Baffinland

March 7, 2013

Damien Côté
Executive Director, Nunavut Water Board
PO Box 119
Gjoa Haven, NU X0B 1J0

Re: Pre-Hearing Conference Decision Items for Follow Up – Final Submission

Dear Mr. Côté,

As a result of the January 25th, 2013 Pre-Hearing Conference, a number of items were submitted to Baffinland for follow-up action. Baffinland has endeavored, through numerous regulatory meetings, as well as the February 26th, 2013 submission of the Draft Terms and Conditions for the Type A Water Licence, including a draft AEMP, to satisfy these commitments within the agreed upon timelines for submission.

Baffinland is pleased to report that most line items are considered "complete" or "resolved."

Item #1 requested a copy of Baffinland's 2012 Financial Statement. Please find attached the draft, unaudited consolidated financial statements of 1843208 Ontario Inc. (the "Company") and its wholly owned subsidiary Baffinland Iron Mines Corporation. The Company is the entity through which ArcelorMittal and Nunavut Iron Ore hold their respective interests in Baffinland Iron Mines. This document is labelled Appendix A.

Appendix B satisfies items #2 and 3 with respect to financial security and bonding. Appendix C contains the meeting minutes from the February 25th, 2013 meeting held at the offices of NRCan.

If you have any questions, please contact myself at your convenience.

Regards,

Erik Madsen, Vice President
Sustainable Development, Health, Safety and Environment

CC
Jeff Mercer – AANDC
Murray Ball – AANDC
Georgina Williston – DFO
Anne Wilson – EC
John Clarke – NRCan
Mark Dahl – EC
David Hohnstein – NWB
Phyllis Beaulieu – NWB
Stephen Bathory – QIA

List of Commitments - NWB PHC Decision Report January 25th, 2013						
No.	**Pre-Hearing Commitment**	**Raised By**	**Responsible Party**	**Timeline for Submission**	**Status**	**Status on February 28**
Security Bonding						
1	BIMC to provide a copy of its 2012 Financial Statement	NWB	BIMC	Feb-13	Pending	See Appendix A
2	BIMC to provide feedback to the NWB on the fate of and/or changes to the financial security associated with the Type "B" Water Licence for the Mary River Project	NWB	BIMC	Feb-13	Pending	See Appendix B
3	BIMC to provide the NWB with information on the its proposed phased approach to Security and Bonding - (BIMC will review work plan annually and post security annually based on additive liability)	BIMC	BIMC	Annually	Ongoing/Pending	See Appendix B
Water Use and Compensation						
4	BIMC to provide an update to the NWB on any advances and/or outstanding issues pertaining to the water compensation agreements associated with the project	NWB	BIMC	Feb-13	Pending	Discussions regarding the water compensation agreement are ongoing with the QIA. It is expected that an agreement can be reached prior to the Ministers decision on the Type A Water Licence.
5	QIA to provide a status update to the NWB of water compensation as an aspect of the IIBA	NWB	QIA	Prior to the public hearing	Pending	No response from BIM required.
6	BIMC to provide additional information on deep lakes in northern climate to support that lake stratification is not a concern	AANDC	BIMC	Ongoing	Unresolved	This item was discussed at the technical meetings. Water qaulity of the open pit at Mary River is addressed and will continue to be addressed in subsequent revisions to the Closure and Reclamation Plan throughout the life of the Project.
Monitoring and Management Plan and Measures						
7	BIMC to respond to Environment Canada's (EC) January 9, 2013 Addendum to EC's original technical review comments	EC	BIMC	Jan-13	Pending	Complete. Submitted to the NWB on February 5, 2013.
8	BIMC to hold a workshop in advance of the public hearing to discuss the various aspects of the AEMP (Validating effects predications)	EC, DFO, AANDC & QIA	BIMC	Feb-13	Pending	Complete. Workshop held on February 12, 2013. Meeting notes provided to NWB on February 19, 2013.
9	BIMC to incorporate Inuit knowledge where relevant as part of the AEMP	QIA	BIMC	Not stated	Ongoing/Pending; BIM to incorporate, QIA to provide comments	Complete. See submission of AEMP on February 26, 2013.

10	BIMC to provide updated Management Plans (Timing, Information)	EC, DFO, AANDC & QIA	BIMC	60 days prior to start of construction for the majority of the plan	Ongoing/Pending	Schedule for updated plans complete. See workplan submitted to NWB on February 13, 2013.
11	BIMC to provide a final Blasting Management Plan - (Ammonia Source Control will be part of the plan)	EC, DFO, AANDC & QIA	BIMC	To be developed in concert with the EPCM and blasting constructor	Ongoing/Pending	Ongoing. To be completed 60 days prior to Blasting Activities.
12	BIMC to provide a Site-Specific Drainage Plan for each quarry	AANDC	BIMC	Not stated	Ongoing/Pending	Ongoing. To be completed 60 days prior to Quarrying Activites.
13	BIMC to develop a Sediment and Erosion Control Plan for work in or near fish bearing water bodies	DFO	BIMC	Not stated	Pending	Ongoing. To be completed in concert with DFO and prior to work on upgrades of the Tote Road.
14	BIMC to develop additional long-term monitoring and mitigation measures to address pit water quality issues	AANDC	BIMC	Not stated	Unresolved	Ongoing. This item is related to Closure and Reclamation and was discussed at the NWB technical meetings. Please see meeting notes from meeting held at NRCan offices on February 25, 2013 (Appendix C)
15	BIMC to clarify pit water quality modeling assumption and pit fill-time projections and provide additional scenarios to address range of future water quality outcomes	AANDC	BIMC	Not stated	Unresolved	This item is related to Closure and Reclamation and was discussed at the NWB technical meetings. Please see meeting notes from meeting held at NRCan offices on February 25, 2013 (Appendix C)
16	BIMC to provide the frequency of sampling in tabular format along with the locations and parameters to be sampled in the Surface Water and Aquatic Ecosystems Management Plan.	AANDC	BIMC	Not stated	Unresolved	Schedule for updated plans complete. See workplan submitted to NWB on February 13, 2013.
17	BIMC to provide a separate pit water quality monitoring station to the list of mine site monitoring stations to characterize pit water quality separately from other possible acid rock drainage/metal leaching sources	AANDC	BIMC	Feb-13	Unresolved	This is not required at this time. Item would be applicable to future revisions of the Closure and Reclamation Plan as the open pit begins to develop (>10 year timeframe). See attached notes from NRCan meeting (Appendix C).
18	BIMC to include a range of surface water quality monitoring parameters and propose a monitoring frequency that will support all project-based monitoring requirements and a commitment to include any regional monitoring objectives that may be identified	AANDC	BIMC	Feb-13	Resolved; covered under schedules 4, 6, 7 in AEMP document	Complete
Waste Management						
19	BIMC to provide continued updates and information on the Pit Lake Water Quality Post Closure (Geochemical evaluations and contingencies for accelerated filling)	AANDC	BIMC	Not stated	Ongoing/Pending	Ongoing. See Appendix C for meeting notes from February 25, meeting notes.
20	*seems to be missing in numbering					
21	BIMC work with EC to ensure that quarry material selection involves screening for ARD potential	EC	BIMC	60 days prior to start of construction	Resolved	Complete

22	Baffinland to provide full inspection and monitoring detail (as per the Waste Management Plan for Construction, Operation and Closure) to the waste monitoring section of the Surface Water and Aquatic Ecosystems Management Plan.	AANDC	BIMC	Feb-13	Resolved	Complete
23	BIMC to work with EC to resolve issues related to the oily water treatment facility discharge limits	EC	BIMC	Not stated	Partially resolved	Complete. Provided in updated AEMP Framework submitted to NWB on February 26, 2013.
24	BIMC to work with EC to resolve issues related to the selection/Use of dust suppressants	EC	BIMC	Not stated	Resolved	Complete
25	BIMC to work with EC to resolve issues related Landfarm soil criteria	EC	BIMC	25-Jan-13	Resolved	Complete
26	BIMC to work with EC to resolve issues related to discharge limits (Also Sewage discharge into sheardown lake)	EC	BIMC	Not stated	New/unresolved issue	Complete. Provided in updated AEMP Framework submitted to NWB on February 26, 2013.
27	BIMC to work with EC to resolve issues related to the Mine contact water discharge limits (Concern about the application of MMER to Waste rock discharge	EC	BIMC	Not stated	New/unresolved issue	EC will likely address their concerns in their submission on March 22, 2013.
28	BIMC to work with EC to ensure that issues related to Pit water quality (EC don't agree with the proposed limits) are resolved	EC	BIMC	Not stated	New/unresolved issue	EC will likely address their concerns in their submission on March 22, 2013.
29	BIMC work with EC to ensure that issues related to the management of Nutrient (Tied in with sewage management) are addressed	EC	BIMC	Not stated	New/unresolved issue	Complete. Provided in updated AEMP Framework submitted to NWB on February 26, 2013.
30	BIMC to work with DFO to ensure that a detailed Blasting program is developed and that include mitigation measures and monitoring plans	DFO	BIMC	Not stated		Ongoing. To be completed in concert with DFO and prior to work on upgrades of the Tote Road.
Closure and Reclamation						
31	BIMC to submit an Interim MC&RP	AANDC	BIMC	Prior to the commencement of Mining	Ongoing/Pending	Resolved - To be completed prior to the commencement of Mining Activities
32	BIMC to submit a Final MC&RP	AANDC	BIMC	In advance of permanent closure	Ongoing/Pending	Resolved - To be completed in advance of permanent closure.
33	Baffinland to clarify the basis for deriving their estimated closure costs, in regards to the issues identified, in future revisions of the closure and reclamation plan. Baffin land is also requested to provide a mechanism for periodic reevaluation and update of the closure and reclamation plan and associated security requirements. This reevaluation and update should occur at least every five years.	AANDC	BIMC	Not stated	Unresolved	Ongoing. Baffinland will work with agencies to address this item.
34	BIMC to develop Plans for the removal of watercourse crossings as part of the Preliminary Mine Closure and Reclamation Plan	DFO	BIMC	Not stated	Pending	To be completed in consultation with DFO.
General						

35	BIMC to provide a work plan for each year of construction that includes a cost estimate for decommissioning relevant site infrastructure	BIMC	BIMC	Feb-13	Ongoing/Pending	2013 Workplan complete. See submission to NWB on February 13, 2013.
36	QIA to provide additional or final technical comments to NWB prior to the Public Hearing; the comments will focus on developing suggested terms and conditions for the type "A" Water licence and will include discussion on the status of the water compensation agreement.	QIA	QIA	Prior to the public hearing	Pending	No response from BIM required.
37	QIA to provide the NWB with some feedback on the whether the information provided by BIMC in response to issues raised by the QIA during the Pre-technical meeting in October are satisfactory to the QIA	NWB	QIA	01-Feb-13	Pending	No response from BIM required.
Pre-Technical Meeting Commitment						
2	NWB to provide correspondence in response to BIMC's errata request for SNP stations associated with the existing Type B water licence.	QIA	NWB	25-Jan-12	Pending	No response from BIM required.

Appendix A
2012 Draft Unaudited Financial Statement

1843208 Ontario Inc.

(formerly 2263199 Ontario Inc.)

and its wholly owned subsidiary

Baffinland Iron Mines Corporation

Consolidated Financial Statements
as at December 31, 2012

1843208 Ontario Inc. (formerly 2263199 Ontario Inc.)
Consolidated Statement of Loss and Comprehensive Loss
(in thousands of Canadian dollars unless otherwise stated)

For the periods	January 1, 2012 to December 31, 2012	November 10, 2010 to December 31, 2011
Expenses		
Exploration	$ 3,397	$ -
General and administrative	3,024	5,442
	6,421	5,442
Finance costs	205	270
Financial and other income	157	1,034
Net loss for the period before taxes	(6,469)	(4,678)
Income tax recovery	1,633	175
Net loss and comprehensive loss	$ (4,836)	$ (4,503)

1843208 Ontario Inc. (formerly 2263199 Ontario Inc.)
Consolidated Statement of Cash Flows
(in thousands of Canadian dollars unless otherwise stated)

For the periods	January 1, 2012 to December 31, 2012	November 10, 2010 to December 31, 2011
Operating activities		
Net loss for the period	**$ (4,836)**	$ (4,503)
Items not affecting cash:		
Deferred tax recovery	**(1,633)**	(175)
Accretion expense	**205**	270
Gain on sale of investments	**-**	(564)
Other non cash items		
Decrease in accounts receivable	**856**	3,665
(Increase) decrease in inventory	**1,780**	(2,679)
(Increase) decrease in prepaid expenses	**(574)**	539
Increase (decrease) in accounts payable	**(16,984)**	530
Cash used in operating activities	**(21,186)**	(2,917)
Investing activities		
Purchase of property, plant & equipment	**(293)**	(49)
Mine development costs	**(53,247)**	(93,374)
Acquisition of BIM, net of cash acquired	**-**	(497,629)
Proceeds on sale of investments	**-**	13,452
Addition of restricted cash	**-**	17,250
Cash used in investing activities	**(53,540)**	(560,350)
Financing activities		
Net proceeds on issue of common shares and warrants	**44,580**	600,545
Net proceeds received on shareholder advance	**3,400**	-
Cash provided by financing activities	**47,980**	600,545
Increase (decrease) in cash and cash equivalents	**(26,746)**	37,278
Cash position at beginning of the period	**37,278**	-
Cash position at end of the period	**$ 10,532**	$ 37,278

1843208 Ontario Inc. (formerly 2263199 Ontario Inc.)
Consolidated Statement of Changes in Equity
(in thousands of Canadian dollars unless otherwise stated)

	Common shares	Deficit	Total Equity
Balance at November 10, 2010	**$ -**	**$ -**	**$ -**
Net loss	-	(4,503)	(4,503)
Proceeds from shares issued	661,627	-	661,627
Balance at December 31, 2011	**$ 661,627**	**$ (4,503)**	**$ 657,124**
Net loss	-	(4,836)	(4,836)
Proceeds from shares issued	44,580	-	44,580
Balance at December 31, 2012	**$ 706,207**	**$ (9,339)**	**$ 696,868**

1843208 Ontario Inc. (formerly 2263199 Ontario Inc.)
Consolidated Balance Sheet
(in thousands of Canadian dollars unless otherwise stated)

As at December 31		2012		2011
ASSETS				
Current				
Cash and cash equivalents	$	**10,532**	$	37,278
Accounts receivable		**406**		1,262
Inventory		**5,141**		6,921
Prepaid expenses		**869**		295
		16,948		45,756
Non-Current				
Mining interests		**620,442**		572,311
Exploration and evaluation assets		**81,922**		81,922
Property, plant & equipment (net)		**4,752**		9,346
Income tax receivable		**30,656**		18,664
Goodwill		**77,619**		34,534
	$	**832,339**	$	762,533
LIABILITIES				
Current				
Accounts payable and accrued liabilities	$	**11,722**	$	28,706
Shareholder advance		**3,400**		-
Provision for environmental rehabilitation		**1,218**		-
		16,340		28,706
Non-Current				
Provision for environmental rehabilitation		**16,910**		15,934
Deferred tax liabilities		**102,221**		60,769
		135,471		105,409
SHAREHOLDERS' EQUITY AND DEFICIT				
Common shares		**706,207**		661,627
Deficit		**(9,339)**		(4,503)
		696,868		657,124
	$	**832,339**	$	762,533

Appendix B
Financial Security and Bonding for the Mary River Project

Baffinland Iron Mines Corporation
Mary River Project

2013 Work Plan Closure Cost Summary

2013-02-26	A	Internal/Client Review	A. Grzegorczyk	T. Mackay	S. Perry	N/A
Date	**Rev.**	**Status**	**Prepared By**	**Checked By**	**Approved By**	**Approved By**

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Attachment A

Appendix G-3 Cost Estimation Details for Closure of the 2013 Abandonment and Reclamation Plan for Advanced Exploration Activities.

1. Introduction

The purpose of this document is to provide a summary of the closure and reclamation costs for the Mary River Project 2013 Work Plan activities conducted in 2013 including:

- Type B Closure Cost Estimate (after removal of items that carry over to the Type 'A' Water Licence)
- Closure Cost Estimate associated with activities that carry over from the Type 'B' Water Licence to the Type 'A' Water Licence
- Closure Cost Estimate for the proposed 2013 Work Plan for activities conducted in 2013.

The closure and reclamation costs were estimated using the RECLAIM excel model provided by Aboriginal Affairs and Northern Development Canada (AANDC) (formerly Department of Indian Affairs and Northern Development).

Based on calculations of the RECLAIM Model, the cost of reclamation for the following items is as follows:

Table 1-1: 2013 Work Plan Closure Cost Summary Allocation

Revised Type B Closure Estimate	Carry-over Type A Estimate from Type B	2013 Work Plan Estimate (for 2013 activities)	**TOTAL Security for Type A Water Licence in 2013**
CAD $1,246,625	CAD $23,651,165	CAD $ 27,895,504	**CAD $51,546,669**

1.1 Closure and Reclamation Objectives

A revised Preliminary Mine Closure and Reclamation Plan will be prepared to address mine closure. This interim plan will incorporate progressive rehabilitation during the course of the Project to limit the work required after cessation of operations and to limit the environmental effects during the Project life. It will address temporary and long-term closure as well as final cessation of operations. Public health and safety will be considered throughout all stages of progressive rehabilitation, closure and post-closure.

For final closure, materials and equipment will either be removed from site or disposed of in on site landfills, and all hazardous materials and wastes will be removed from site to licensed disposal facilities. The open pit, waste rock stockpiles and quarries will be inspected for physical and chemical stability if necessary. Roads (with the exception of the public Milne Inlet Tote Road), airstrips and development areas will be re-contoured as required to provide long-term stability and reduce the potential for erosion. The closure phase is expected to be 3 years, followed by a minimum of 5 years of post-closure safety and environmental monitoring and treatment, as and if required.

The Plan is a "living" document. It will be reviewed and revised during water licensing, and regularly updated throughout the operation phase to reflect the progress of the Project as well

as changes in technology and/or standards or legislation. The Plan is subject to review and approval by the Nunavut Water Board. Future revisions will also consider input from consultations with communities and other stakeholders on methods to be used, and potential uses for project infrastructure.

The main objectives of closure activities are to:

- Return the Project affected sites to "wherever practicable, self-sustaining ecosystems that are compatible with a healthy environment and human activities" (NRCan, 1994).
- Where practicable, undertake progressive reclamation to reduce the environmental risk once the mine ceases operation (INAC, 2002; INAC, 2002a; Northwest Territories Water Board, 1990; and QIA, 2009).
- Provide for the reclamation of affected sites and areas to a stable and safe condition. Where practical, affected areas will be returned to a state compatible with the original undisturbed area (Territorial Land Use Regulations).
- Reduce the need for long-term monitoring and maintenance by designing for closure and instituting progressive reclamation, as possible.
- Provide for mine closure using the current available proven technologies in a manner consistent with sustainable development.
- Return altered water courses to their original alignment and cross-section (Territorial Land Use Regulations).

2. Type 'B' Closure Cost and Carry-Over Type A Closure Costs

The costs for the Type B Closure Cost Estimate and the Closure Cost Estimate associated with activities that carry over from the Type 'B' Water Licence to the Type 'A' Water Licence were determined using the already agreed upon costs presented in Baffinland Iron Mines Corporation, Mary River Project, 2013 Abandonment And Reclamation Plan For Advanced Exploration Activities, January 2013 (2013 A&R Plan). Appendix G3, Cost Estimation Details For Closure of the 2013 A&R Plan For Advanced Exploration Activities was used for detailed cost analysis. All capital costs described in 2013 A&R Plan were captured in the RECLAIM models.

RECLAIM makes use of separate worksheets to organize the information, and calculate the closure and reclamation costs based on Unit Costs predefined for several activities (a list of the unit costs defined by RECLAIM can be found in the 'Unit_Costs' tab of each RECLAIM model). Additionally, RECLAIM automatically assigns a fee for the following components, based on the subtotal of capital costs:

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

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

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

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

Note: RECLAIM spreadsheet automatically assigns a fee for project management (5% of the subtotal). Appendix G3 of 2012 A&R Plan has a breakdown for Project Management & Supervision costs (General Site Area, cells 1 to 9, Appendix G3 of 2013 A&R Plan). This was therefore excluded from the RECLAIM model to avoid double counting.

