet Camp & support supplies and equipment, Milne Inlet to Valleyfield	8 days
228	Land freight cost for Year 6 backhaul sealift	2 days
229	**CAMP OPERATIONS**	**658 days**
230	**A & R Fuel Purchase**	**22 days**
231	Cash cost of fuel and barrel deposit	6 days
232	Hercules Aircraft mobilization from Yellowknife to Mary River	14 days



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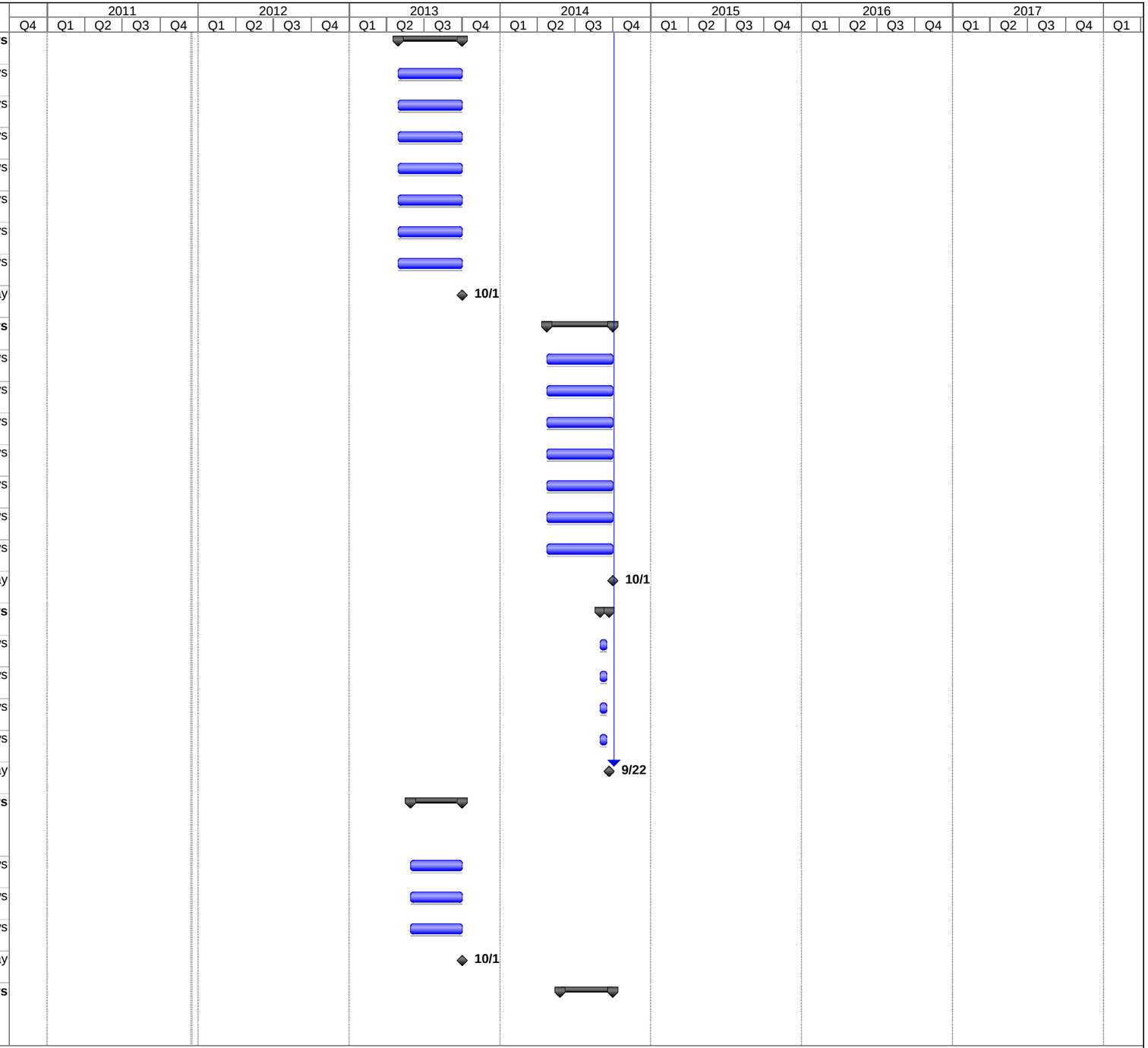
Task | Milestone | Project Summary | External Milestone | Deadline
Split | Summary | External Tasks | Progress