Note: All contingency values assigned in 2013 A&R Plan - Appendix G3 have not been included to allow for RECLAIM already defined contingency estimate (10%).

In order to keep track the source of the costs and quantities and what activities drive them, a reference was inserted in each line item of RECLAIM that cross references the costing source to Appendix G3 of the 2013 A&R Plan. Therefore the RECLAIM Model presented and Appendix G3 of the 2013 A&R Plan should be read as complementary documents. For further references, Appendix G3 has been incorporate as an appendix to this document.

Based on calculations of the RECLAIM Model, the cost of reclamation for the following items is as follows:

Table 2-1 Type B Closure Cost Estimate Reallocation Summary

Revised Type B Closure Estimate	Carry-over Type A Estimate from Type B
CAD $1,246,625	CAD $23,651,165

For further discussion of the Closure Cost Estimate for the Revised Type B Closure Estimate and the Carry-over Type A Estimate from Type B please refer to section 2.1 and 2.2, respectively.

2.1 Type B Closure Cost Estimate

2.1.1 General

Costs Remaining under Type B Water Licence include:

- All costs associated with Steensby Camp

- Steensby Inlet Camp operation;
- Decommission of Steensby Inlet Camp;
- Demobilize freight Sealift Steensby Port to Port Valleyfield;

- All cost associated with Mid-Rail and any other rail camps
  - Mid-Rail Camp operation;
  - Decommission of Remotes Sites;
  - Decommission of Mid-Rail Camp;
- All Costs associated with drilling and drill holes;
  - Bulk Sample Pit;
  - Mineral Exploration Areas.

For specific references to which line items in the 2012 Mary River A&R Plan costs were considered in the Type B Model refer to the 'Revised Type B Water Licence Closure Cost Estimate' RECLAIM Model which cross references all costs.

A summary of the Revised Type B Closure Cost Estimate RECLAIM model is presented in Figure 2-1. All subsequent images are screenshots from the respective tabs in the RECLAIM model that derives the summary cost table (Figure 2-1).

SUMMARY OF COSTS

CAPITAL COSTS

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

Figure 2-1. Summary of Revised Type B Closure Cost Estimate

2.1.2 Open Pit

Open Pit Name: *Mineral Exploration Areas* **Pit #** *3*

ACTIVITY/MATERIAL	Units	Quantity	Cost Code	Unit Cost	Cost	% Land	Land Cost	Water Cost	Refer in Appendix G3
OBJECTIVE: CONTROL ACCESS									
Fence	m		#N/A	0.00	$0		$0	$0	
Signs	each		#N/A	0.00	$0		$0	$0	
Berm at crest	m		#N/A	0.00	$0		$0	$0	
Block roads	m3		#N/A	0.00	$0		$0	$0	
Other			#N/A		$0		$0	$0	
OBJECTIVE: STABILIZE SLOPES									
Off-load crest, soil A	m3		#N/A	0	$0		$0	$0	
Off-load crest, soil B	m3		#N/A	0	$0		$0	$0	
Doze/trimoverburden at crest	m3		#N/A	0	$0		$0	$0	
Drill & blast pit crest	m3		#N/A	0	$0		$0	$0	
buttress slope	m3		#N/A	0	$0		$0	$0	
Other			#N/A	0	$0		$0	$0	
OBJECTIVE: COVER/CONTOUR SLOPES									
Dump demolition materials (pit or landfill or qua	m3		#N/A	0	$0		$0	$0	
Place overburden over demolition material	m3		#N/A	0	$0		$0	$0	
Rip rap	m3		#N/A	0	$0		$0	$0	
Vegetate slopes	ha		#N/A	0	$0		$0	$0	
Vegetate pit floor	ha		#N/A	0	$0		$0	$0	
Level Pads, backfill sumps and grade to natur	$	18000	TBUS	1	$18,000	100%	$18,000	$0	Mineral Exploration Areas tab, cells 4
OBJECTIVE: SPILLWAY									
Excavate channel, soil A	m3		#N/A	0	$0		$0	$0	
Excavate channel, soil B	m3		#N/A	0	$0		$0	$0	
Concrete	m3		#N/A	0	$0		$0	$0	
Rip rap	m3		#N/A	0	$0		$0	$0	
Other	each		#N/A	0	$0		$0	$0	
OBJECTIVE: FLOOD PIT									
remove stationary equipment (sump pump)	each		#N/A	0	$0		$0	$0	
remove power lines	each		#N/A	0	$0		$0	$0	
Embankment/dam - Soil A	m3		#N/A	0	$0		$0	$0	
Embankment/dam - Soil B	m3		#N/A	0	$0		$0	$0	
supply/install pump & piping system	each		#N/A	0	$0		$0	$0	
operate pumps to flood pit	each		#N/A	0	$0		$0	$0	
Llme addition, _____ kg/m3 of water	tonne		#N/A	0	$0		$0	$0	
Lime, purchase and shipping	tonne		#N/A	0	$0		$0	$0	
Other			#N/A	0	$0		$0	$0	
RECLAIM QUARRIES									
Contour slopes	m3		#N/A	0	$0		$0	$0	
Berm at crest	m3		#N/A	0	$0		$0	$0	
Place overburder	m3		#N/A	0	$0		$0	$0	
Vegetate	m3		#N/A	0	$0		$0	$0	
OTHER ITEMS									
Stability inspection			#N/A	0	$0		$0	$0	
Drill Holes fillled and Residual Casings Cuts	$	30376	TBUS	1	$30,376	100%	$30,376	$0	Mineral Exploration Areas tab, cells 3
Inspection and final reclamation of exploration	$	11213	TBUS	1	$11,213	100%	$11,213	$0	Mineral Exploration Areas tab, cells 6

	Subtotal	$59,589	100%	$59,589	$0
			Pct Land	Total Land	Total Water

Figure 2-2: Revised Type B Open Pit Reclamation Costs

2.1.3 Buildings and Equipments

Building / Equip Name: *Mineral Exploration Areas* **Bldg / Equip #:** *6*

ACTIVITY/MATERIAL	Units	Quantity	Cost Code	Unit Cost	Cost % Land	Land Cost	Water Cost	Refer in Appendix G3
OBJECTIVE: DISPOSE MOBILE EQUIPMENT								
Decontaminate and ship off-site	each		#N/A	0	$0	$0	$0	
Decontaminate, dispose on-site	each		#N/A	0	$0	$0	$0	
Other (sealift for equipmt)	each		#N/A	0	$0	$0	$0	
OBJECTIVE: REMOVE CONTAMINATED BUILDINGS								
Decontaminate crushing plant	each		#N/A	0	$0	$0	$0	
Decontaminate tanks & plumbing	each		#N/A	0	$0	$0	$0	
Decontaminate thickeners	each		#N/A	0	$0	$0	$0	
Decontaminate water treatment plant	each		#N/A	0	$0	$0	$0	
Decontaminate maintenance shop	each		#N/A	0	$0	$0	$0	
Decontaminate power plant	each		#N/A	0	$0	$0	$0	
Decontaminate bulk fuel storage	each		#N/A	0	$0	$0	$0	
Decontaminate ANFO plant	each		#N/A	0	$0	$0	$0	
Deontaminate offices/warehouse/accom	each		#N/A	0	$0	$0	$0	
Removal of asbestos siding on buildings	each		#N/A	0	$0	$0	$0	
Removal of friable asbestos on equipment	each		#N/A	0	$0	$0	$0	
Other			#N/A	0	$0	$0	$0	
OBJECTIVE: REMOVE NON-CONTAMINATED BUILDINGS								
crushing plant	m2		#N/A	0	$0	$0	$0	
conveyors & transfer towers	m2		#N/A	0	$0	$0	$0	
tanks & plumbing	m2		#N/A	0	$0	$0	$0	
thickeners	m2		#N/A	0	$0	$0	$0	
water treatment plant	m2		#N/A	0	$0	$0	$0	
maintenance shop	m2		#N/A	0	$0	$0	$0	
power plant	m2		#N/A	0	$0	$0	$0	
bulk fuel storage	m2		#N/A	0	$0	$0	$0	
ANFO plant	m2		#N/A	0	$0	$0	$0	
offices/warehouse/accom	m2		#N/A	0	$0	$0	$0	
consolidate & dump boneyard debris	m3		#N/A	0	$0	$0	$0	
other			#N/A	0	$0	$0	$0	
OBJECTIVE: BREAK BASEMENT SLABS								
crushing plant	m2		#N/A	0	$0	$0	$0	
conveyors & transfer towers	m2		#N/A	0	$0	$0	$0	
tanks & plumbing	m2		#N/A	0	$0	$0	$0	
thickeners	m2		#N/A	0	$0	$0	$0	
water treatment plant	m2		#N/A	0	$0	$0	$0	
maintenance shop	m2		#N/A	0	$0	$0	$0	
power plant	m2		#N/A	0	$0	$0	$0	
bulk fuel storage	m2		#N/A	0	$0	$0	$0	
ANFO plant	m2		#N/A	0	$0	$0	$0	
offices/warehouse/accom	m2		#N/A	0	$0	$0	$0	
Other	m2		#N/A	0	$0	$0	$0	
OBJECTIVE: LANDFILL FOR DEMOLITION WASTE								
Place soil cover	m3		#N/A	0	$0	$0	$0	
Vegetate	ha		#N/A	0	$0	$0	$0	
Landfill disposal fee	tonne		#N/A	0	$0	$0	$0	
OBJECTIVE: GRADE AND CONTOUR MILL & PLANT SITE								
crushing plant	m2		#N/A	0	$0	$0	$0	
conveyors & transfer towers	m2		#N/A	0	$0	$0	$0	
tanks & plumbing	m2		#N/A	0	$0	$0	$0	
thickeners	m2		#N/A	0	$0	$0	$0	
water treatment plant	m2		#N/A	0	$0	$0	$0	
maintenance shop	m2		#N/A	0	$0	$0	$0	
power plant	m2		#N/A	0	$0	$0	$0	
bulk fuel storage	m2		#N/A	0	$0	$0	$0	
ANFO plant	m2		#N/A	0	$0	$0	$0	
offices/warehouse/accom	m2		#N/A	0	$0	$0	$0	
other	m2		#N/A	0	$0	$0	$0	
OBJECTIVE: RECLAIM ROADS								
Remove culverts	each		#N/A	0	$0	$0	$0	
Remove bridges	each		#N/A	0	$0	$0	$0	
Scarify and install water breaks	ha		#N/A	0	$0	$0	$0	
remove/doze down berms	m3		#N/A	0	$0	$0	$0	
create wildlife passage ramps	m3		#N/A	0	$0	$0	$0	
Vegetate	ha		#N/A	0	$0	$0	$0	
other			#N/A	0	$0	$0	$0	
SPECIALIZED ITEMS								
Prepare core for Long-term site storage	$	1756	TBUS	1	$1,756	100%	$1,756	$0 Bulk Mineral Exploration Areas tab, cells 5
Salt mixing stations	$	7570	TBUS	1	$7,570	100%	$7,570	$0 Bulk Mineral Exploration Areas tab, cells 7
				Subtotal	$9,326	100%	$9,326	$0
						Pct Land	Total Land	Total Water

Figure 2-3: Revised Type B Buildings and Equipment Reclamation Costs - Mineral Exploration Areas

Building / Equip Name: ***Remote Sites*** **Bldg / Equip #:** ***7***

ACTIVITY/MATERIAL	Units	Quantity	Cost Code	Unit Cost	Cost % Land	Land Cost	Water Cost	Refer in Appendix G3
OBJECTIVE: DISPOSE MOBILE EQUIPMENT								
Decontaminate and ship off-site	each		#N/A	0	$0	$0	$0	
Decontaminate, dispose on-site	each		#N/A	0	$0	$0	$0	
Other (sealift for equipmt)	each		#N/A	0	$0	$0	$0	
OBJECTIVE: REMOVE CONTAMINATED BUILDINGS								
Decontaminate crushing plant	each		#N/A	0	$0	$0	$0	
Decontaminate tanks & plumbing	each		#N/A	0	$0	$0	$0	
Decontaminate thickeners	each		#N/A	0	$0	$0	$0	
Decontaminate water treatment plant	each		#N/A	0	$0	$0	$0	
Decontaminate maintenance shop	each		#N/A	0	$0	$0	$0	
Decontaminate power plant	each		#N/A	0	$0	$0	$0	
Decontaminate bulk fuel storage	each		#N/A	0	$0	$0	$0	
Decontaminate ANFO plant	each		#N/A	0	$0	$0	$0	
Deontaminate offices/warehouse/accom	each		#N/A	0	$0	$0	$0	
Removal of asbestos siding on buildings	each		#N/A	0	$0	$0	$0	
Removal of friable asbestos on equipment	each		#N/A	0	$0	$0	$0	
Other			#N/A	0	$0	$0	$0	
OBJECTIVE: REMOVE NON-CONTAMINATED BUILDINGS								
crushing plant	m2		#N/A	0	$0	$0	$0	
conveyors & transfer towers	m2		#N/A	0	$0	$0	$0	
tanks & plumbing	m2		#N/A	0	$0	$0	$0	
thickeners	m2		#N/A	0	$0	$0	$0	
water treatment plant	m2		#N/A	0	$0	$0	$0	
maintenance shop	m2		#N/A	0	$0	$0	$0	
power plant	m2		#N/A	0	$0	$0	$0	
bulk fuel storage	m2		#N/A	0	$0	$0	$0	
ANFO plant	m2		#N/A	0	$0	$0	$0	
offices/warehouse/accom	m2		#N/A	0	$0	$0	$0	
consolidate & dump boneyard debris	m3		#N/A	0	$0	$0	$0	
other			#N/A	0	$0	$0	$0	
OBJECTIVE: BREAK BASEMENT SLABS								
crushing plant	m2		#N/A	0	$0	$0	$0	
conveyors & transfer towers	m2		#N/A	0	$0	$0	$0	
tanks & plumbing	m2		#N/A	0	$0	$0	$0	
thickeners	m2		#N/A	0	$0	$0	$0	
water treatment plant	m2		#N/A	0	$0	$0	$0	
maintenance shop	m2		#N/A	0	$0	$0	$0	
power plant	m2		#N/A	0	$0	$0	$0	
bulk fuel storage	m2		#N/A	0	$0	$0	$0	
ANFO plant	m2		#N/A	0	$0	$0	$0	
offices/warehouse/accom	m2		#N/A	0	$0	$0	$0	
Other	m2		#N/A	0	$0	$0	$0	
OBJECTIVE: LANDFILL FOR DEMOLITION WASTE								
Place soil cover	m3		#N/A	0	$0	$0	$0	
Vegetate	ha		#N/A	0	$0	$0	$0	
Landfill disposal fee	tonne		#N/A	0	$0	$0	$0	
OBJECTIVE: GRADE AND CONTOUR MILL & PLANT SITE								
crushing plant	m2		#N/A	0	$0	$0	$0	
conveyors & transfer towers	m2		#N/A	0	$0	$0	$0	
tanks & plumbing	m2		#N/A	0	$0	$0	$0	
thickeners	m2		#N/A	0	$0	$0	$0	
water treatment plant	m2		#N/A	0	$0	$0	$0	
maintenance shop	m2		#N/A	0	$0	$0	$0	
power plant	m2		#N/A	0	$0	$0	$0	
bulk fuel storage	m2		#N/A	0	$0	$0	$0	
ANFO plant	m2		#N/A	0	$0	$0	$0	
offices/warehouse/accom	m2		#N/A	0	$0	$0	$0	
other	m2		#N/A	0	$0	$0	$0	
OBJECTIVE: RECLAIM ROADS								
Remove culverts	each		#N/A	0	$0	$0	$0	
Remove bridges	each		#N/A	0	$0	$0	$0	
Scarify and install water breaks	ha		#N/A	0	$0	$0	$0	
remove/doze down berms	m3		#N/A	0	$0	$0	$0	
create wildlife passage ramps	m3		#N/A	0	$0	$0	$0	
Vegetate	ha		#N/A	0	$0	$0	$0	
other			#N/A	0	$0	$0	$0	
SPECIALIZED ITEMS								
Decommission remote sites	$	102792	TBUS	1	$102,792	100%	$102,792	$0 Remote Sites tab, cells 1 to 5
			Subtotal		$102,792	100%	$102,792	$0
						Pct Land	Total Land	Total Water

Figure 2-4: Revised Type B Buildings and Equipment Reclamation Costs – Remote Sites

Building / Equip Name: *Mid-Rail Camp* **Bldg / Equip #:** *8*

ACTIVITY/MATERIAL	Units	Quantity	Cost Code	Unit Cost	Cost % Land	Land Cost	Water Cost	Refer in Appendix G3
OBJECTIVE: DISPOSE MOBILE EQUIPMENT								
Decontaminate and ship off-site	each		#N/A	0	$0	$0	$0	
Decontaminate, dispose on-site	each		#N/A	0	$0	$0	$0	
Other (sealift for equipmt)	each		#N/A	0	$0	$0	$0	
OBJECTIVE: REMOVE CONTAMINATED BUILDINGS								
Decontaminate crushing plant	each		#N/A	0	$0	$0	$0	
Decontaminate tanks & plumbing	each		#N/A	0	$0	$0	$0	
Decontaminate thickeners	each		#N/A	0	$0	$0	$0	
Decontaminate water treatment plant	each		#N/A	0	$0	$0	$0	
Decontaminate maintenance shop	each		#N/A	0	$0	$0	$0	
Decontaminate power plant	each		#N/A	0	$0	$0	$0	
Decontaminate bulk fuel storage	each		#N/A	0	$0	$0	$0	
Decontaminate ANFO plant	each		#N/A	0	$0	$0	$0	
Deontaminate offices/warehouse/accom	each		#N/A	0	$0	$0	$0	
Removal of asbestos siding on buildings	each		#N/A	0	$0	$0	$0	
Removal of friable asbestos on equipment	each		#N/A	0	$0	$0	$0	
Other			#N/A	0	$0	$0	$0	
OBJECTIVE: REMOVE NON-CONTAMINATED BUILDINGS								
crushing plant	m2		#N/A	0	$0	$0	$0	
conveyors & transfer towers	m2		#N/A	0	$0	$0	$0	
tanks & plumbing	m2		#N/A	0	$0	$0	$0	
thickeners	m2		#N/A	0	$0	$0	$0	
water treatment plant	m2		#N/A	0	$0	$0	$0	
maintenance shop	m2		#N/A	0	$0	$0	$0	
power plant	$	1756	TBUS	1	$1,756	100%	$1,756	$0 Camps & Related Facilities tab, cell 47
bulk fuel storage	m2		#N/A	0	$0	$0	$0	
ANFO plant	m2		#N/A	0	$0	$0	$0	
offices/warehouse/accom	$	15804	TBUS	1	$15,804	100%	$15,804	$0 Camps & Related Facilities tab, cell 46
consolidate & dump boneyard debris	m3		#N/A	0	$0	$0	$0	
Related Infrastructure	$	3512	TBUS	1	$3,512	100%	$3,512	$0 Camps & Related Facilities tab, cell 48
OBJECTIVE: BREAK BASEMENT SLABS								
crushing plant	m2		#N/A	0	$0	$0	$0	
conveyors & transfer towers	m2		#N/A	0	$0	$0	$0	
tanks & plumbing	m2		#N/A	0	$0	$0	$0	
thickeners	m2		#N/A	0	$0	$0	$0	
water treatment plant	m2		#N/A	0	$0	$0	$0	
maintenance shop	m2		#N/A	0	$0	$0	$0	
power plant	m2		#N/A	0	$0	$0	$0	
bulk fuel storage	m2		#N/A	0	$0	$0	$0	
ANFO plant	m2		#N/A	0	$0	$0	$0	
offices/warehouse/accom	m2		#N/A	0	$0	$0	$0	
Other	m2		#N/A	0	$0	$0	$0	
OBJECTIVE: LANDFILL FOR DEMOLITION WASTE								
Place soil cover	m3		#N/A	0	$0	$0	$0	
Vegetate	ha		#N/A	0	$0	$0	$0	
Landfill disposal fee	tonne		#N/A	0	$0	$0	$0	
OBJECTIVE: GRADE AND CONTOUR MILL & PLANT SITE								
crushing plant	m2		#N/A	0	$0	$0	$0	
conveyors & transfer towers	m2		#N/A	0	$0	$0	$0	
tanks & plumbing	m2		#N/A	0	$0	$0	$0	
thickeners	m2		#N/A	0	$0	$0	$0	
water treatment plant	m2		#N/A	0	$0	$0	$0	
maintenance shop	m2		#N/A	0	$0	$0	$0	
power plant	m2		#N/A	0	$0	$0	$0	
bulk fuel storage	m2		#N/A	0	$0	$0	$0	
ANFO plant	m2		#N/A	0	$0	$0	$0	
offices/warehouse/accom	m2		#N/A	0	$0	$0	$0	
other	m2		#N/A	0	$0	$0	$0	
OBJECTIVE: RECLAIM ROADS								
Remove culverts	each		#N/A	0	$0	$0	$0	
Remove bridges	each		#N/A	0	$0	$0	$0	
Scarify and install water breaks	ha		#N/A	0	$0	$0	$0	
remove/doze down berms	m3		#N/A	0	$0	$0	$0	
create wildlife passage ramps	m3		#N/A	0	$0	$0	$0	
Vegetate	ha		#N/A	0	$0	$0	$0	
other			#N/A	0	$0	$0	$0	
SPECIALIZED ITEMS								
Decomission Decommission Laydown Areas	$	878	TBUS	1	$878	100%	$878	$0 Camps & Related Facilities tab, cell 50
General site Clean up	$	2634	TBUS	1	$2,634	100%	$2,634	$0 Camps & Related Facilities tab, cell 51
Camp Operation	$	7404	TBUS	1	$7,404	100%	$7,404	$0 Camp Operations tab, cell 18 to 22
Fly waste from Mid Rail Camp to Mary River Camp for landfillir	$	104180	TBUS	1	$104,180	100%	$104,180	$0 Camps & Related Facilities tab, cell 49
				Subtotal	$136,168	100%	$136,168	$0
						Pct Land	Total Land	Total Water

Figure 2-5: Revised Type B Buildings and Equipment Reclamation Costs - Mineral Mid-Rail Camp

Building / Equip Name: *Steensby Inlet Camp* **Bldg / Equip #:** *9*

ACTIVITY/MATERIAL	Units	Quantity	Cost Code	Unit Cost	Cost	% Land	Land Cost	Water Cost	Refer in Appendix G3
OBJECTIVE: DISPOSE MOBILE EQUIPMENT									
Decontaminate and ship off-site	$	4218	TBUS	1	$4,218	100%	$4,218	$0	Camps & Related Facilities tab, cell 60
Decontaminate, dispose on-site	each		#N/A	0	$0		$0	$0	
Other (sealift for equipmt)	$	2020	TBUS	1	$2,020	100%	$2,020	$0	Camps & Related Facilities tab, cell 59
OBJECTIVE: REMOVE CONTAMINATED BUILDINGS									
Decontaminate crushing plant	each		#N/A	0	$0		$0	$0	
Decontaminate tanks & plumbing	each		#N/A	0	$0		$0	$0	
Decontaminate thickeners	each		#N/A	0	$0		$0	$0	
Decontaminate water treatment plant	each		#N/A	0	$0		$0	$0	
Decontaminate maintenance shop	each		#N/A	0	$0		$0	$0	
Decontaminate power plant	each		#N/A	0	$0		$0	$0	
Decontaminate bulk fuel storage	each		#N/A	0	$0		$0	$0	
Decontaminate ANFO plant	each		#N/A	0	$0		$0	$0	
Deontaminate offices/warehouse/accom	each		#N/A	0	$0		$0	$0	
Removal of asbestos siding on buildings	each		#N/A	0	$0		$0	$0	
Removal of friable asbestos on equipment	each		#N/A	0	$0		$0	$0	
Other			#N/A	0	$0		$0	$0	
OBJECTIVE: REMOVE NON-CONTAMINATED BUILDINGS									
crushing plant	m2		#N/A	0	$0		$0	$0	
conveyors & transfer towers	m2		#N/A	0	$0		$0	$0	
tanks & plumbing	m2		#N/A	0	$0		$0	$0	
thickeners	m2		#N/A	0	$0		$0	$0	
water treatment plant	m2		#N/A	0	$0		$0	$0	
maintenance shop	m2		#N/A	0	$0		$0	$0	
power plant	$	2020	TBUS	1	$2,020	100%	$2,020	$0	Camps & Related Facilities tab, cell 54
bulk fuel storage	$	1670	TBUS	1	$1,670	100%	$1,670	$0	Camps & Related Facilities tab, cell 57
ANFO plant	m2		#N/A	0	$0		$0	$0	
offices/warehouse/accom	$	23448	TBUS	1	$23,448	100%	$23,448	$0	Camps & Related Facilities tab, cell 53
consolidate & dump boneyard debris	m3		#N/A	0	$0		$0	$0	
Related Infrastructure	$	2634	TBUS	1	$2,634	100%	$2,634	$0	Camps & Related Facilities tab, cell 55
OBJECTIVE: BREAK BASEMENT SLABS									
crushing plant	m2		#N/A	0	$0		$0	$0	
conveyors & transfer towers	m2		#N/A	0	$0		$0	$0	
tanks & plumbing	m2		#N/A	0	$0		$0	$0	
thickeners	m2		#N/A	0	$0		$0	$0	
water treatment plant	m2		#N/A	0	$0		$0	$0	
maintenance shop	m2		#N/A	0	$0		$0	$0	
power plant	m2		#N/A	0	$0		$0	$0	
bulk fuel storage	m2		#N/A	0	$0		$0	$0	
ANFO plant	m2		#N/A	0	$0		$0	$0	
offices/warehouse/accom	m2		#N/A	0	$0		$0	$0	
Other	m2		#N/A	0	$0		$0	$0	
OBJECTIVE: LANDFILL FOR DEMOLITION WASTE									
Place soil cover	m3		#N/A	0	$0		$0	$0	
Vegetate	ha		#N/A	0	$0		$0	$0	
Landfill disposal fee	tonne		#N/A	0	$0		$0	$0	
OBJECTIVE: GRADE AND CONTOUR MILL & PLANT SITE									
crushing plant	m2		#N/A	0	$0		$0	$0	
conveyors & transfer towers	m2		#N/A	0	$0		$0	$0	
tanks & plumbing	m2		#N/A	0	$0		$0	$0	
thickeners	m2		#N/A	0	$0		$0	$0	
water treatment plant	m2		#N/A	0	$0		$0	$0	
maintenance shop	m2		#N/A	0	$0		$0	$0	
power plant	m2		#N/A	0	$0		$0	$0	
bulk fuel storage	m2		#N/A	0	$0		$0	$0	
ANFO plant	m2		#N/A	0	$0		$0	$0	
offices/warehouse/accom	m2		#N/A	0	$0		$0	$0	
other	m2		#N/A	0	$0		$0	$0	
OBJECTIVE: RECLAIM ROADS									
Remove culverts	each		#N/A	0	$0		$0	$0	
Remove bridges	each		#N/A	0	$0		$0	$0	
Scarify and install water breaks	ha		#N/A	0	$0		$0	$0	
remove/doze down berms	m3		#N/A	0	$0		$0	$0	
create wildlife passage ramps	m3		#N/A	0	$0		$0	$0	
Vegetate	ha		#N/A	0	$0		$0	$0	
other			#N/A	0	$0		$0	$0	
SPECIALIZED ITEMS									
Decomission Decommission Laydown Areas	$	7644	TBUS	1	$7,644	100%	$7,644	$0	Camps & Related Facilities tab, cell 56
General site Clean up	$	4218	TBUS	1	$4,218	100%	$4,218	$0	Camps & Related Facilities tab, cell 58
Camp Operation	$	18304	TBUS	1	$18,304	100%	$18,304	$0	Camp Operations tab, cell 18 to 22
Resupply by Helicopter	$	57239	TBUS	1	$57,239	100%	$57,239	$0	Camps & Related Facilities tab, cell 59
Demobilize Freight Sealift Steensby Port to Port of Valleyfield	$	575726	TBUS	1	$575,726	100%	$575,726	$0	Camps & Related Facilities tab, cell 60
			Subtotal		$699,141	100%	$699,141	$0	
						Pct Land	Total Land	Total Water	

Figure 2-6: Revised Type B Buildings and Equipment Reclamation - Steensby Inlet

2.1.4 Chemicals

1 Chemicals and Soil Contamination:

ACTIVITY/MATERIAL	Units	Quantity	Cost Code	Unit Cost	Cost	% Land	Land Cost	Water Cost
HAZARDOUS MATERIALS AUDIT								
Phase 1 audit	each		#N/A	0	$0	100%	$0	$0
Phase 2 audit	each		#N/A	100000	$0	100%	$0	$0
HAZARDOUS MATERIALS TO BE CONSOLIDATED FOR REMOVAL								
Waste oils	litre		#N/A	0	$0	100%	$0	$0
Fuel - Type 1, eg diesel dregs	litre		#N/A	0	$0	100%	$0	$0
Fuel - Type 1, eg gasoline dregs	litre		#N/A	0	$0	100%	$0	$0
waste batteries	kg		#N/A	0	$0	100%	$0	$0
assay & environmental lab reagents	litre		#N/A	0	$0	100%	$0	$0
machine shop, paints, solvents etc	litre		#N/A	0	$0	100%	$0	$0
contaminated soils - hydrocarbon	m3		#N/A	0	$0	100%	$0	$0
metal contam. soil at conc. load-out	m3		#N/A	0	$0	100%	$0	$0
HAZARDOUS MATERIALS								
Transportation to disposal facility	T		#N/A	0	$0		$0	$0
Disposal fees	allow		#N/A		$0		$0	$0
other			#N/A	0	$0		$0	$0
CONTAMINATED SOILS								
Contam. soil investigation - technical	each		#N/A	34957	$0	100%	$0	$0
Contam. soil investigation - drilling & sampling	each		#N/A	34957	$0	100%	$0	$0
CONTAMINATED SOIL REMOVAL	m3				$0		$0	$0
contaminated soils - hydrocarbon	m3		#N/A	0	$0	100%	$0	$0
. metal contam. soil at conc. load-out	m3		#N/A	0	$0		$0	$0
. Load, haul, dump or doze	m3		#N/A	0	$0		$0	$0
. Reagents/stabilizing agent	m2		#N/A	0	$0		$0	$0
Contour reclaimed area	m3		#N/A	0	$0		$0	$0
. other	m2		#N/A	0	$0		$0	$0
. CONTAMIANTED SOIL VERY LOW PERMEABILITY COVER								
. supply geomembrane, HDPE, ES3, GCL	m2		#N/A	0	$0		$0	$0
. upper and lower bedding layers	m3		#N/A	0	$0		$0	$0
. install geomembrane, HDPE, ES3, GCL	m2		#N/A	0	$0		$0	$0
. erosion protection layer	m3		#N/A	0	$0		$0	$0
vegetate	m2		#N/A	0	$0		$0	$0
. install infiltration/seepage instrumentation	allow		#N/A	0	$0		$0	$0
. other			#N/A	0	$0		$0	$0
. OTHER								
. Explosives	kg		#N/A	0	$0		$0	$0
			Subtotal		$0	0%	$0	$0
						Pct Land	Total Land	Total Water

Figure 2-7: Revised Type B Chemicals Reclamation Costs

2.1.5 *Water*

Water Management :

ACTIVITY/MATERIAL	Units	Quantity	Cost Code	Unit Cost	% Cost Land	Land Cost	Water Cost	Refer in Appendix G3
A OBJECTIVE: WATER SUPPLY EMBANKMENT								
Toe buttress, drain mat'l	m3		#N/A	0	$0	$0	$0	
, fill mat'l A	m3		#N/A	0	$0	$0	$0	
, fill mat'l B	m3		#N/A	0	$0	$0	$0	
Rip rap	m3		#N/A	0	$0	$0	$0	
Vegetate	ha		#N/A	0	$0	$0	$0	
Breach dam	m3		#N/A	0	$0	$0	$0	
Other			#N/A	0	$0	$0	$0	
B OBJECTIVE: UPGRADE SPILLWAY								
Excavate channel, mat'l A	m3		#N/A	0	$0	$0	$0	
, mat'l B	m3		#N/A	0	$0	$0	$0	
Concrete	m3		#N/A	0	$0	$0	$0	
Rip rap	m3		#N/A	0	$0	$0	$0	
Other			#N/A	0	$0	$0	$0	
E OBJECTIVE: STABILIZE &/OR UPGRADE DIVERSION DITCHES								
Excavate channel	m3		#N/A	0	$0	$0	$0	
doze & spread excavated material	m3		#N/A	0	$0	$0	$0	
Vegetate, spread material	ha		#N/A	0	$0	$0	$0	
Rip rap in channel base	each		#N/A		$0	$0	$0	
F OBJECTIVE: BREACH DITCHES								
Excavate breaches	m3		#N/A	0	$0	$0	$0	
install rip rap	m3		#N/A	0	$0	$0	$0	
install flow dissipation	m3		#N/A	0	$0	$0	$0	
vegetate remainder of ditch	m2		#N/A	0	$0	$0	$0	
G OBJECTIVE: REMOVE PIPELINES								
Remove pipes	$	14808	TBUS	1	$14,808	$0	$14,808	Water tab, cell 2
Concrete plug deep pipes	m3		#N/A	0	$0	$0	$0	
Other			#N/A	0	$0	$0	$0	
H Groundwater Collection - Long-term Collection System								
excavate/install sumps	m2		#N/A	0	$0	$0	$0	
install pumping wells	m3		#N/A	0	$0	$0	$0	
install pumps/pipelines/power supply			#N/A	0	$0	$0	$0	
I OBJECTIVE: COLLECT DRAINAGE FOR TREATMENT								
Excavate channel	m3		#N/A	0	$0	$0	$0	
doze & spread excavated material	m3		#N/A	0	$0	$0	$0	
Vegetate, spread material	ha		#N/A	0	$0	$0	$0	
Rip rap in channel base	each		#N/A	0	$0	$0	$0	
Construct contaminated water storage pond								
Excavation	m3		#N/A	0	$0	$0	$0	
supply geomembrame, HDPE, ES3, GCL	m2		#N/A	0	$0	$0	$0	
upper and lower bedding layers	m3		#N/A	0	$0	$0	$0	
install geomembrane, HDPE, ES3, GCL	m2		#N/A	0	$0	$0	$0	
erosion protection layer	m3		#N/A	0	$0	$0	$0	
J OBJECTIVE: TREAT DRAINAGE (see "ONGOING TREATMENT" for operating costs)								
Build treatment plant	LS		#N/A	0	$0	$0	$0	
build sludge containment facility	LS		#N/A	0	$0	$0	$0	
			Subtotal		$14,808	$0	$14,808	
					Pct Land	Total Land	Total Water	

Figure 2-8: Revised Type B Water Management Reclamation Costs

2.1.6 On Going Water

WATER TREATMENT COSTS

ANNUAL VOLUME OF WATER (m3)

Reagent addition rates

Reagent	kg reagent/m3 water		cost in $/kg, FOB site	Annual reagent cost
H2O2		kg/m3		$0
lime		kg/m3		$0
ferric sulphate		kg/m3		$0
ferrous sulphate		kg/m3		$0
flocculents		kg/m3		$0
			TOTAL	$0

Supplies and Labour

power, kW-hr	0	rate, $/kW-hr	$0
misc. supplies, hoses, tools			$0
sampling equip.			$4,200
equip. maintenance and parts			$5,000
water analysis			$6,400
reporting			$0
truck rental			$0
annual mileage			$0
road maintenace & snow plowing			$0
electrician/mechanic for treatment plant & power supply			$0
		Annual cost	$15,600

labor, hourly rate	$75.00	
men per day for water treatment work		3
on site, days per year		1
spring/fall maintenance, extra work		0
hours worked per year		24
annual labor cost		$1,800
	Total, labour and supplies	$17,400

TOTAL ANNUAL COSTS, reagents + labour + supplies + site access	$106,276
Average treatment cost, $/m3	$0.00

Water analyses	
samples per month	0
analysis cost/sample	0
shipping	0
Total Water Sampling	0

Site Access	
road	$0
air	$88,876
winter road	$0
annual site access cost	$88,876

Figure 2-9: Revised Type B On-Going Water Reclamation Costs

2.2 Type A 'Carry-Over' Closure Cost Estimate

2.2.1 General

Reclamation costs that are carrying over to Type A Water License will include all the costs in the 2013 A&R Plan that are not mentioned in Section 2.1. Thus, the following items were included from the 2013 A&R Plan:

- Project Site Abandonment
- Stockpiles - Mary River and Milne Inlet Stockpiles
- Camp and related Facilities – Mary River Camp and Milne Inlet Camp
  - Site Contractor decommissioning and demobilization of Mary River Camp
  - Decommission Camp
  - Organize material for Shipment
  - General Site Clean up
  - Contouring and grading
  - Decommission Refugee Sites
- Road and Strips
  - Freshet Management Field Activities (Year 2 to 4)
  - Milne Inlet Tote Road Operation
  - #1 Deposit Haul Road
  - Milne Inlet Tote Road
  - General Access Roads
  - Airstrips
- Borrow and Quarry Areas
- Fuel Storage Facility - Mary River and Milne Inlet Fuel Farm
- Explosives
- Waste Management
  - Operate Landfill
  - Ship Waste by Land from Mary River to Milne Inlet
  - Sewage – Mary River and Milne
- Hydrocarbon Impacted Soils
- Sealift Materials

- Freight Sealift Milne Inlet to Valleyfield (year 2 to 4)
- Bulk Fuel demobilization

- Camp Operation
  - A&R fuel purchase
  - Mary River Camp operation (year 2 & 3)
  - Milne Inlet Camp operation (year 2 to 4)
- Environmental Monitoring (year 2 to 6)

For specific references to which line items in the 2013 Mary River A&R Plan costs were considered in the Carry Over Type A Closure Cost Estimate refer to the 'Carry Over to Type A Water Licence Closure Cost Estimate' RECLAIM Model which cross references all costs

A summary of the Revised Type B Closure Cost Estimate is presented in Figure 2-10.