ID	Task Name	Duration
233	**Mary River Camp Operation Yr 2**	**113 days**
234	Helicopter support	113 days
235	Fixed wing support	113 days
236	Fixed wing fuel purchase in Iqaluit	113 days
237	Commercial flights for 35 person camp (Mary River & Milne Inlet)	113 days
238	35 person camp operation	113 days
239	Camp operating overhead	113 days
240	Food	113 days
241	Seasonal shutdown	1 day
242	**Mary River Camp Operation Yr 3**	**116 days**
243	Helicopter support	116 days
244	Fixed wing support	116 days
245	Fixed wing fuel purchase in Iqaluit	116 days
246	Commercial flights for 35 person camp (Mary River and Milne Inlet)	116 days
247	35 person camp operation	116 days
248	Camp operating overhead	116 days
249	Food	116 days
250	Mary River Site A & R complete	1 day
251	**Steensby Inlet Camp Operation**	**16 days**
252	6 person camp operation - decommissioning	12 days
253	2 person camp operation - sealift	12 days
254	Camp operating overhead	12 days
255	Food	12 days
256	A & R complete	1 day
257	**Milne Inlet Yr 2 - Operate avg 5-person camp (16 person peak for 2 weeks)**	**91 days**
258	6 person camp operation (Support labour)	91 days
259	Camp operating overhead	91 days
260	Food	91 days
261	Seasonal shutdown	1 day
262	**Milne Inlet Year 3 - Operate avg 5-person camp (16 person peak for 2 weeks)**	**94 days**



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Task | Milestone | Project Summary | External Milestone | Deadline
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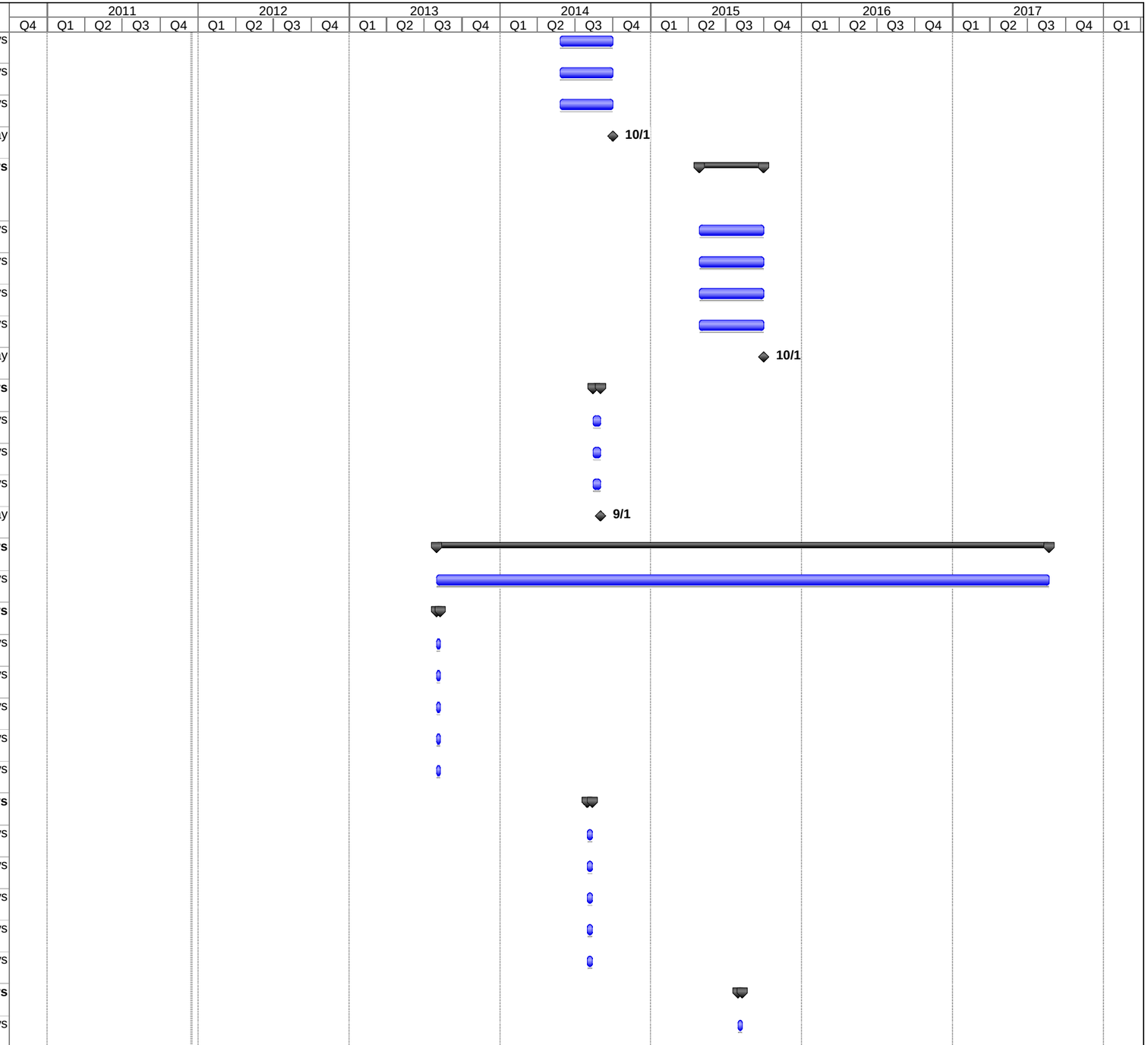
ID	Task Name	Duration
263	6 person camp operation (Support labour)	94 days
264	Camp Operating Overhead	94 days
265	Food	94 days
266	Seasonal shutdown	1 day
267	**Milne Inlet Year 4 - Operate avg 5-person camp (16 person peak for 2 weeks)**	**114 days**
268	14 person camp operation (Support labour)	114 days
269	Fixed wind support	114 days
270	Commercial flights for Milne Inlet Camp	114 days
271	Food	114 days
272	Seasonal shutdown	1 day
273	**Mid-Rail - Operate 7-person camp**	**12 days**
274	6 person camp operation (Support labour)	12 days
275	Camp operating overhead	12 days
276	Food	12 days
277	A & R complete	1 day
278	**ENVIRONMENTAL MONITORING**	**1065 days**
279	Environmental supervision and reporting dueing ongoing monitoring	1065 days
280	**Environmental Monitoring Year 2**	**7 days**
281	Annual site visits - preparation / consumables	7 days
282	Annual site visits - water sampling	7 days
283	Annual site visits - site overview	7 days
284	Commercial flights for labour	7 days
285	Annual site visit - helicopter support	7 days
286	**Environmental Monitoring Year 3**	**8 days**
287	Annual site visits - preparation / consumables	8 days
288	Annual site visits - water sampling	8 days
289	Annual site visits - site overview	8 days
290	Post 2011 commercial flights for labour	8 days
291	Annual site visit - helicopter support	8 days
292	**Environmental Monitoring Year 4**	**7 days**
293	Annual site visits - preparation / consumables	7 days