SUMMARY OF COSTS

CAPITAL COSTS

COMPONENT TYPE	COMPONENT NAME	TOTAL COST	LAND LIABILITY	WATER LIABILITY
OPEN PIT	Mary River Mine Pit	$481,586	$481,586	$0
UNDERGROUND MINE	-	$0	$0	$0
TAILINGS	-	$0	$0	$0
ROCK PILE	lary River Stockpile	$86,881	$86,881	$0
BUILDINGS AND EQUIPMENT	Milne Site	$6,269,994	$6,269,994	$0
	Milne Inlet Stockpile	$182,526	$182,526	$0
	Tote Road	$1,938,492	$1,938,492	$0
	Mary River Mine	$2,669,047	$2,669,047	$0
	Railway	$0	$0	$0
	Steensby Port	$0	$0	$0
	General Site Areas	$4,248,539	$4,248,539	$0
CHEMICALS AND SOIL MANAGEMENT		$90,000	$90,000	$0
WATER MANAGEMENT		$0	$0	$0
POST-CLOSUREMONITORING AND MAINTENANCE		$1,654,952	$1,654,952	$0
	SUBTOTAL	**$17,622,017**	**$17,622,017**	**$0**
		PERCENTAGES	**100%**	**0%**
MOBILIZATION/DEMOBILIZATION		$4,057,700	4,057,700	0
PROJECT MANAGEMENT	5%	$881,101	$881,101	$0
Bonding	1%	$176,220	$176,220	$0
Taxes (GST on supplies) - est.	allowance	$0	$0	$0
Insurance	1%	$176,220	$176,220	$0
ENGINEERING	5%	$881,101	$881,101	$0
CONTINGENCY	10%	$1,762,202	$1,762,202	$0
Market Price Factor Adjustment	0%	$0	$0	$0
GRAND TOTAL - CAPITAL COSTS		**$25,556,561**	**$25,556,561**	**$0**

Figure 2-10: Summary of Carry-over Closure Cost Estimate from Type 'B' to Type 'A' Water Licence

2.2.2 Open Pit

Open Pit Name: *Mary River Mine Pit* **Pit # *1***

ACTIVITY/MATERIAL	Units	Quantity	Cost Code	Unit Cost	Cost	% Land	Land Cost	Water Cost	Refer in Appendix G3
OBJECTIVE: CONTROL ACCESS									
Fence	m		#N/A	0.00	$0		$0	$0	
Signs	each		#N/A	0.00	$0		$0	$0	
Berm at crest	m		#N/A	0.00	$0		$0	$0	
Block roads	m3		#N/A	0.00	$0		$0	$0	
Other			#N/A		$0		$0	$0	
OBJECTIVE: STABILIZE SLOPES									
Off-load crest, soil A	m3		#N/A	0	$0		$0	$0	
Off-load crest, soil B	m3		#N/A	0	$0		$0	$0	
Doze/trimoverburden at crest	m3		#N/A	0	$0		$0	$0	
Drill & blast pit crest	m3		#N/A	0	$0		$0	$0	
buttress slope	m3		#N/A	0	$0		$0	$0	
Other			#N/A	0	$0		$0	$0	
OBJECTIVE: COVER/CONTOUR SLOPES									
Dump demolition materials (pit or landfill or qı	m3		#N/A	0	$0		$0	$0	
Place overburden over demolition material	m3		#N/A	0	$0		$0	$0	
Rip rap	m3		#N/A	0	$0		$0	$0	
Vegetate slopes	ha		#N/A	0	$0		$0	$0	
Vegetate pit floor	ha		#N/A	0	$0		$0	$0	
Other			#N/A	0	$0		$0	$0	
OBJECTIVE: SPILLWAY									
Excavate channel, soil A	m3		#N/A	0	$0		$0	$0	
Excavate channel, soil B	m3		#N/A	0	$0		$0	$0	
Concrete	m3		#N/A	0	$0		$0	$0	
Rip rap	m3		#N/A	0	$0		$0	$0	
Other	each		#N/A	0	$0		$0	$0	
OBJECTIVE: FLOOD PIT									
remove stationary equipment (sump pump)	each		#N/A	0	$0		$0	$0	
remove power lines	each		#N/A	0	$0		$0	$0	
Embankment/dam - Soil A	m3		#N/A	0	$0		$0	$0	
Embankment/dam - Soil B	m3		#N/A	0	$0		$0	$0	
supply/install pump & piping system	each		#N/A	0	$0		$0	$0	
operate pumps to flood pit	each		#N/A	0	$0		$0	$0	
Llme addition, _____ kg/m3 of water	tonne		#N/A	0	$0		$0	$0	
Lime, purchase and shipping	tonne		#N/A	0	$0		$0	$0	
Other			#N/A	0	$0		$0	$0	
RECLAIM QUARRIES									
Contour slopes	m3		#N/A	0	$0	100%	$0	$0	
Berm at crest	m3		#N/A	0	$0		$0	$0	
Place overburder	m3		#N/A	0	$0	100%	$0	$0	
Vegetate	m3		#N/A	0	$0		$0	$0	
OTHER ITEMS									
Borrow and Quarry Areas	$	481586	TBUS	1	$481,586	100%	$481,586	$0	Borrow & Quarry Areas tab, cell 1 to 4
			Subtotal		$481,586	100%	$481,586	$0	
						Pct Land	Total Land	Total Water	

Figure 2-11: Carry Over Type A Open Pit Reclamation Costs

2.2.3 Rock Pile

Rock Pile Name: *Mary River Stockpile* **Rock Pile #: *1***

ACTIVITY/MATERIAL	Units	Quantity	Cost Code	Unit Cost	Cost	% Land	Land Cost	Water Cost	Refer in Appendix G3
OBJECTIVE: STABILIZE SLOPES									
Flatten slopes with dozer	m3	21756	TBUS	1	$21,756	100%	$21,756	$0	Stockpiles tab, cell 2
Flatten "bubble dump" areas	m3		#N/A		$0		$0	$0	
Divert runon, ditch mat'l A	m3		#N/A	0	$0		$0	$0	
, ditch mat'l B	m3		#N/A	0	$0		$0	$0	
Toe buttress, drain mat'l	m3		#N/A	0	$0		$0	$0	
, fill mat'l A	m3		#N/A	0	$0		$0	$0	
, fill mat'l B	m3		#N/A	0	$0		$0	$0	
Other			#N/A	0	$0		$0	$0	
OBJECTIVE: COVER DUMP									
Mat'l A	m3	65125	TBUS	1	$65,125	100%	$65,125	$0	Stockpiles tab, cell 3
Mat'l B	m3		#N/A	0	$0		$0	$0	
Rip rap	m3		#N/A	0	$0		$0	$0	
Vegetate	ha		#N/A	0	$0		$0	$0	
Other (scarify)	m2		#N/A	0	$0		$0	$0	
VERY LOW PERMEABILITY COVER									
supply geomembrame, HDPE, ES3, GCL	m2		#N/A	0	$0		$0	$0	
upper and lower bedding layers	m3		#N/A	0	$0		$0	$0	
install geomembrane, HDPE, ES3, GCL	m2		#N/A	0	$0		$0	$0	
erosion protection layer	m3		#N/A	0	$0		$0	$0	
vegetate	ha		#N/A	0	$0		$0	$0	
install infiltration/seepage instrumentation	allow		#N/A	0	$0		$0	$0	
OBJECTIVE: RELOCATE DUMPS									
Load, haul, dump or doze	m3		#N/A	0	$0		$0	$0	
Add lime	tonne		#N/A	0	$0		$0	$0	
Contour reclaimed area	ha		#N/A	0	$0		$0	$0	
Other			#N/A	0	$0		$0	$0	
SPECIALIZED ITEMS									
Stability inspection			#N/A	0	$0	100%	$0	$0	
install permanent instrumentation, drilling			#N/A		$0		$0	$0	
				Subtotal	$86,881	100%	$86,881	$0	
						% Land	Total Land	Total Water	

Figure 2-12: Carry Over Type A Mary River Stockpile Reclamation Costs

Rock Pile Name: *Milne Inlet Stockpile* **Rock Pile #: *1***

ACTIVITY/MATERIAL	Units	Quantity	Cost Code	Unit Cost	Cost	% Land	Land Cost	Water Cost	Refer in Appendix G3
OBJECTIVE: STABILIZE SLOPES									
Flatten slopes with dozer	$	18648	TBUS	1	$18,648	100%	$18,648	$0	Stockpiles tab, cell 5
Flatten "bubble dump" areas	m3		#N/A		$0		$0	$0	
Divert runon, ditch mat'l A	m3		#N/A	0	$0		$0	$0	
, ditch mat'l B	m3		#N/A	0	$0		$0	$0	
Toe buttress, drain mat'l	m3		#N/A	0	$0		$0	$0	
, fill mat'l A	m3		#N/A	0	$0		$0	$0	
, fill mat'l B	m3		#N/A	0	$0		$0	$0	
Other			#N/A	0	$0		$0	$0	
OBJECTIVE: COVER DUMP									
Mat'l A	$	163878	TBUS	1	$163,878	100%	$163,878	$0	Stockpiles tab, cell 6
Mat'l B	m3		#N/A	0	$0		$0	$0	
Rip rap	m3		#N/A	0	$0		$0	$0	
Vegetate	ha		#N/A	0	$0		$0	$0	
Other (scarify)	m2		#N/A	0	$0		$0	$0	
VERY LOW PERMEABILITY COVER									
supply geomembrame, HDPE, ES3, GCL	m2		#N/A	0	$0		$0	$0	
upper and lower bedding layers	m3		#N/A	0	$0		$0	$0	
install geomembrane, HDPE, ES3, GCL	m2		#N/A	0	$0		$0	$0	
erosion protection layer	m3		#N/A	0	$0		$0	$0	
vegetate	ha		#N/A	0	$0		$0	$0	
install infiltration/seepage instrumentation	allow		#N/A	0	$0		$0	$0	
OBJECTIVE: RELOCATE DUMPS									
Load, haul, dump or doze	m3		#N/A	0	$0		$0	$0	
Add lime	tonne		#N/A	0	$0		$0	$0	
Contour reclaimed area	ha		#N/A	0	$0		$0	$0	
Other			#N/A	0	$0		$0	$0	
SPECIALIZED ITEMS									
Stability inspection			#N/A	0	$0		$0	$0	
install permanent instrumentation, drilling			#N/A		$0		$0	$0	
				Subtotal	$182,526		$182,526	$0	
						Land	Total Land	Total Water	

Figure 2-13: Carry Over Type A Milne Inlet Stockpile Reclamation Costs

2.2.4 Buildings and Equipments

Building / Equip Name: *Milne Site* **Bldg / Equip #: *1***

ACTIVITY/MATERIAL	Units	Quantity	Cost Code	Unit Cost	Cost	% Land	Land Cost	Water Cost	Refer in Appendix G3
OBJECTIVE: DISPOSE MOBILE EQUIPMENT									
Decontaminate and ship off-site	each		#N/A	0	$0		$0	$0	
Decontaminate, dispose on-site	each		#N/A	0	$0		$0	$0	
Other (remove airstrip lightning)	each	105890	tbus	1	$105,890	100%	$105,890	$0	Camps & Related Facilities tab, cells 12 to 17
OBJECTIVE: REMOVE CONTAMINATED BUILDINGS									
Decontaminate crushing plant	each		#N/A	0	$0		$0	$0	
Decontaminate tanks & plumbing	each		#N/A	0	$0		$0	$0	
Decontaminate thickeners	each		#N/A	0	$0		$0	$0	
Decontaminate water treatment plant	each		#N/A	0	$0		$0	$0	
Decontaminate maintenance shop	each		#N/A	0	$0		$0	$0	
Decontaminate power plant	each		#N/A	0	$0		$0	$0	
Decontaminate bulk fuel storage	each		#N/A	0	$0	100%	$0	$0	
Decontaminate ANFO plant	each		#N/A	0	$0		$0	$0	
Deontaminate offices/warehouse/accom	each		#N/A	0	$0		$0	$0	
Removal of asbestos siding on buildings	each		#N/A	0	$0		$0	$0	
Removal of friable asbestos on equipment	each		#N/A	0	$0		$0	$0	
Other			#N/A	0	$0		$0	$0	
OBJECTIVE: REMOVE NON-CONTAMINATED BUILDINGS									
crushing plant	m2		#N/A	0	$0		$0	$0	
conveyors & transfer towers	m2		#N/A	0	$0		$0	$0	
tanks & plumbing	m2		#N/A	0	$0		$0	$0	
thickeners	m2		#N/A	0	$0		$0	$0	
water treatment plant	m2		#N/A	0	$0		$0	$0	
maintenance shop	m2		#N/A	0	$0		$0	$0	
power plant	m2		#N/A	0	$0		$0	$0	
bulk fuel storage	$	444397	TBUS	1	$444,397	100%	$444,397	$0	Fuel Storage Facilities tab, cells 8 to 20
ANFO plant	m2		#N/A	0	$0		$0	$0	
offices/warehouse/accom	$	145456	TBUS	1	$145,456	100%	$145,456	$0	Camps & Related Facilities tab, cells 30 to 32
consolidate & dump boneyard debris	m3		#N/A	0	$0		$0	$0	
other			#N/A	0	$0		$0	$0	
OBJECTIVE: BREAK BASEMENT SLABS									
crushing plant	m2		#N/A	0	$0		$0	$0	
conveyors & transfer towers	m2		#N/A	0	$0		$0	$0	
tanks & plumbing	m2		#N/A	0	$0		$0	$0	
thickeners	m2		#N/A	0	$0		$0	$0	
water treatment plant	m2		#N/A	0	$0		$0	$0	
maintenance shop	m2		#N/A	0	$0		$0	$0	
power plant	m2		#N/A	0	$0		$0	$0	
bulk fuel storage	m2		#N/A	0	$0	100%	$0	$0	
ANFO plant	m2		#N/A	0	$0		$0	$0	
offices/warehouse/accom	m2		#N/A	0	$0	100%	$0	$0	
Other	m2		#N/A	0	$0		$0	$0	
OBJECTIVE: LANDFILL FOR DEMOLITION WASTE									
Place soil cover	m3		#N/A	0	$0		$0	$0	
Vegetate	ha		#N/A	0	$0		$0	$0	
Landfill disposal fee	tonne		#N/A	0	$0		$0	$0	
OBJECTIVE: GRADE AND CONTOUR MILL & PLANT SITE									
crushing plant	m2		#N/A	0	$0		$0	$0	
conveyors & transfer towers	m2		#N/A	0	$0		$0	$0	
tanks & plumbing	m2		#N/A	0	$0		$0	$0	
thickeners	m2		#N/A	0	$0		$0	$0	
water treatment plant	m2		#N/A	0	$0		$0	$0	
maintenance shop	m2		#N/A	0	$0		$0	$0	
power plant	m2		#N/A	0	$0		$0	$0	
bulk fuel storage	m2		#N/A	0	$0	100%	$0	$0	
ANFO plant	m2		#N/A	0	$0		$0	$0	
offices/warehouse/accom	m2		#N/A	0	$0	100%	$0	$0	
other	$	31488.0	TBUS	1	$31,488	100%	$31,488	$0	Camps & Related Facilities tab, cells 41 to 44
OBJECTIVE: RECLAIM ROADS									
Remove culverts	each		#N/A	0	$0		$0	$0	
Remove bridges	each		#N/A	0	$0		$0	$0	
Scarify and install water breaks	ha		#N/A	0	$0		$0	$0	
remove/doze down berms	m3		#N/A	0	$0		$0	$0	
create wildlife passage ramps	m3		#N/A	0	$0		$0	$0	
Vegetate	ha		#N/A	0	$0		$0	$0	
other			#N/A	0	$0		$0	$0	
SPECIALIZED ITEMS									
Site Contractor Decommissioning and Demob - Milne Inlet Cam	$	91828	TBUS	1	$91,828	100%	$91,828		Camps & Related Facilities tab, cell 1 to 3
General Site Clean up	$	23294	TBUS	1	$23,294	100%	$23,294		Camps & Related Facilities tab, cell 38 to 40
Sewage Milne	$	12408	TBUS	1	$12,408	100%	$12,408		Waste Management tab, cells 14 to 18
Land Farm Operation	$	658080	TBUS	1	$658,080	100%	$658,080		Hydrocarbon Impacted Soil tab, cells 2 to 7
Sealift	$	3929796	TBUS	1	$3,929,796	100%	$3,929,796		Sealift Materials tab, cells 1 to 18 & 22 to 25
Camp Operation	$	827357	TBUS	1	$827,357	100%	$827,357		Camp Operations tab, cells 23 to 30; cells 32, 33 &3
				Subtotal	$6,269,994	100%	$6,269,994	$0	
						Pct Land	Total Land	Total Water	

Figure 2-14: Carry Over Type A Buildings and Equipment Reclamation Costs – Milne Inlet

Building / Equip Name: ***Tote Road*** **Bldg / Equip #:** ***2***

ACTIVITY/MATERIAL	Units	Quantity	Cost Code	Unit Cost	Cost % Land	Land Cost	Water Cost	Refer in Appendix G3
OBJECTIVE: DISPOSE MOBILE EQUIPMENT								
Decontaminate and ship off-site	each		#N/A	0	$0	$0	$0	
Decontaminate, dispose on-site	each		#N/A	0	$0	$0	$0	
Other	each		#N/A	0	$0	$0	$0	
OBJECTIVE: REMOVE CONTAMINATED BUILDINGS								
Decontaminate crushing plant	each		#N/A	0	$0 100%	$0	$0	
Decontaminate tanks & plumbing	each		#N/A	0	$0 100%	$0	$0	
Decontaminate thickeners	each		#N/A	0	$0 100%	$0	$0	
Decontaminate water treatment plant	each		#N/A	0	$0 100%	$0	$0	
Decontaminate maintenance shop	each		#N/A	0	$0 100%	$0	$0	
Decontaminate power plant	each		#N/A	0	$0 100%	$0	$0	
Decontaminate bulk fuel storage	each		#N/A	0	$0 100%	$0	$0	
Decontaminate ANFO plant	each		#N/A	0	$0 100%	$0	$0	
Deontaminate offices/warehouse/accom	each		#N/A	0	$0 100%	$0	$0	
Removal of asbestos siding on buildings	each		#N/A	0	$0 100%	$0	$0	
Removal of friable asbestos on equipment	each		#N/A	0	$0 100%	$0	$0	
Other			#N/A	0	$0 100%	$0	$0	
OBJECTIVE: REMOVE NON-CONTAMINATED BUILDINGS								
crushing plant	m2		#N/A	0	$0 100%	$0	$0	
conveyors & transfer towers	m2		#N/A	0	$0 100%	$0	$0	
tanks & plumbing	m2		#N/A	0	$0 100%	$0	$0	
thickeners	m2		#N/A	0	$0 100%	$0	$0	
water treatment plant	m2		#N/A	0	$0 100%	$0	$0	
maintenance shop	m2		#N/A	0	$0 100%	$0	$0	
power plant	m2		#N/A	0	$0 100%	$0	$0	
bulk fuel storage	m2		#N/A	0	$0 100%	$0	$0	
ANFO plant	m2		#N/A	0	$0 100%	$0	$0	
offices/warehouse/accom	m2		#N/A	0	$0 100%	$0	$0	
consolidate & dump boneyard debris	m3		#N/A	0	$0 100%	$0	$0	
other	m2		#N/A	0	$0 100%	$0	$0	
OBJECTIVE: BREAK BASEMENT SLABS								
crushing plant	m2		#N/A	0	$0 100%	$0	$0	
conveyors & transfer towers	m2		#N/A	0	$0 100%	$0	$0	
tanks & plumbing	m2		#N/A	0	$0 100%	$0	$0	
thickeners	m2		#N/A	0	$0 100%	$0	$0	
water treatment plant	m2		#N/A	0	$0 100%	$0	$0	
maintenance shop	m2		#N/A	0	$0 100%	$0	$0	
power plant	m2		#N/A	0	$0 100%	$0	$0	
bulk fuel storage	m2		#N/A	0	$0 100%	$0	$0	
ANFO plant	m2		#N/A	0	$0 100%	$0	$0	
offices/warehouse/accom	m2		#N/A	0	$0 100%	$0	$0	
Other	m2		#N/A	0	$0 100%	$0	$0	
OBJECTIVE: LANDFILL FOR DEMOLITION WASTE								
Place soil cover	m3		#N/A	0	$0	$0	$0	
Vegetate	ha		#N/A	0	$0	$0	$0	
Landfill disposal fee	tonne		#N/A	0	$0	$0	$0	
OBJECTIVE: GRADE AND CONTOUR MILL & PLANT SITE								
crushing plant	m2		#N/A	0	$0	$0	$0	
conveyors & transfer towers	m2		#N/A	0	$0	$0	$0	
tanks & plumbing	m2		#N/A	0	$0	$0	$0	
thickeners	m2		#N/A	0	$0	$0	$0	
water treatment plant	m2		#N/A	0	$0	$0	$0	
maintenance shop	m2		#N/A	0	$0	$0	$0	
power plant	m2		#N/A	0	$0	$0	$0	
bulk fuel storage	m2		#N/A	0	$0	$0	$0	
ANFO plant	m2		#N/A	0	$0	$0	$0	
offices/warehouse/accom	m2		#N/A	0	$0	$0	$0	
other	m2		#N/A	0	$0	$0	$0	
OBJECTIVE: RECLAIM ROADS								
Remove box culverts & stabilize slopes	$	286416	TBUS	1	$286,416 100%	$286,416	$0	Roads & Airstrips tab, cells 17
Remove round culverts & stabilize slopes	$	1525212	TBUS	1	$1,525,212 100%	$1,525,212	$0	Roads & Airstrips tab, cells 19
Install water breaks	$	18240	TBUS	1	$18,240 100%	$18,240	$0	Roads & Airstrips tab, cells 18
remove/doze down berms	m3		#N/A	0	$0	$0	$0	
create wildlife passage ramps	m3		#N/A	0	$0	$0	$0	
Vegetate	ha		#N/A	0	$0	$0	$0	
other (inspect/repair erosion and/or permafrost damage)	$	53040	TBUS	1	$53,040 100%	$53,040	$0	Roads & Airstrips tab, cells 16
SPECIALIZED ITEMS								
Operate Tote road for shipments	$	55584	TBUS	1	$55,584 100%	$55,584	$0	Roads & Airstrips tab, cells 7 to 8
				Subtotal	$1,938,492	$1,938,492	$0	
					Pct Land	Total Land	Total Water	

Figure 2-15: Carry Over Type A Buildings and Equipment Reclamation Costs – Tote Road

Building / Equip Name: *Mary River Mine* **Bldg / Equip #:** *3*

ACTIVITY/MATERIAL	Units	Quantity	Cost Code	Unit Cost	Cost % Land	Land Cost	Water Cost	Refer in Appendix G3
OBJECTIVE: DISPOSE MOBILE EQUIPMENT								
Decontaminate and ship off-site	each		#N/A	0	$0 100%	$0	$0	
Decontaminate, dispose on-site	each		#N/A	0	$0	$0	$0	
Other (remove airstrip lightning)	each	120084	tbus	1	$120,084 100%	$120,084	$0	Camps & Related Facilities tab, cells 12 to 17
OBJECTIVE: REMOVE CONTAMINATED BUILDINGS								
Decontaminate crushing plant	each		#N/A	0	$0 100%	$0	$0	
Decontaminate tanks & plumbing	each		#N/A	0	$0	$0	$0	
Decontaminate thickeners	each		#N/A	0	$0	$0	$0	
Decontaminate water treatment plant	each		#N/A	0	$0	$0	$0	
Decontaminate maintenance shop	each		#N/A	0	$0 100%	$0	$0	
Decontaminate power plant	each		#N/A	0	$0 100%	$0	$0	
Decontaminate bulk fuel storage	each		#N/A	0	$0 100%	$0	$0	
Decontaminate ANFO plant	each		#N/A	0	$0 100%	$0	$0	
Deontaminate offices/warehouse/accom	each		#N/A	0	$0	$0	$0	
Removal of asbestos siding on buildings	each		#N/A	0	$0	$0	$0	
Removal of friable asbestos on equipment	each		#N/A	0	$0	$0	$0	
Other			#N/A	0	$0	$0	$0	
OBJECTIVE: REMOVE NON-CONTAMINATED BUILDINGS								
crushing plant	m2		#N/A	0	$0 100%	$0	$0	
conveyors & transfer towers	m2		#N/A	0	$0 100%	$0	$0	
tanks & plumbing	m2		#N/A	0	$0	$0	$0	
thickeners	m2		#N/A	0	$0	$0	$0	
water treatment plant	m2		#N/A	0	$0	$0	$0	
maintenance shop	m2		#N/A	0	$0 100%	$0	$0	
power plant	m2		#N/A	0	$0 100%	$0	$0	
bulk fuel storage	$	256648	TBUS	1	$256,648 100%	$256,648	$0	Fuel Storage Facilities tab, cells 1 to 7
ANFO plant	m2		#N/A	0	$0 100%	$0	$0	
offices/warehouse/accom	$	563276	TBUS	1	$563,276 100%	$563,276	$0	Camps & Related Facilities tab, cells 4 to 11
consolidate & dump boneyard debris	m3		#N/A	0	$0 100%	$0	$0	
other	m2		#N/A	0	$0 100%	$0	$0	
OBJECTIVE: BREAK BASEMENT SLABS								
crushing plant	m2		#N/A	0	$0 100%	$0	$0	
conveyors & transfer towers	m2		#N/A	0	$0 100%	$0	$0	
tanks & plumbing	m2		#N/A	0	$0	$0	$0	
thickeners	m2		#N/A	0	$0	$0	$0	
water treatment plant	m2		#N/A	0	$0	$0	$0	
maintenance shop	m2		#N/A	0	$0 100%	$0	$0	
power plant	m2		#N/A	0	$0 100%	$0	$0	
bulk fuel storage	m2		#N/A	0	$0 100%	$0	$0	
ANFO plant	m2		#N/A	0	$0	$0	$0	
offices/warehouse/accom	m2		#N/A	0	$0 100%	$0	$0	
Other	m2		#N/A	0	$0 100%	$0	$0	
OBJECTIVE: LANDFILL FOR DEMOLITION WASTE								
Place soil cover	m3		#N/A	0	$0 100%	$0	$0	
Vegetate	ha		#N/A	0	$0	$0	$0	
Landfill disposal fee	tonne		#N/A	0	$0	$0	$0	
OBJECTIVE: GRADE AND CONTOUR MILL & PLANT SITE								
crushing plant	m2		#N/A	0	$0 100%	$0	$0	
conveyors & transfer towers	m2		#N/A	0	$0 100%	$0	$0	
tanks & plumbing	m2		#N/A	0	$0	$0	$0	
thickeners	m2		#N/A	0	$0	$0	$0	
water treatment plant	m2		#N/A	0	$0 100%	$0	$0	
maintenance shop	m2		#N/A	0	$0 100%	$0	$0	
power plant	m2		#N/A	0	$0 100%	$0	$0	
bulk fuel storage	m2		#N/A	0	$0 100%	$0	$0	
ANFO plant	m2		#N/A	0	$0 100%	$0	$0	
offices/warehouse/accom	m2		#N/A	0	$0 100%	$0	$0	
other	$	66324	TBUS	1	$66,324 100%	$66,324	$0	Camps & Related Facilities tab, cells 21 to 24
OBJECTIVE: RECLAIM ROADS								
Remove culverts	$	53040	TBUS	1	$53,040 100%	$53,040	$0	Roads & Airstrips tab, cells 12
Remove bridges	each		#N/A	0	$0	$0	$0	
Scarify and install water breaks	ha		#N/A	0	$0	$0	$0	
Grade and contour road and ditch	$	63000	TBUS	1	$63,000 100%	$63,000	$0	Roads & Airstrips tab, cells 11
create wildlife passage ramps	m3		#N/A	0	$0	$0	$0	
Vegetate	ha		#N/A	0	$0	$0	$0	
other (inspect/repair erosion and/or permafrost damage; insta	$	54852	TBUS	1	$54,852 100%	$54,852	$0	Roads & Airstrips tab, cells 10, 13-14
SPECIALIZED ITEMS								
Remove airstrip lightening and fill in airstrip lightening diches &	$	21231	TBUS	1	$21,231 100%	$21,231		Roads & Airstrips tab, cells 22 to 24
Site Contractor Decommissioning and Demob - Mary River Ca	$	294600	TBUS	1	$294,600 100%	$294,600		Camps & Related Facilities tab, cell 1 to 3
General Site Clean up	$	43031	TBUS	1	$43,031 100%	$43,031		Camps & Related Facilities tab, cell 18 to 20
Decommission Refuge Sites	$	2896	TBUS	1	$2,896 100%	$2,896		Camps & Related Facilities tab, cell 25 & 26
Operate Landfill	$	297024	TBUS	1	$297,024 100%	$297,024		Waste Management tab, cells 1 to 5
Ship waste by Land (Mary River to Milne Inlet)	$	36999	TBUS	1	$36,999 100%	$36,999		Waste Management tab, cells 6 to 8
Sewage Mary River	$	212862	TBUS	1	$212,862 100%	$212,862		Waste Management tab, cells 9 to 13
Camp Operation	$	583180	TBUS	1	$583,180 100%	$583,180		Camp Operations tab, cells 8 to 10; 15 to 17
			Subtotal		$2,669,047	$2,669,047	$0	
					Pct Land	Total Land	Total Water	

Figure 2-16: Carry Over Type A Buildings and Equipment Reclamation Costs – Mine Site

Building / Equip Name: *General Site Areas* **Bldg / Equip #:** *6*

ACTIVITY/MATERIAL	Units	Quantity	Cost Code	Unit Cost	Cost % Land	Land Cost	Water Cost	Refer in Appendix G3
OBJECTIVE: DISPOSE MOBILE EQUIPMENT								
Decontaminate and ship off-site	each		#N/A	0	$0	$0	$0	
Decontaminate, dispose on-site	each		#N/A	0	$0	$0	$0	
Other (sealift for equipmt)	each		#N/A	0	$0	$0	$0	
OBJECTIVE: REMOVE CONTAMINATED BUILDINGS								
Decontaminate crushing plant	each		#N/A	0	$0	$0	$0	
Decontaminate tanks & plumbing	each		#N/A	0	$0	$0	$0	
Decontaminate thickeners	each		#N/A	0	$0	$0	$0	
Decontaminate water treatment plant	each		#N/A	0	$0	$0	$0	
Decontaminate maintenance shop	each		#N/A	0	$0	$0	$0	
Decontaminate power plant	each		#N/A	0	$0	$0	$0	
Decontaminate bulk fuel storage	each		#N/A	0	$0	$0	$0	
Decontaminate ANFO plant	each		#N/A	0	$0	$0	$0	
Deontaminate offices/warehouse/accom	each		#N/A	0	$0	$0	$0	
Removal of asbestos siding on buildings	each		#N/A	0	$0	$0	$0	
Removal of friable asbestos on equipment	each		#N/A	0	$0	$0	$0	
Other			#N/A	0	$0	$0	$0	
OBJECTIVE: REMOVE NON-CONTAMINATED BUILDINGS								
crushing plant	m2		#N/A	0	$0	$0	$0	
conveyors & transfer towers	m2		#N/A	0	$0	$0	$0	
tanks & plumbing	m2		#N/A	0	$0	$0	$0	
thickeners	m2		#N/A	0	$0	$0	$0	
water treatment plant	m2		#N/A	0	$0	$0	$0	
maintenance shop	m2		#N/A	0	$0	$0	$0	
power plant	m2		#N/A	0	$0	$0	$0	
bulk fuel storage	m2		#N/A	0	$0	$0	$0	
ANFO plant	m2		#N/A	0	$0	$0	$0	
offices/warehouse/accom	m2		#N/A	0	$0	$0	$0	
consolidate & dump boneyard debris	m3		#N/A	0	$0	$0	$0	
other			#N/A	0	$0	$0	$0	
OBJECTIVE: BREAK BASEMENT SLABS								
crushing plant	m2		#N/A	0	$0	$0	$0	
conveyors & transfer towers	m2		#N/A	0	$0	$0	$0	
tanks & plumbing	m2		#N/A	0	$0	$0	$0	
thickeners	m2		#N/A	0	$0	$0	$0	
water treatment plant	m2		#N/A	0	$0	$0	$0	
maintenance shop	m2		#N/A	0	$0	$0	$0	
power plant	m2		#N/A	0	$0	$0	$0	
bulk fuel storage	m2		#N/A	0	$0	$0	$0	
ANFO plant	m2		#N/A	0	$0	$0	$0	
offices/warehouse/accom	m2		#N/A	0	$0	$0	$0	
Other	m2		#N/A	0	$0	$0	$0	
OBJECTIVE: LANDFILL FOR DEMOLITION WASTE								
Place soil cover	m3		#N/A	0	$0	$0	$0	
Vegetate	ha		#N/A	0	$0	$0	$0	
Landfill disposal fee	tonne		#N/A	0	$0	$0	$0	
OBJECTIVE: GRADE AND CONTOUR MILL & PLANT SITE								
crushing plant	m2		#N/A	0	$0	$0	$0	
conveyors & transfer towers	m2		#N/A	0	$0	$0	$0	
tanks & plumbing	m2		#N/A	0	$0	$0	$0	
thickeners	m2		#N/A	0	$0	$0	$0	
water treatment plant	m2		#N/A	0	$0	$0	$0	
maintenance shop	m2		#N/A	0	$0	$0	$0	
power plant	m2		#N/A	0	$0	$0	$0	
bulk fuel storage	m2		#N/A	0	$0	$0	$0	
ANFO plant	m2		#N/A	0	$0	$0	$0	
offices/warehouse/accom	m2		#N/A	0	$0	$0	$0	
other	m2		#N/A	0	$0	$0	$0	
OBJECTIVE: RECLAIM ROADS								
Remove culverts	each		#N/A	0	$0	$0	$0	
Remove bridges	each		#N/A	0	$0	$0	$0	
Scarify and install water breaks	ha		#N/A	0	$0	$0	$0	
remove/doze down berms	m3		#N/A	0	$0	$0	$0	
create wildlife passage ramps	m3		#N/A	0	$0	$0	$0	
Vegetate	ha		#N/A	0	$0	$0	$0	
Other (Grade and contour road surfaces and remove culvert	$	32790	TBUS	1	$32,790	100%	$32,790	$0 Roads & Airstrips tab, cells 0 & 21
SPECIALIZED ITEMS								
other (Freshet management Field Activities, year 2, 3, 4)	$	1069152	TBUS	1	$1,069,152	100%	$1,069,152	$0 Roads & Airstrips tab, cells 1 to 6
Project Site Abandonment	$	49106	TBUS	1	$49,106	100%	$49,106	$0 Project Site Abandonment tab, cells 1 to 8
Project Management & Supervision (Years 2 to 4)	$	1561800	TBUS	1	$1,561,800	100%	$1,561,800	$0 General Site Area tab, cells 1 to 9
A&R fuel purchase - cash cost of fuel & barel deposit	$	1535691	TBUS	1	$1,535,691	100%	$1,535,691	$0 Camp Operations tab, cell 2
			Subtotal		$4,248,539	100%	$4,248,539	$0
						Pct Land	Total Land	Total Water

Figure 2-17: Carry Over Type A Buildings and Equipment Reclamation Costs – General Site Areas

2.2.5 Chemicals

Chemicals and Soil Contamination:

ACTIVITY/MATERIAL	Units	Quantity	Cost Code	Unit Cost	Cost	% Land	Land Cost	Water Cost	Refer in Appendix G3
HAZARDOUS MATERIALS AUDIT									
Phase 1 audit	each		#N/A	0	$0	100%	$0	$0	
Phase 2 audit	each		#N/A	100000	$0	100%	$0	$0	
HAZARDOUS MATERIALS TO BE CONSOLIDATED FOR REMOVAL									
Waste oils	litre		#N/A	0	$0	100%	$0	$0	
Fuel - Type 1, eg diesel dregs	litre		#N/A	0	$0	100%	$0	$0	
Fuel - Type 1, eg gasoline dregs	litre		#N/A	0	$0	100%	$0	$0	
waste batteries	kg		#N/A	0	$0	100%	$0	$0	
assay & environmental lab reagents	litre		#N/A	0	$0	100%	$0	$0	
machine shop, paints, solvents etc	litre		#N/A	0	$0	100%	$0	$0	
contaminated soils - hydrocarbon	m3		#N/A	0	$0	100%	$0	$0	
metal contam. soil at conc. load-out	m3		#N/A	0	$0	100%	$0	$0	
HAZARDOUS MATERIALS									
Transportation to disposal facility	T		#N/A	0	$0		$0	$0	
Disposal fees	allow		#N/A		$0		$0	$0	
other			#N/A	0	$0		$0	$0	
CONTAMINATED SOILS									
Contam. soil investigation - technical	$	90000	TBUS	1	$90,000	100%	$90,000		Hydrocarbon Impacted Soil tab, cell 1
Contam. soil investigation - drilling & sampling	each		#N/A	34957	$0	100%	$0	$0	
CONTAMINATED SOIL REMOVAL	m3				$0		$0	$0	
contaminated soils - hydrocarbon	m3		#N/A	0	$0	100%	$0	$0	
metal contam. soil at conc. load-out	m3		#N/A	0	$0		$0	$0	
Load, haul, dump or doze	m3		#N/A	0	$0		$0	$0	
Reagents/stabilizing agent	m2		#N/A	0	$0		$0	$0	
Contour reclaimed area	m3		#N/A	0	$0		$0	$0	
other	m2		#N/A	0	$0		$0	$0	
CONTAMIANTED SOIL VERY LOW PERMEABILITY COVER									
supply geomembrame, HDPE, ES3, GCL	m2		#N/A	0	$0		$0	$0	
upper and lower bedding layers	m3		#N/A	0	$0		$0	$0	
install geomembrane, HDPE, ES3, GCL	m2		#N/A	0	$0		$0	$0	
erosion protection layer	m3		#N/A	0	$0		$0	$0	
vegetate	m2		#N/A	0	$0		$0	$0	
install infiltration/seepage instrumentation	allow		#N/A	0	$0		$0	$0	
other			#N/A	0	$0		$0	$0	
OTHER									
Explosives	$	0	TBUS	1	$0	100%	$0	$0	Explosives tab, cells 1 to 3
			Subtotal		$90,000	100%	$90,000	$0	
						Pct Land	Total Land	Total Water	

Figure 2-18: Carry Over Type A Chemicals Reclamation Costs

2.2.6 *Mobilization*

Mobilization:

ACTIVITY/MATERIAL	Units	Quantity	Cost Code	Unit Cost	Cost	% Land	Land Cost	Water Cost	Refer in Appendix G3
MOBILIZE HEAVY EQUIPMENT									
Equipment to regional centre									
Excavators	km		#N/A	0	$0	100%	$0	$0	
Dump trucks	km		#N/A	0	$0	100%	$0	$0	
Dozers	km		#N/A	0	$0	100%	$0	$0	
Demolition shears	km		#N/A	0	$0	100%	$0	$0	
Crane	km		#N/A	0	$0	100%	$0	$0	
Light duty vehicles	km		#N/A	0	$0	100%	$0	$0	
Other (loaders)	km		#N/A	0	$0	100%	$0	$0	
Other	km		#N/A	0	$0	100%	$0	$0	
Equipment, regional centre to site									
Excavators	km		#N/A	0	$0		$0	$0	
Dump trucks	km		#N/A	0	$0		$0	$0	
Dozers	km		#N/A	0	$0		$0	$0	
Demolition shears	km		#N/A	0	$0		$0	$0	
Crane	km		#N/A	0	$0		$0	$0	
Light duty vehicles	km		#N/A	0	$0		$0	$0	
Other	km		#N/A	0	$0		$0	$0	
Other	km		#N/A	0	$0		$0	$0	
MOBILIZE CAMP									
	allow		#N/A		$0		$0	$0	
MOBILIZE WORKERS									
crew travel time	manday		#N/A	0	$0	100%	$0	$0	
crew transportation	$	2693300	TBUS	1	$2,693,300	100%	$2,693,300	$0	Camp Operations tab, cells 5 to 7; 12 to 14; cells 34-35
MOBILIZE MISC. SUPPLIES									
Fuel	$	1364400	TBUS	1	$1,364,400	100%	$1,364,400	$0	Camp Operations tab, cells 30 to 32
Sealift per season	allow		#N/A	0	$0	100%	$0	$0	
Sealift manpower per season	allow		#N/A	0	$0	100%	$0	$0	
Manpower for the season w/o sealift			#N/A	0	$0	100%	$0	$0	
WORKER ACCOMODATIONS									
	$		#N/A	0	$0	100%	$0	$0	
WINTER ROAD							$0	$0	
Full winter use	km		#N/A	0	$0		$0	$0	
Limited winter use	km		#N/A	0	$0		$0	$0	
other			#N/A	0	$0		$0	$0	
INTERIM CARE & MAINTENANCE									
on-site caretaker	annual		#N/A	0	$0				
fuel and misc. supplies	annual		#N/A	0	$0				
electrician	days		#N/A	0	$0				
mechnaic	days		#N/A	0	$0				
pick-up truck	yr		#N/A	0	$0				
small dozer	allow		#N/A	0	$0				
small excavator	allow		#N/A	0	$0				
snow machine	allow		#N/A	0	$0				
communications	allow		#N/A	0	$0				
Water licence sampling & reporting	each		#N/A	0	$0				
Geotechnical assessment	each		#N/A	0	$0				
Other	each		#N/A	20000	$0				
			sub-total annual C&M cost		$0				
Total C&M cost	years	3	#N/A	0	$0	100%	$0	$0	
				Subtotal	$4,057,700	100%	$4,057,700	$0	
						Pct Land	Total Land	Total Water	

Figure 2-19: Carry Over Type A Mobilization Reclamation Costs

2.2.7 *Post Closure*

Post-Closure Monitoring & Maintenance:

	ACTIVITY/MATERIAL	Units	Quantity	Cost Code	Unit Cost	Cost	% Land	Land Cost	Water Cost	Refer in Appendix G3
A	OBJECTIVE: MONITORING & INSPECTIONS									
	Annual geotechnical insp.	each		#N/A	$0	$0		$0	$0	
.	Survey inspection	each		#N/A	$0	$0	100%	$0	$0	
.	Surface water sampling	$	21500	TBUS	$1	$21,500	100%	$21,500	$0	Environmental Monitoring tab, cells 4, 10, 16, 22, 28
	Groundwater Sampling	each		#N/A	$0	$0		$0	$0	
	Receiving/downstream water sampling	each		#N/A	$0	$0		$0	$0	
	Reporting	$	200000	TBUS	$1	$200,000	100%	$200,000	$0	Environmental Monitoring tab, cell 1
.	on-site transportation	each		#N/A	$0	$0		$0	$0	
	transporation to site	$	18000	TBUS	$1	$18,000	100%	$18,000	$0	Environmental Monitoring tab, cells 6-7, 12-13, 18-19, 24-25, 30-31
.	Other (preparation/consumables, site over	$	66000	TBUS	$1	$66,000	100%	$66,000	$0	Environmental Monitoring tab, cells 3, 5, 9, 11, 15, 17, 21, 23, 27, 29
B	OBJECTIVE: COVER MAINTENANCE									
.	Repair erosion - infill gullies	allow		#N/A	$0	$0		$0	$0	
.	Repair erosion - upgrade diversion ditches	allow		#N/A	$0	$0		$0	$0	
.	Remove problem vegetation	allow		#N/A	$0	$0		$0	$0	
.	Repair animal damage	allow		#N/A	$0	$0		$0	$0	
.	Repair/upgrade access controls	allow		#N/A	$0	$0		$0	$0	
	Other			#N/A	$0	$0	100%	$0	$0	
C	SPILLWAY MAINTENANCE									
	Repair erosion	m3		#N/A	$0	$0		$0	$0	
	Clear spillway	each		#N/A	$0	$0		$0	$0	
	Other			#N/A	$0	$0		$0	$0	
D	POST-CLOSURE WATER TREATMENT									
	Annual water treatment cost, from Ongoing water			#N/A	$0	$0		$0	$0	
	Subtotal, Annual post-closure costs					$305,500		$305,500	$0	
	Discount rate for calculation of net present value of post-closure			3.00%						
	Number of years of post-closure activity			6 years						
	Present Value of payment stream					$1,654,952	$1	$1,654,952	$0	
							Pct Land	Total Land	Total Water	

Figure 2-20: Carry Over Type A Post Closure Costs

3. Closure Cost Estimate for the Proposed 2013 Work Plan activities in 2013

The financial cost of the Mary River Project 2013 Work Plan closure and reclamation has been estimated using The Mining RECLAIM spreadsheet. The cost is derived based on the model methodology of identifying reclamation components as assigning a reclamation cost for a functional unit of that component. These include:

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

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

It should be noted that all work described in the 2013 Work Plan will not be completed in 2013. The cost presented in this document only covers the cost of reclamation of activities scheduled to occur in 2013. Although a total cost for all the 2013 Work Plan activities was considered, activities that extend into 2014 are not considered to apply for 2013.