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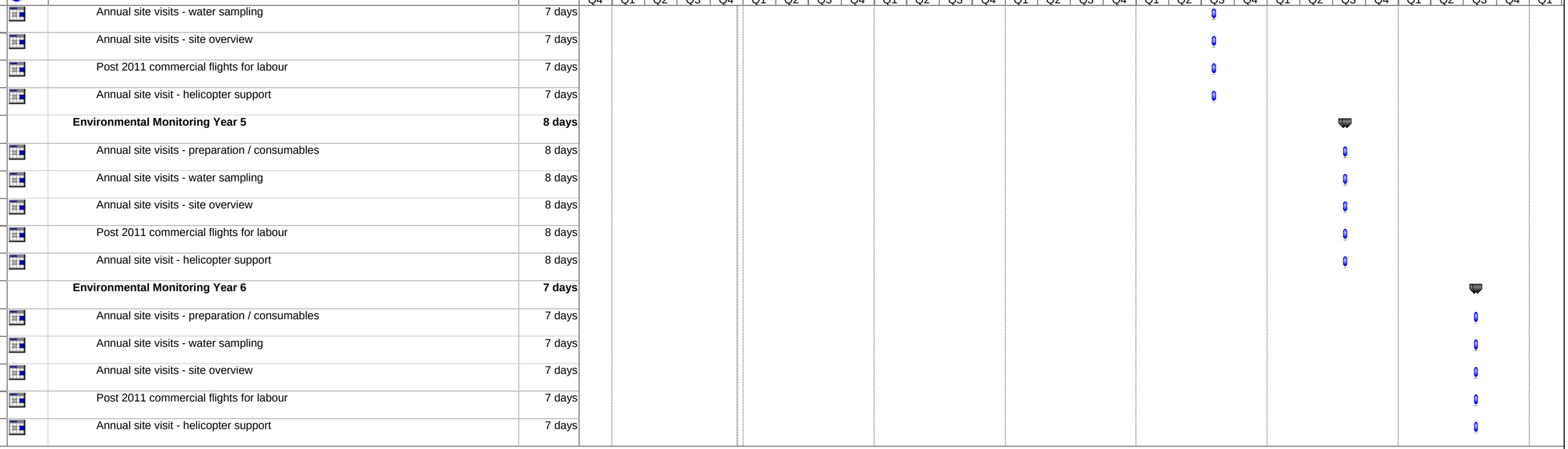
ID	Task Name	Duration
294	Annual site visits - water sampling	7 days
295	Annual site visits - site overview	7 days
296	Post 2011 commercial flights for labour	7 days
297	Annual site visit - helicopter support	7 days
298	**Environmental Monitoring Year 5**	**8 days**
299	Annual site visits - preparation / consumables	8 days
300	Annual site visits - water sampling	8 days
301	Annual site visits - site overview	8 days
302	Post 2011 commercial flights for labour	8 days
303	Annual site visit - helicopter support	8 days
304	**Environmental Monitoring Year 6**	**7 days**
305	Annual site visits - preparation / consumables	7 days
306	Annual site visits - water sampling	7 days
307	Annual site visits - site overview	7 days
308	Post 2011 commercial flights for labour	7 days
309	Annual site visit - helicopter support	7 days



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