To best estimate the total reclamation cost, some actions were modified or adapted to the strategies defined in the Preliminary Mine Closure and Reclamation Plan (February, 2012). The financial cost obtained is based on the information available at the time of publishing.

Several assumptions and estimations have been made and are described in the following sections.

The spreadsheet will require to be updated annually as the Project progresses. To make up for uncertainties, the highest prices of the range provided by the unit costs spreadsheet were systematically chosen.

Mary River Project closure and reclamation for the activities expected to occur in 2013 as part of the 2013 Work Plan is estimated to cost $27,895,504.

The breakdown of cost for 2013 activities is summarized up in Table 3-1

Table 3-1: Total Cost and Breakdown for 2013 Work Plan, Mary River Project Closure and Reclamation

Category	Associated cost		2013
Capital Costs for Infrastructure		$	14,820,127
Mobilization		$	9,814,949
Project Management	5%	$	741,006
Bonding	1%	$	148,201
Insurance	1%	$	148,201
Engineering	5%	$	741,006
Contingency	10%	$	1,482,013
Sub-Total		$	3,260,428
Total By Year		$	27,895,504

3.1 2013 Work Plan Closure Cost Estimate

3.1.1 General Assumptions

The following is a list of general assumptions that were made during the estimate of the total cost of reclamation to meet reclamation objectives stated in section 1.1 of this document and in the 2012 Preliminary Mine Closure and Reclamation Plan (February 2012) submitted in the Type 'A' Water Licence Application in support of the Mary River Project:

- The annual allocation of the security needing to be deposited each year is based on activities expected to occur in that year. (i.e. if activities occur in 2013, cost for reclamation would have to be given prior to the commencement of that activity). The cost of reclamation of that item is based on RECLAIM methodology. It amounts to the cost of reclaiming a defined unit of a project component.
- Due to use of the RECLAIM software, closure costs are based on pre-determined RECLAIM 'unit' costs associated to reclaim the site when specified costs are unknown. Unit costs are always selected at the maximum level in RECLAIM due to project characteristics (mainly climate and remoteness).
- Where RECLAIM does not have costs for a particular activity or it is not practical to break the activity down into the sub-tasks, a "specified" lump sum estimate of cost has been used.
- There has been no consideration of difference of reclamation techniques that would occur at the end of construction vs. the end of operation as RECLAIM does not allow for it.

- If an activity spans multiple years of construction, the cost for its reclamation is **evenly** distributed across all years that it is scheduled to take place.
- Annual costs or costs that would be reset each year are all deposited in Year 1. (i.e. the cost for removing hazardous waste from site would be deposited in Year 1 because it is the current project strategy that there will be annual shipments off-site of all hazardous waste generated that year)
- The closure activities for 2013 activities can be completed in 2 years.
- Security deposited for each year is aggregated with previous years.
- As a default, RECLAIM assumes the discount rate for calculation of net present value of post-closure cost as 3%.
- Assume the number of years of post-closure monitoring as 5 years (same as 2013 A&R Plan).
- The cost associated with post closure monitoring is assumed to be captured in cost carried over from Type B post closure water treatment, accounts for $106,276 as per the ongoing water tab.

				Construction		
				Percentage allocation		$ Al
			Associated cost	Year 1	Year 2	Year 1
Mary River						
Open Pit	Inspection	Carry out	$33,333	100%		$ 33,333
	Berm at crest	Install				
	Signs	Place				
	Demolition scrap	Dump				
		Place overburden	$338,748	100%		$ 338,748
	Spillway	Excavate				
	Quarries	Site contouring	$303,636	100%		$ 303,636
		Place overburden	$67,800	100%		$ 67,800
	Access roads	Scarify				
Rock Pile	Inspection	Carry out				
	Flat surface	Scarify				
Buildings	Fuel storage & foundations	Decomissioning	$503,707	50%	50%	$ 251,854
	Camp & foundations	Decomissioning	$1,423,051	50%	50%	$ 711,526
	Fuel and camp	Site contouring	$130,022	50%	50%	$ 65,011
	Other contaminated buildings	Remove	$285,400	50%	50%	$ 142,700
	Other non-contaminated buildings	Remove	$377,476	50%	50%	$ 188,738
	Break Basement Slabs	Remove	$129,587	50%	50%	$ 64,794
	All buildings	Site contouring	$46,861	50%	50%	$ 23,430
Road	Road	Remove Culverts	$13,219	50%	50%	$ 6,610
		Fill with cobble & grade	$41,550	50%	50%	$ 20,775
Landfill	Soil	Place cover	$374,252	100%		$ 374,252
Specialize Items	Construction Materials	Sealift	$0	50%	50%	
Manpower						
Milne Inlet						
Stockpile	Cover Dump	Overbuder cover	$1,262,250	100%		$ 1,262,250
Buildings	Fuel storage & foundations	Decomissioning	$5,106,553	50%	50%	$ 2,553,277
	Camp & foundations	Decomissioning	$1,178,209	50%	50%	$ 589,104
	Fuel and camp	Site contouring	$307,577	50%	50%	$ 153,788
	Other contaminated buildings	Remove	$80,400	50%	50%	$ 40,200
	Other non-contaminated buildings	Remove	$372,704	50%	50%	$ 186,352
	Break Basement Slabs	Remove	$98,420	50%	50%	$ 49,210
	All buildings	Site contouring	$35,590	50%	50%	$ 17,795
Road	Road	Fill with cobble & grade	$10,617	50%	50%	$ 5,309
Landfill	Soil	Place cover				
Specialize Items	Construction Materials	Credit for bladder farm	($403,870)	100%	0%	$ (403,870)
Manpower						
50 km Road Camp						
Buildings	Fuel storage & foundations	Decomissioning				
	Camp & foundations	Decomissioning	$192,883	50%	50%	$ 96,442
	Fuel and camp	Site contouring				
	Other contaminated buildings	Remove	$516,800	50%	50%	$ 258,400
	Other non-contaminated buildings	Remove				
	Break Basement Slabs	Remove	$69,070	50%	50%	$ 34,535
	All buildings	Site contouring		50%	50%	
Road	Road	Fill with cobble & grade		50%	50%	
Landfill	Soil	Place cover				
Specialize Items	Construction Materials	Sealift				
Manpower						
Chemicals						
Haz. Mat.	Hazardous material audits	Phase 1	$25,600	100%		$ 25,600
		Phase 2	$100,000	100%		$ 100,000
Wastes	Waste oils	Remove	$51,282	100%		$ 51,282
	Fuel - Type 1, eg diesel dregs	Remove	$454,410	100%		$ 454,410
	Fuel - Type 1, eg gasoline dregs	Remove				
	waste batteries	Remove	$4,029	100%		$ 4,029
	assay & environmental lab re	Remove	$23,136	100%		$ 23,136
	machine shop, paints, solver	Remove	$10,627	100%		$ 10,627
Soils	Contaminated soils investigation	Technical	$34,957	100%		$ 34,957
		Drilling & sampling	$34,957	100%		$ 34,957
	HC contaminated soils	Remove	$3,360,000	100%		$ 3,360,000
Explosives	Explosives	Reclaim Explosives	$2,185,920	100%	0%	$ 2,185,920
	Explosives	Salvage (Explosives)	$0	100%		
Water						
Water & pipelines	Pipelines	Remove	$44,280	50%	50%	$ 22,140
	Water Supply Embankement	Removal	$21,035		100%	
On-going water						
Water	Water	Supplies	$15,600	100%		$ 15,600
		Labour	$1,800	100%		$ 1,800
Site	Site	Access	$88,876	100%		$ 88,876
Mobilization						
Vehicles	Mary River vehicles	Move to MI	$173,688	100%		$ 173,688
Crew	Crew	Transportation	$533,253	100%		$ 533,253
		Accommodation	$417,660	100%		$ 417,660
Fuel	Fuel	For Reclmation Activites	$0	100%	0%	
Sealift	Sealift	Activity	$3,000,000	100%	0%	$ 3,000,000
		Manpower	$5,630,348	100%	0%	$ 5,630,348
Site	Site	Clean-up	$60,000	100%		$ 60,000
Post-Closure						
Post closure monitoring	Site		$970,797	100%		$ 970,797

Figure 3-1: Summary of 2013 Work Plan Closure Cost Estimate, 2013 Breakdown

3.2 Open Pit

Open Pit Name: *Mary River Mine Pit* **Pit # *1***

ACTIVITY/MATERIAL	Units	Quantity	Cost Code	Unit Cost	Cost	% Land	Land Cost	Water Cost
OBJECTIVE: CONTROL ACCESS								
Fence	m		#N/A	0.00	$0		$0	$0
Signs	each		#N/A	0.00	$0		$0	$0
Berm at crest	m		#N/A	0.00	$0		$0	$0
Block roads	m3		#N/A	0.00	$0		$0	$0
Other			#N/A		$0		$0	$0
OBJECTIVE: STABILIZE SLOPES			#N/A					
Off-load crest, soil A	m3		#N/A	0	$0		$0	$0
Off-load crest, soil B	m3		#N/A	0	$0		$0	$0
Doze/trimoverburden at crest	m3		#N/A	0	$0		$0	$0
Drill & blast pit crest	m3		#N/A	0	$0		$0	$0
buttress slope	m3		#N/A	0	$0		$0	$0
Other			#N/A	0	$0		$0	$0
OBJECTIVE: COVER/CONTOUR SLOPES			#N/A					
Dump demolition materials (pit or landfill or qu	m3		#N/A	0	$0		$0	$0
Place overburden over demolition material	m3	33546	RB1L	10.098	$338,748	100%	$338,748	$0
Rip rap	m3		#N/A	0	$0		$0	$0
Vegetate slopes	ha		#N/A	0	$0		$0	$0
Vegetate pit floor	ha		#N/A	0	$0		$0	$0
Other			#N/A	0	$0		$0	$0
OBJECTIVE: SPILLWAY			#N/A					
Excavate channel, soil A	m3		#N/A	0	$0		$0	$0
Excavate channel, soil B	m3		#N/A	0	$0		$0	$0
Concrete	m3		#N/A	0	$0		$0	$0
Rip rap	m3		#N/A	0	$0		$0	$0
Other	each		#N/A	0	$0		$0	$0
OBJECTIVE: FLOOD PIT			#N/A					
remove stationary equipment (sump pump)	each		#N/A	0	$0		$0	$0
remove power lines	each		#N/A	0	$0		$0	$0
Embankment/dam - Soil A	m3		#N/A	0	$0		$0	$0
Embankment/dam - Soil B	m3		#N/A	0	$0		$0	$0
supply/install pump & piping system	each		#N/A	0	$0		$0	$0
operate pumps to flood pit	each		#N/A	0	$0		$0	$0
Llme addition, _____ kg/m3 of water	tonne		#N/A	0	$0		$0	$0
Lime, purchase and shipping	tonne		#N/A	0	$0		$0	$0
Other			#N/A	0	$0		$0	$0
RECLAIM QUARRIES			#N/A					
Contour slopes	m3	90400	DSH	3.3588	$303,636	100%	$303,636	$0
Berm at crest	m3		#N/A	0	$0	100%	$0	$0
Place overburder	m3	22600	SBCL	3	$67,800	100%	$67,800	$0
Vegetate	m3		#N/A	0	$0	100%	$0	$0
OTHER ITEMS			#N/A					
Stability inspection	each	2	sis	16667	$33,333	100%	$33,333	$0
Reclaim road to primary crusher (scarification	ha		scs	1000	$0	100%	$0	$0
			Subtotal		$743,516	100%	$743,516	$0
						Pct Land	Total Land	Total Water

Figure 3-2: 2013 Work Plan Closure Cost Estimate for Open Pit

3.2.1 Open Pit Assumptions

3.2.1.1 Objective: Control Access

Assume no berm and fence will be needed at end of 2013 as no open pit will be present

3.2.1.2 Objective: Cover/Contour Slopes (chosen for the price of placing inert materials in the pit)

Scrap materials will be produced by the demolition of buildings. Although these materials will not be placed in the open-pit, the price of loading and dumping has been included in the open pit spreadsheet.

Assume that 1.5 m of overburden will be placed over the materials from buildings.

3.2.1.3 Objective: Spillway

Assume no spillway needed at open pit.

3.2.1.4 Objective: Reclaim Quarries

Assume Quarry Q1 and QMR2 will be reclaimed at closure.

Assume Quarry Q1 footprint equals 200,000 sq m.

Assume Quarry QMR2 footprint equals 252,700 sq m.

Excess rock will be placed back in the quarries.

An estimated 5% of the total surface of the quarries will be covered by excess rock, at a minimum of 1m. The borrow pit slopes will be contoured. It has been assumed that 20% of the total area of the borrow pit will undergo re-contouring.

At this point, no treatment for ARG/ML is anticipated (AMEC, 2010). If future investigations prove to the contrary, batch treatments will be added to the open pit cost.

Assume one stability inspection needed for quarries at $16,666.67/Survey site Inspection

3.3 Underground Mine

3.3.1 Underground Mine Assumptions

There will be no underground mining at the Mary River Project and therefore this component of RECLAIM was not considered.

3.4 Tailings

3.4.1 Tailings Assumptions

There will be no tailings produced at the Mary River Project and therefore this component of RECLAIM was not considered.

3.5 Stockpile

Rock Pile Name: *Milne* **Rock Pile #: *1***

ACTIVITY/MATERIAL	Units	Quantity	Cost Code	Unit Cost	Cost	% Land	Land Cost	Water Cost
OBJECTIVE: STABILIZE SLOPES								
Flatten slopes with dozer	m3		#N/A	0	$0		$0	$0
Flatten "bubble dump" areas	m3		#N/A		$0		$0	$0
Divert runon, ditch mat'l A	m3		#N/A	0	$0		$0	$0
, ditch mat'l B	m3		#N/A	0	$0		$0	$0
Toe buttress, drain mat'l	m3		#N/A	0	$0		$0	$0
, fill mat'l A	m3		#N/A	0	$0		$0	$0
, fill mat'l B	m3		#N/A	0	$0		$0	$0
Other			#N/A	0	$0		$0	$0
OBJECTIVE: COVER DUMP			#N/A					
Mat'l A	m3	125000	RB1L	10.098	$1,262,250	100%	$1,262,250	$0
Mat'l B	m3		#N/A	0	$0		$0	$0
Rip rap	m3		#N/A	0	$0		$0	$0
Vegetate	ha		#N/A	0	$0		$0	$0
Other (scarify)	m2		#N/A	0	$0		$0	$0
VERY LOW PERMEABILITY COVER			#N/A					
supply geomembrame, HDPE, ES3, GCL	m2		#N/A	0	$0		$0	$0
upper and lower bedding layers	m3		#N/A	0	$0		$0	$0
install geomembrane, HDPE, ES3, GCL	m2		#N/A	0	$0		$0	$0
erosion protection layer	m3		#N/A	0	$0		$0	$0
vegetate	ha		#N/A	0	$0		$0	$0
install infiltration/seepage instrumentation	allow		#N/A	0	$0		$0	$0
OBJECTIVE: RELOCATE DUMPS			#N/A					
Load, haul, dump or doze	m3		#N/A	0	$0		$0	$0
Add lime	tonne		#N/A	0	$0		$0	$0
Contour reclaimed area	ha		#N/A	0	$0		$0	$0
Other			#N/A	0	$0		$0	$0
SPECIALIZED ITEMS								
Stability inspection			#N/A	0	$0	100%	$0	$0

	Subtotal	$1,262,250	100%	$1,262,250	$0
			% Land	Total Land	Total Water

Figure 3-3: 2013 Work Plan Closure Cost Estimate for Buildings and Equipment – Milne Inlet Stockpile

3.5.1 Rock Pile Assumptions

There is no waste rock pile but assume the ore stockpile at Milne will need to be covered with 0.5 m of overburden.

Assume size of stockpile equals 250,000 m2.

Assume No Stability Inspection Needed at Waste Rock Stockpile.

3.6 Buildings and Equipment

Building / Equip Name: *Mary River* **Bldg / Equip #: *1***

ACTIVITY/MATERIAL	Units	Quantity	Cost Code	Unit Cost	Cost	% Land	Land Cost	Water Cost
OBJECTIVE: DISPOSE MOBILE EQUIPMENT								
Decontaminate and ship off-site	each		#N/A	0	$0	100%	$0	$0
Decontaminate, dispose on-site	each		#N/A	0	$0	100%	$0	$0
Other (sealift for equipmt)	each		#N/A	0	$0	100%	$0	$0
OBJECTIVE: REMOVE CONTAMINATED BUILDINGS			#N/A					
Decontaminate crushing plant	each		#N/A	0	$0	100%	$0	$0
Decontaminate tanks & plumbing	each		#N/A	0	$0	100%	$0	$0
Decontaminate thickeners	each		#N/A	0	$0	100%	$0	$0
Decontaminate water treatment plant	each		#N/A	0	$0	100%	$0	$0
Decontaminate maintenance shop	m2	1427	BRCDS	200	$0	100%	$0	$0
Decontaminate power plant	each	30	BRCDS	200	$285,400	100%	$285,400	$0
Decontaminate bulk fuel storage	m2	2221.5	BRCDS	200	$444,300	100%	$444,300	$0
Decontaminate ANFO plant	each	0	BRCDS	200	$0	100%	$0	$0
Deontaminate offices/warehouse/accom	each		#N/A	0	$0	100%	$0	$0
Removal of asbestos siding on buildings	each		#N/A	0	$0	100%	$0	$0
Removal of friable asbestos on equipment	each		#N/A	0	$0	100%	$0	$0
Other	m2		BRCDS	200	$0	100%	$0	$0
OBJECTIVE: REMOVE NON-CONTAMINATED BUILDINGS								
crushing plant	m2		#N/A	0	$0		$0	$0
conveyors & transfer towers	m2		#N/A	0	$0	100%	$0	$0
tanks & plumbing	m2		#N/A	0	$0	100%	$0	$0
thickeners	m2		#N/A	0	$0	100%	$0	$0
water treatment plant	m2	557	BRS	100	$55,700	100%	$55,700	$0
maintenance shop	m2		#N/A	0	$0	100%	$0	$0
power plant	m2		#N/A	0	$0	100%	$0	$0
bulk fuel storage	each	1	MRBTS	38376	$38,376	100%	$38,376	$0
ANFO plant	m2		#N/A	0	$0	100%	$0	$0
offices/warehouse/accom	m2	11229	BRS	100	$1,122,900	100%	$1,122,900	$0
consolidate & dump boneyard debris	m3	334	BRS	100	$33,400	100%	$33,400	$0
other (Airstrip Extension)	m2	2500	BRS	100	$250,000	100%	$250,000	$0
OBJECTIVE: BREAK BASEMENT SLABS								
crushing plant	m2	0	#N/A	0	$0	100%	$0	$0
conveyors & transfer towers	m2	0	#N/A	0	$0	100%	$0	$0
tanks & plumbing	m2	0	#N/A	0	$0	100%	$0	$0
thickeners	m2	0	#N/A	0	$0	100%	$0	$0
water treatment plant	m2	557	BRCS	26.73	$14,889	100%	$14,889	$0
maintenance shop	m2	1427	BRCS	26.73	$38,144	100%	$38,144	$0
power plant	m2	30	BRCS	26.73	$802	100%	$802	$0
bulk fuel storage	m2	2222.5	BRCS	26.73	$59,407	100%	$59,407	$0
ANFO plant	m2	$0	#N/A	0	$0	100%	$0	$0
offices/warehouse/accom	m2	$11,229	BRCS	26.73	$300,151	100%	$300,151	$0
Other	m2	2834	BRCS	26.73	$75,753	100%	$75,753	$0
OBJECTIVE: LANDFILL FOR DEMOLITION WASTE								
Place soil cover	m3	114450	SBTH	3.27	$374,252	100%	$374,252	$0
Vegetate	ha		#N/A	0	$0	100%	$0	$0
Landfill disposal fee	tonne		#N/A	0	$0	100%	$0	$0
OBJECTIVE: GRADE AND CONTOUR MILL & PLANT SITE			#N/A					
crushing plant	m2	0	#N/A	0	$0	100%	$0	$0
conveyors & transfer towers	m2	0	#N/A	0	$0	100%	$0	$0
tanks & plumbing	m2	0	#N/A	0	$0	100%	$0	$0
thickeners	m2	0	#N/A	0	$0	100%	$0	$0
water treatment plant	m2	557	SB4H	9.666	$5,384	100%	$5,384	$0
maintenance shop	m2	1427	SB4H	9.666	$13,793	100%	$13,793	$0
power plant	m2	30	SB4H	9.666	$290	100%	$290	$0
bulk fuel storage	m2	2222.5	SB4H	9.666	$21,483	100%	$21,483	$0
ANFO plant	m2	0	#N/A	0	$0	100%	$0	$0
offices/warehouse/accom	m2	$11,229	SB4H	9.666	$108,540	100%	$108,540	$0
other	m2	2834	SB4H	9.666	$27,393	100%	$27,393	$0
OBJECTIVE: RECLAIM ROADS								
Remove culverts	each	68	PPLH	194.4	$13,219	100%	$13,219	$0
Remove bridges	each		#N/A	0	$0	100%	$0	$0
Scarify and install water breaks (Laydown Area)	ha	35.48	scs	1000	$35,480	100%	$35,480	$0
remove/doze down berms	m3		#N/A	0	$0	100%	$0	$0
create wildlife passage ramps	m3		#N/A	0	$0	100%	$0	$0
Vegetate	ha		#N/A	0	$0	100%	$0	$0
other (Laydown Area)	ha	6.07	SCS	1000	$6,070	100%	$6,070	$0
SPECIALIZED ITEMS								
Sealift for construction materials	m3	0	#N/A	0	$0	100%	$0	$0
Dispose of misc. debris and laydown area refuse	each		#N/A	0	$0	100%	$0	$0
			Subtotal		$3,325,125	100%	$3,325,125	$0
						Pct Land	Total Land	Total Water

Figure 3-4: 2013 Work Plan Closure Cost Estimate for Buildings and Equipment – Mary River Mine Site

Building / Equip Name: *Milne* **Bldg / Equip #: *2***

ACTIVITY/MATERIAL	Units	Quantity	Cost Code	Unit Cost	Cost	% Land	Land Cost	Water Cost	
OBJECTIVE: DISPOSE MOBILE EQUIPMENT									
Decontaminate and ship off-site	each		#N/A	0	$0	100%	$0	$0	
Decontaminate, dispose on-site	each		#N/A	0	$0	100%	$0	$0	
Other (sealift for equipmt)	each		#N/A	0	$0	100%	$0	$0	
OBJECTIVE: REMOVE CONTAMINATED BUILDINGS									
Decontaminate crushing plant	each		#N/A	0	$0	100%	$0	$0	
Decontaminate tanks & plumbing	each		#N/A	0	$0	100%	$0	$0	
Decontaminate thickeners	each		#N/A	0	$0	100%	$0	$0	
Decontaminate water treatment plant	each		#N/A	0	$0	100%	$0	$0	
Decontaminate maintenance shop	m2	268	BRCDS	200	$53,600	100%	$53,600	$0	
Decontaminate power plant	each	134	BRCDS	200	$26,800	100%	$26,800	$0	
Decontaminate bulk fuel storage	m2	22522.5	BRCDS	200	$4,504,500	100%	$4,504,500	$0	
Decontaminate ANFO plant	each	$0	BRCDS	200	$0	100%	$0	$0	
Deontaminate offices/warehouse/accom	each		#N/A	0	$0	100%	$0	$0	
Removal of asbestos siding on buildings	each		#N/A	0	$0	100%	$0	$0	
Removal of friable asbestos on equipment	each		#N/A	0	$0	100%	$0	$0	
Other	m2		BRCDS	200	$0	100%	$0	$0	
OBJECTIVE: REMOVE NON-CONTAMINATED BUILDINGS									
crushing plant	m2		#N/A	0	$0		$0	$0	
conveyors & transfer towers	m2		#N/A	0	$0	100%	$0	$0	
tanks & plumbing	m2		#N/A	0	$0	100%	$0	$0	
thickeners	m2		#N/A	0	$0	100%	$0	$0	
water treatment plant	m2	446	BRS	100	$44,600	100%	$44,600	$0	
maintenance shop	m2		BRS	100	$0	100%	$0	$0	
power plant	m2		#N/A	0	$0	100%	$0	$0	
bulk fuel storage	each	1	MBTS	44704	$44,704	100%	$44,704	$0	
ANFO plant	m2		#N/A	0	$0	100%	$0	$0	
offices/warehouse/accom	m2	9297	BRS	100	$929,700	100%	$929,700	$0	
consolidate & dump boneyard debris	m3	334	BRS	100	$33,400	100%	$33,400	$0	
other (Airstrip Extension)	m2	2500	BRS	100	$250,000	100%	$250,000	$0	
OBJECTIVE: BREAK BASEMENT SLABS									
crushing plant	m2	0	#N/A	0	$0	100%	$0	$0	
conveyors & transfer towers	m2	0	#N/A	0	$0	100%	$0	$0	
tanks & plumbing	m2	0	#N/A	0	$0	100%	$0	$0	
thickeners	m2	0	#N/A	0	$0	100%	$0	$0	
water treatment plant	m2	446	BRCS	26.73	$11,922	100%	$11,922	$0	
maintenance shop	m2	268	BRCS	26.73	$7,164	100%	$7,164	$0	
power plant	m2	134	BRCS	26.73	$3,582	100%	$3,582	$0	
bulk fuel storage	m2	22523.5	BRCS	26.73	$602,053	100%	$602,053	$0	
ANFO plant	m2	$0	#N/A	0	$0	100%	$0	$0	
offices/warehouse/accom	m2	$9,297	BRCS	26.73	$248,509	100%	$248,509	$0	
Other	m2	2834	BRCS	26.73	$75,753	100%	$75,753	$0	
OBJECTIVE: LANDFILL FOR DEMOLITION WASTE									
Place soil cover	m3		SBTH	3.27	$0	100%	$0	$0	
Vegetate	ha		#N/A	0	$0	100%	$0	$0	
Landfill disposal fee	tonne		#N/A	0	$0	100%	$0	$0	
OBJECTIVE: GRADE AND CONTOUR MILL & PLANT SITE									
crushing plant	m2	0	#N/A	0	$0	100%	$0	$0	
conveyors & transfer towers	m2	0	#N/A	0	$0	100%	$0	$0	
tanks & plumbing	m2	0	#N/A	0	$0	100%	$0	$0	
thickeners	m2	0	#N/A	0	$0	100%	$0	$0	
water treatment plant	m2	446	SB4H	9.666	$4,311	100%	$4,311	$0	
maintenance shop	m2	268	SB4H	9.666	$2,590	100%	$2,590	$0	
power plant	m2	134	SB4H	9.666	$1,295	100%	$1,295	$0	
bulk fuel storage	m2	22523.5	SB4H	9.666	$217,712	100%	$217,712	$0	
ANFO plant	m2	0	#N/A	0	$0	100%	$0	$0	
offices/warehouse/accom	m2	$9,297	SB4H	9.666	$89,865	100%	$89,865	$0	
other	m2	2834	SB4H	9.666	$27,393	100%	$27,393	$0	
OBJECTIVE: RECLAIM ROADS									
Remove culverts	each	13	PPLH	194.4	$2,527	100%	$2,527	$0	
Remove bridges	each		#N/A	0	$0	100%	$0	$0	
Scarify and install water breaks (Laydown Area)	ha		SCS	1000	$0	100%	$0	$0	
remove/doze down berms	m3		#N/A	0	$0	100%	$0	$0	
create wildlife passage ramps	m3		#N/A	0	$0	100%	$0	$0	
Vegetate	ha		#N/A	0	$0	100%	$0	$0	
other (Laydown Area)	ha	8.09	SCS	1000	$8,090	100%	$8,090	$0	
SPECIALIZED ITEMS									
Credit for reclaiming bladder farm	$	1	TBUS	#N/A	($403,870)	100%	($403,870)	$0	Refer to Fuel Storage Facilities tab, cells 9, 12-14, 16-20 in Appendix G3
Sealift for construction materials	m3		#N/A	0	$0	100%	$0	$0	
Dispose of misc. debris and laydown area refuse	each		#N/A	0	$0	100%	$0	$0	
			Subtotal		$6,786,200	100%	$6,786,200	$0	
						Pct Land	Total Land	Total Water	

Figure 3-5: 2013 Work Plan Closure Cost Estimate for Buildings and Equipment – Milne Inlet

Building / Equip Name: *50 km Road Camp* **Bldg / Equip #: 3**

ACTIVITY/MATERIAL	Units	Quantity	Cost Code	Unit Cost	Cost	% Land	Land Cost	Water Cost
OBJECTIVE: DISPOSE MOBILE EQUIPMENT								
Decontaminate and ship off-site	each		#N/A	0	$0	100%	$0	$0
Decontaminate, dispose on-site	each		#N/A	0	$0	100%	$0	$0
Other (sealift for equipmt)	each		#N/A	0	$0	100%	$0	$0
OBJECTIVE: REMOVE CONTAMINATED BUILDINGS								
Decontaminate crushing plant	each		#N/A	0	$0	100%	$0	$0
Decontaminate tanks & plumbing	each		#N/A	0	$0	100%	$0	$0
Decontaminate thickeners	each		#N/A	0	$0	100%	$0	$0
Decontaminate water treatment plant	each		#N/A	0	$0	100%	$0	$0
Decontaminate maintenance shop	m2	2575	BRCDS	200	$515,000	100%	$515,000	$0
Decontaminate power plant	m2	9	BRCDS	200	$1,800	100%	$1,800	$0
Decontaminate bulk fuel storage	m2		#N/A	0	$0	100%	$0	$0
Decontaminate ANFO plant	each		#N/A	0	$0	100%	$0	$0
Deontaminate offices/warehouse/accom	each		#N/A	0	$0	100%	$0	$0
Removal of asbestos siding on buildings	each		#N/A	0	$0	100%	$0	$0
Removal of friable asbestos on equipment	each		#N/A	0	$0	100%	$0	$0
Other (Waste Management Building)	m2		#N/A	0	$0	100%	$0	$0
OBJECTIVE: REMOVE NON-CONTAMINATED BUILDINGS								
crushing plant	m2		#N/A	0	$0		$0	$0
conveyors & transfer towers	m2		#N/A	0	$0	100%	$0	$0
tanks & plumbing	m2		#N/A	0	$0	100%	$0	$0
thickeners	m2		#N/A	0	$0	100%	$0	$0
water treatment plant	m2		#N/A	0	$0	100%	$0	$0
maintenance shop	m2		BRS	100	$0	100%	$0	$0
power plant	m2		#N/A	0	$0	100%	$0	$0
bulk fuel storage	each		MRBTS	38376	$0	100%	$0	$0
ANFO plant	m2		#N/A	0	$0	100%	$0	$0
offices/warehouse/accom	m2	1522	BRS	100	$152,200	100%	$152,200	$0
consolidate & dump boneyard debris	m3		#N/A	0	$0	100%	$0	$0
other (Airstrip Extension)	m2		BRS	100	$0	100%	$0	$0
OBJECTIVE: BREAK BASEMENT SLABS								
crushing plant	m2	0	#N/A	0	$0	100%	$0	$0
conveyors & transfer towers	m2	0	#N/A	0	$0	100%	$0	$0
tanks & plumbing	m2	0	#N/A	0	$0	100%	$0	$0
thickeners	m2	0	#N/A	0	$0	100%	$0	$0
water treatment plant	m2	0	BRCS	26.73	$0	100%	$0	$0
maintenance shop	m2	2575	BRCS	26.73	$68,830	100%	$68,830	$0
power plant	m2	9	BRCS	26.73	$241	100%	$241	$0
bulk fuel storage	m2	0	BRCS	26.73	$0	100%	$0	$0
ANFO plant	m2	0	#N/A	0	$0	100%	$0	$0
offices/warehouse/accom	m2	1522	BRCS	26.73	$40,683	100%	$40,683	$0
Other	m2	0	BRCS	26.73	$0	100%	$0	$0
OBJECTIVE: LANDFILL FOR DEMOLITION WASTE								
Place soil cover	m3		SBTH	3.27	$0	100%	$0	$0
Vegetate	ha		#N/A	0	$0	100%	$0	$0
Landfill disposal fee	tonne		#N/A	0	$0	100%	$0	$0
OBJECTIVE: GRADE AND CONTOUR MILL & PLANT SITE								
crushing plant	m2		#N/A	0	$0	100%	$0	$0
conveyors & transfer towers	m2		#N/A	0	$0	100%	$0	$0
tanks & plumbing	m2		#N/A	0	$0	100%	$0	$0
thickeners	m2		#N/A	0	$0	100%	$0	$0
water treatment plant	m2		SB4H	9.666	$0	100%	$0	$0
maintenance shop	m2		SB4H	9.666	$0	100%	$0	$0
power plant	m2		SB4H	9.666	$0	100%	$0	$0
bulk fuel storage	m2		SB4H	9.666	$0	100%	$0	$0
ANFO plant	m2		#N/A	0	$0	100%	$0	$0
offices/warehouse/accom	m2		SB4H	9.666	$0	100%	$0	$0
other	m2		SB4H	9.666	$0	100%	$0	$0
OBJECTIVE: RECLAIM ROADS								
Remove culverts	each		#N/A	0	$0	100%	$0	$0
Remove bridges	each		#N/A	0	$0	100%	$0	$0
Scarify and install water breaks (Laydown Area)	ha		SCS	1000	$0	100%	$0	$0
remove/doze down berms	m3		#N/A	0	$0	100%	$0	$0
create wildlife passage ramps	m3		#N/A	0	$0	100%	$0	$0
Vegetate	ha		#N/A	0	$0	100%	$0	$0
other			#N/A	0	$0	100%	$0	$0
SPECIALIZED ITEMS								
			#N/A			100%		
Dispose of misc. debris and laydown area refuse	each		#N/A	0	$0	100%	$0	$0
				Subtotal	$778,753	100%	$778,753	$0
						Pct Land	Total Land	Total Water

Figure 3-6: 2013 Work Plan Closure Cost Estimate for Buildings and Equipment – Tote Road Camp

3.6.1 Buildings and Equipment Assumptions

3.6.1.1 Objective: Remove Buildings

Three objectives correspond to each building: ”removal of contaminated buildings”, “removal of non contaminated buildings” and “break basement slab”.

As a general assumption, the buildings have been sorted into the following categories in the RECLAIM spreadsheet:

- Buildings that may require decontamination (Assume all power supply, maintenance/welding shop and waste management buildings): 200$/m2; and
- Buildings that may not require decontamination (warehousing, accommodations, miscellaneous, etc): 100 $/m2.

As well as:

- Buildings with concrete foundations (crushing plants): 53.46 $/m2; and
- Buildings with pile foundations: 26.73 $/m2.

For 2013 Work Plan, assumed no building will have a concrete foundation, only pile foundations.

Assume that strictly the footprints of the aboveground fuel tanks would be reclaimed and not the entire fuel storage site. Therefore it is estimated that 75% of the fuel storage site area will need to be reclaimed.

It is assumed that 1.5m cover will be place over Mary River landfill (area of landfill 76,300 m2) and over disposal area used for onsite disposal of buildings.

Scrap material will be produced by the demolition of buildings. Assume area of all buildings on-site need to covered with 1.5 m of cover at closure (disposal site to be determined).

Assume yield of 50 m^3 per 1000 m^2 of buildings footprint.

Assume accommodation complex's size at Mary River and Milne Inlet equals 'Total Camp/Admin Complex' in 2010 Feasibility Study:

- Mary River 9,857 m2
- Milne Inlet : 7,714 m2

A technical as well as a drilling and sampling investigation for contaminated soils will be carried out. The cost ($34,957) is based on the site overview cost from the 2011 Exploration Phase A&R Plan.

Assume that the unit cost for non contaminated building includes removal of material to landfill (if uncontaminated).

Assume that the unit cost for removal of contaminated building includes the cost to decontaminate the buildings. Persistent contamination is not expected due to primarily hydrocarbon based contamination.

Assume 1 revenue ton per 1 cubic meter of building material

The list of buildings was extracted from document H349000-1000-00-144-0001: Mary River Project Master Building Matrix.

An update of this section will be necessary as this document is revised.

3.6.1.2 *Objective: Reclaim Milne Bladder Farm*

A progressive reclamation credit is being applied to the total estimate due to the assumption that the Milne Inlet bladder farm will be reclaimed by the time of closure. Cost was derived from 2013 A&R Plan (Fuel Storage Facilities tab, cells 9, 12-14, 16-20 in Appendix G3).

3.6.1.3 Objective: Dispose Mobile Equipment

It has been assumed that all the mobile equipment will be disposed of offsite. The total cost of sealift is included in the mobilization estimate.

The return on salvaged scrap material from the demolition of buildings and equipment was not taken into account in this estimate.

Assume at the end of reclamation, all heavy equipment at Mary River mine will be transported to Milne Inlet for shipment. It is thus estimated that each piece of equipment will travel once the length of Tote Road (100 km).

Assume all temporary and foldaway structures will be disposed of on-site.

PLEASE NOTE: Options for any remaining infrastructure at final closure to be donated to local communities will be examined and encouraged, however the cost of demolition and disposal of all buildings was the cost captured in this estimate.

3.6.1.4 Objective: Reclaim Roads

Assume length of roads equal to 2010 Feasibility Study Report:

- Mine Site Main Haul Road: ~13km length , 24m width
- Mine Site total Service Roads: ~4km, width: 10.7m
- Milne Inlet Total Service Roads: ~3.1km, width: 10.7m

Assume all laydown areas and parking areas have the same unit cost as road reclamation.

Assume 4 culverts on each project site for every 1km of road (based on Hatch Project Experience)

Assume required parking and laydown area at:

- Mary River = 60702.8 m2
- Milne Inlet = 80937.1 m2.

Area of parking and laydown areas based on conservative estimate of 20 acres needed at Milne and 15 acres needed at Mine Site (estimated value based volume of required equipment and materials)

Assume both airstrips will be extended by 250m x 100 m for safety reasons (as per 2013 Work Plan).

3.7 Chemicals

Chemicals and Soil Contamination:

ACTIVITY/MATERIAL	Units	Quantity	Cost Code	Unit Cost	Cost	% Land	Land Cost	Water Cost
Note: The procedures, equipment and packaging for clean up and removal of chemicals or contaminated soils are highly dependent on the nature of the chemicals and their existing state of containment. Government guidelines should be consulted on an individual chemical basis. Any estimate made here should be considered very rough unless specific evaluations have been conducted.								
HAZARDOUS MATERIALS AUDIT								
Phase 1 audit	each	21.3333333	P1AS	1200	$25,600	100%	$25,600	$0
Phase 2 audit	each	1	#N/A	100000	$100,000	100%	$100,000	$0
HAZARDOUS MATERIALS TO BE CONSOLIDATED FOR REMOVAL								
Waste oils	litre	23162.5	PCRH	2.214	$51,282	100%	$51,282	$0
Fuel - Type 1, eg diesel dregs	litre	412,500	FRh	1.1016	$454,410	100%	$454,410	$0
Fuel - Type 1, eg gasoline dregs	litre		#N/A	0	$0	100%	$0	$0
waste batteries	kg	1820	PCRH	2.214	$4,029	100%	$4,029	$0
assay & environmental lab reagents	kg	10450	PCRH	2.214	$23,136	100%	$23,136	$0
machine shop, paints, solvents etc	kg	4800	PCRH	2.214	$10,627	100%	$10,627	$0
contaminated soils - hydrocarbon	m3		#N/A	0	$0	100%	$0	$0
metal contam. soil at conc. load-out	m3		#N/A	0	$0	100%	$0	$0
HAZARDOUS MATERIALS								
Transportation to disposal facility	T		#N/A	0	$0		$0	$0
Disposal fees	allow		#N/A		$0		$0	$0
other			#N/A	0	$0		$0	$0
CONTAMINATED SOILS								
Contam. soil investigation - technical	each	1	#N/A	34957	$34,957	100%	$34,957	$0
Contam. soil investigation - drilling & sampling	each	1	#N/A	34957	$34,957	100%	$34,957	$0
CONTAMINATED SOIL REMOVAL	m3				$0		$0	$0
contaminated soils - hydrocarbon	m3	33600	remss	100	$3,360,000	100%	$3,360,000	$0
metal contam. soil at conc. load-out	m3		#N/A	0	$0		$0	$0
Load, haul, dump or doze	m3		#N/A	0	$0		$0	$0
Reagents/stabilizing agent	m2		#N/A	0	$0		$0	$0
Contour reclaimed area	m3		#N/A	0	$0		$0	$0
other	m2		#N/A	0	$0		$0	$0
CONTAMIANTED SOIL VERY LOW PERMEABILITY COVER								
supply geomembrame, HDPE, ES3, GCL	m2		#N/A	0	$0		$0	$0
upper and lower bedding layers	m3		#N/A	0	$0		$0	$0
install geomembrane, HDPE, ES3, GCL	m2		#N/A	0	$0		$0	$0
erosion protection layer	m3		#N/A	0	$0		$0	$0
vegetate	m2		#N/A	0	$0		$0	$0
install infiltration/seepage instrumentation	allow		#N/A	0	$0		$0	$0
other			#N/A	0	$0		$0	$0
OTHER			#N/A					
Reclaim Explosives	kg	920,000	ERH	2.376	$2,185,920	100%	$2,185,920	$0
Salvage (Explosives)	kg	0	#N/A	170160	$0	100%	$0	$0
			Subtotal		$6,284,918	100%	$6,284,918	$0
						Pct Land	Total Land	Total Water

Figure 3-7: 2013 Work Plan Closure Cost Estimate for Chemicals

3.7.1 Chemical Assumptions

3.7.1.1 Objective: Hazardous materials audit

A Phase I Environmental Site Assessment (ESA) will first be carried out. A daily cost of $1,200 has been assumed. The assessment is estimated to require 12 days at Mary River as well as 20 days for Milne Port and Tote Road (combined).The need for a Phase II ESA will be assessed during Phase I. A global cost estimate of $100,000 has been added should a Phase II be required.

3.7.1.2 Objective: Hazardous Materials to be Consolidated for Removal

The cost of reclamation of hazardous materials is captured in the annual operating budget as hazardous materials are shipped offsite annually. The cost of personnel needed for this activity is included in the mobilization costs.

In addition, an estimated 5% of the total fuel storage will be left in the containers at closure.

Assume at time of closure storage capacity is:

- Storage capacity at Mary River = 2.0 ML Diesel + 50,000 L Jet A fuel
- Storage capacity at Milne Port = 25 ML diesel + 1.5 ML jet A fuel + 1.2 ML diesel in ISO containers
- Assume Total Fuel Capacity = 29,750,000 L (includes diesel and jet A fuel)

Based on current estimates, 69,605 man-days on site will be needed in 2013 to complete 2013 Work Plan activities: 40,449 man-days @ Mine Site and Tote Road and 29,156 @ Milne Inlet. 11,350,000 L of fuel is estimated to be needed in this same period, or 163.1 L/man-day. It is assumed the same fuel consumption rate per man-day will be needed in closure as in 2013 Work Plan.

It is assumed 10% of man-days required for 2013 activities will be required on site during reclamation or 6,961 man-days. Based on the assumption 163.1 L/man-day it is assumed 1,075,000 L of fuel will be required during closure.

It is assumed that 5% of the total fuel capacity will be available at time of closure: 1,487,500 L. Therefore, the remaining difference need to be back-hauled: 412,500 L.

Assume waste and hazardous waste generation rates/person/day are the same as proposed in FEIS. Waste generation is assumed at full camp capacity for full year to maintain conservatism.

3.7.1.3 Objective: Contaminated Soil Removal

A technical as well as a drilling and sampling investigation for contaminated soils will be carried out. The cost is based on the site overview cost from the 2011 Exploration Phase A&R Plan.

3.7.1.4 *Objective: Contaminated Soil Removal*

The removal takes into account the soils and the water/ice/snow contaminated with hydrocarbons, with an assumed total volume of 33,600 m3 (based on Landfarm Design and Management Plan, Meadowbank Mine (Golder, 2007))

- Soils contaminated with HC (all phases) - 8,400 m3
- Water/ice/snow contaminated with HC (all phases) - 25,200 m3

3.7.1.5 *Objective: Other*

Similarly to the fuel, an estimated 20% of the explosives will need to be reclaimed at closure. Assume 200,000 kg of pre-packaged explosives will be needed and 4,400,000 kg of Ammonium Nitrate will be needed (estimated based on Hatch Logistical Allowances).

3.8 Water Management

Water Management :

ACTIVITY/MATERIAL	Units	Quantity	Cost Code	Unit Cost	Cost	% Land	Land Cost	Water Cost
OBJECTIVE: WATER SUPPLY EMBANKMENT								
Toe buttress, drain mat'l	m3		#N/A	0	$0		$0	$0
, fill mat'l A	m3		#N/A	0	$0		$0	$0
, fill mat'l B	m3		#N/A	0	$0		$0	$0
Rip rap	m3		#N/A	0	$0		$0	$0
Vegetate	ha		#N/A	0	$0		$0	$0
Breach dam	m3		#N/A	0	$0		$0	$0
Other (Pond)	m3	70	RPS	300.5	$21,035		$0	$21,035
OBJECTIVE: UPGRADE SPILLWAY			#N/A					
Excavate channel, mat'l A	m3		#N/A	0	$0		$0	$0
, mat'l B	m3		#N/A	0	$0		$0	$0
Concrete	m3		#N/A	0	$0		$0	$0
Rip rap	m3		#N/A	0	$0		$0	$0
Other			#N/A	0	$0		$0	$0
OBJECTIVE: STABILIZE &/OR UPGRADE DIVERSION DITCHES								
Excavate channel	m3		#N/A	0	$0		$0	$0
doze & spread excavated material	m3		#N/A	0	$0		$0	$0
Vegetate, spread material	ha		#N/A	0	$0		$0	$0
Rip rap in channel base	each		#N/A		$0		$0	$0
OBJECTIVE: BREACH DITCHES								
Excavate breaches	m3		#N/A	0	$0		$0	$0
install rip rap	m3		#N/A	0	$0		$0	$0
install flow dissipation	m3		#N/A	0	$0		$0	$0
vegetate remainder of ditch	m2		#N/A	0	$0		$0	$0
OBJECTIVE: REMOVE PIPELINES								
Remove pipes	m	8200	PPSH	5.4	$44,280		$0	$44,280
Concrete plug deep pipes	m3		#N/A	0	$0		$0	$0
Other			#N/A	0	$0		$0	$0
Groundwater Collection - Long-term Collection System								
excavate/install sumps	m2		#N/A	0	$0		$0	$0
install pumping wells	m3		#N/A	0	$0		$0	$0
install pumps/pipelines/power supply			#N/A	0	$0		$0	$0
OBJECTIVE: COLLECT DRAINAGE FOR TREATMENT								
Excavate channel	m3		#N/A	0	$0		$0	$0
doze & spread excavated material	m3		#N/A	0	$0		$0	$0
Vegetate, spread material	ha		#N/A	0	$0		$0	$0
Rip rap in channel base	each		#N/A	0	$0		$0	$0
Construct contaminated water storage pond			#N/A					
Excavation	m3		#N/A	0	$0		$0	$0
supply geomembrame, HDPE, ES3, GCL	m2		#N/A	0	$0		$0	$0
upper and lower bedding layers	m3		#N/A	0	$0		$0	$0
install geomembrane, HDPE, ES3, GCL	m2		#N/A	0	$0		$0	$0
erosion protection layer	m3		#N/A	0	$0		$0	$0
OBJECTIVE: TREAT DRAINAGE (see "ONGOING TREATMENT" for operating costs)								
Build treatment plant	LS		#N/A	0	$0		$0	$0
build sludge containment facility	LS		#N/A	0	$0		$0	$0
			Subtotal		$65,315	0%	$0	$65,315
						Pct Land	Total Land	Total Water

Figure 3-8: 2013 Work Plan Closure Cost Estimate for Water Management

3.8.1 Water Management Assumptions

3.8.1.1 Objective: Remove Pipelines

All pipes will be removed. The total length of pipes is 8,200m according to Hatch YX001 Site Service Basis for Estimate.

Sewage and sludge will be incinerated whenever possible. If incineration is not available it will be sent to the waste storage pond for decantation. Solids will be left to dry and sent to the landfills.

3.8.1.2 Objective: Infill Partially Constructed Settling Pond

Assume 50% of the volume of the settling ponds presented in the Stormwater Management and Drainage System Design, H337697-0000-10-122-0001, Rev. B (Annex 1, Waste Rock Management Plan) will be constructed in 2014:

Size estimates are as follows:

- Pond 1: Approx. 0.7 million of cubic meters (Page 9)
- Pond 2: Approx. 0.5 million cubic meters (Page 10)
- Pond 3: Approx. 0.15 million cubic meters (Page 10)
- TOTAL: 1.35 million cubic meters

Therefore: 675,000 m3 will be constructed.

Assume the cost per hour of a CAT D8T Dozer is $176 and the cost per hour of a equipment operator is $124.50 (same as 2013 A&R Plan).

Assume it would take 70 hours to infill the partially constructed pond.

Therefore it the cost of equipment and labour to reclaim the pond would be $21,035

3.9 Mobilization

Mobilization:

	ACTIVITY/MATERIAL	Units	Quantity	Cost Code	Unit Cost	Cost	% Land	Land Cost	Water Cost
A	MOBILIZE HEAVY EQUIPMENT								
	Equipment to regional centre								
.	Excavators	km	500	MHERH	9.0936	$4,547	100%	$4,547	$0
.	Dump trucks	km	200	MHERH	9.0936	$1,819	100%	$1,819	$0
	Dozers	km	500	MHERH	9.0936	$4,547	100%	$4,547	$0
	Demolition shears	km		#N/A	0	$0		$0	$0
	Crane	km	300	MHERH	9.0936	$2,728	100%	$2,728	$0
	Light duty vehicles	km	5100	MHERH	9.0936	$46,377	100%	$46,377	$0
.	Other (loaders)	km	1800	MHERH	9.0936	$16,368	100%	$16,368	$0
.	Other	km	10700	MHERH	9.0936	$97,302	100%	$97,302	$0
	Equipment, regional centre to site			#N/A					
.	Excavators	km		#N/A	0	$0		$0	$0
.	Dump trucks	km		#N/A	0	$0		$0	$0
	Dozers	km		#N/A	0	$0		$0	$0
	Demolition shears	km		#N/A	0	$0		$0	$0
	Crane	km		#N/A	0	$0		$0	$0
	Light duty vehicles	km		#N/A	0	$0		$0	$0
.	Other	km		#N/A	0	$0		$0	$0
.	Other	km		#N/A	0	$0		$0	$0
B	MOBILIZE CAMP								
.		allow		#N/A		$0		$0	$0
C	MOBILIZE WORKERS								
	crew travel time	manday		#N/A	0	$0		$0	$0
.	crew transportation	each	6	flightS	88875.52	$533,253	100%	$533,253	$0
D	MOBILIZE MISC. SUPPLIES			#N/A					
.	Fuel	litre	0	fss	0.95	$0	100%	$0	$0
.	Sealift per season	allow	1	SLcS	3000000	$3,000,000	100%	$3,000,000	$0
.	Sealift manpower per season	allow	0	#N/A	0	$0	100%	$0	$0
	Manpower for the season w/o sealift	h	6960.5	MPSSS	808.9	$5,630,348	100%	$5,630,348	$0
E	WORKER ACCOMODATIONS			#N/A					
.		$	6961	cos	60	$417,660	100%	$417,660	$0
F	WINTER ROAD							$0	$0
.	Full winter use	km		#N/A	0	$0		$0	$0
.	Limited winter use	km		#N/A	0	$0		$0	$0
.	other			#N/A	0	$0		$0	$0
G	INTERIM CARE & MAINTENANCE								
	on-site caretaker	annual		#N/A	0	$0			
	fuel and misc. supplies	annual		#N/A	0	$0			
	electrician	days		#N/A	0	$0			
	mechnaic	days		#N/A	0	$0			
	pick-up truck	yr		#N/A	0	$0			
	small dozer	allow		#N/A	0	$0			
	small excavator	allow		#N/A	0	$0			
	snow machine	allow		#N/A	0	$0			
	communications	allow		#N/A	0	$0			
	Water licence sampling & reporting	each		#N/A	0	$0			
	Geotechnical assessment	each		#N/A	0	$0			
	Other	each	1	#N/A	20000	$20,000			
				#N/A	C&M cost	$20,000			
	Total C&M cost	years	3	#N/A	20000	$60,000	100%	$60,000	$0
					Subtotal	$9,814,949	100%	$9,814,949	$0
							Pct Land	Total Land	Total Water

Figure 3-9: 2013 Work Plan Closure Cost Estimate for Mobilization

3.9.1 Mobilization Assumptions

3.9.1.1 Objective: Mobilize Heavy Equipment

At the end of reclamation, all heavy equipment at Mary River mine will be transported to Milne Inlet for shipment or final disposal. It is thus estimated that each piece of equipment will travel once the length of Tote Road.

Assume at the end of reclamation all mobile equipment will be disposed of off-site. The cost of this is captured in the sealift costs.

Based on current contractual agreements, equipment will be picked up from distribution hub by owners (equipment is rented for 2013 Work Plan activities) and therefore land freight was not included.

3.9.1.2 Objective: Mobilize Camps

Existing camps will be used and dismantled at the end of reclamation. The price associated with camp operations is taken into account in the objective: Worker Accommodation.

3.9.1.3 Sealift per Season

Estimate based on current estimates of volumes. It was assumed six (6) barges/ships to return the mobile equipment, explosives and construction support equipment to Valleyfield. The Baffinland Iron Mines estimate is $500,000/ship for back haul. This assumes each ship/barge can hold 12,000 rev tones.

3.9.1.4 Objective: Mobilize Workers

Based on current estimates, 69,605 man-days on site will be needed in 2013 to complete 2013 Work Plan activities: 40,449 man-days @ Mine Site and Tote Road and 29,156 @ Milne Inlet. It is assumed 10% of man-days required for 2013 activities will be required on site for reclamation activities or 6,961 man-days.

Assume blended labour charge is $80.89/hour (based on Source: Revised January, 2013 Nuna Labour – Hourly Charge-Out Rates Effective January 1. 2013 Baffinland Iron Mines Corporation, Mary River Project). Assume 10 hours/working day

Therefore, assume: $808.90/man-day for labour charges.

Assume the price of flight is based on the 2011 rate of a round trip from Ottawa to Iqaluit, going to Mary River, then Iqaluit and back to Ottawa. En-route fees, terminal fees and handling fees are included in estimate.

Assume each flight can carry 112 passengers (therefore 2 flights will be required/year) of closure activities

Assume camp operation cost is 60$/person/day (John Brooks Logistics)

3.9.1.5 Objective: Worker Accommodation

The price associated with the camp operation is based on the estimate of $60/person/day (John Brooks Logistics).

3.9.1.6 *Objective: Interim Care and Maintenance*

The 2011 A&R plan provided an additional estimated cost of $20,000 for the general site cleanup. Labour costs associated with maintenance are taken into account in the objective: Mobilize Workers.

3.10 Post Closure

Post-Closure Monitoring & Maintenance:

	ACTIVITY/MATERIAL	Units	Quantity	Cost Code	Unit Cost	Cost	% Land	Land Cost	Water Cost
A	OBJECTIVE: MONITORING & INSPECTIONS								
	Annual geotechnical insp.	each		#N/A	$0	$0		$0	$0
.	Survey inspection	each		#N/A	$0	$0		$0	$0
.	Surface water sampling	each		#N/A	$0	$0		$0	$0
	Groundwater Sampling	each		#N/A	$0	$0		$0	$0
	Receiving/downstream water sampling	each		#N/A	$0	$0		$0	$0
	Reporting	each		#N/A	$0	$0		$0	$0
.	on-site transportation	each		#N/A	$0	$0		$0	$0
	transporation to site	each		#N/A	$4,918	$0		$0	$0
.	Other (sea lift at the end of post closure)			#N/A	$0	$0		$0	$0
B	OBJECTIVE: COVER MAINTENANCE								
.	Repair erosion - infill gullies	allow		#N/A	$0	$0		$0	$0
.	Repair erosion - upgrade diversion ditches	allow		#N/A	$0	$0		$0	$0
.	Remove problem vegetation	allow		#N/A	$0	$0		$0	$0
.	Repair animal damage	allow		#N/A	$0	$0		$0	$0
.	Repair/upgrade access controls	allow		#N/A	$0	$0		$0	$0
	Other		1	#N/A	$100,000	$100,000	100%	$100,000	$0
C	SPILLWAY MAINTENANCE								
	Repair erosion	m3		#N/A	$0	$0		$0	$0
	Clear spillway	each	1	CSWH	$5,702	$5,702	100%	$5,702	$0
	Other			#N/A	$0	$0		$0	$0
D	POST-CLOSURE WATER TREATMENT								
	Annual water treatment cost, from Ongoing water			#N/A	$106,276	$106,276		$0	$106,276
	Subtotal, Annual post-closure costs					$211,978		$105,702	$106,276
	Discount rate for calculation of net present value of post-closure			3.00%					
	Number of years of post-closure activity			5 years					
	Present Value of payment stream					$970,797	$0	$484,086	$486,711
							Pct Land	Total Land	Total Water

Figure 3-10: 2013 Work Plan Closure Cost Estimate for Post Closure Monitoring

3.10.1 Post Closure Assumptions

3.10.1.1 *Objective: Monitoring and Inspections*

Costs of monitoring and inspections were extracted from the 2013 Exploration Phase A&R Plan. It is estimated that three survey inspections will take place: one general site inspection,

one stability survey for the open pit and one stability survey for the stockpile at Milne Inlet. Reporting costs are added as well as transportation to and from site.

3.10.1.2 *Objective: Cover Maintenance*

According to the Predevelopment Work (PDW) closure plan, maintenance costs are estimated at $100,000 per year.

3.10.1.3 *Objective: Spillway Maintenance*

An annual cost of $5,702 has been applied for clearing the spillway during post closure, although the spillway is only expected to be used after a minimum of 85 years. This has been included to allow for conservatism although a spillway was not expected to be constructed in the 2013 Work Plan.

3.10.1.4 *Objective: Post-closure Water Treatment*

Post-closure water quality monitoring accounts for $106,276 as per the on-going water spreadsheet.

3.11 On-Going Water

WATER TREATMENT COSTS

ANNUAL VOLUME OF WATER (m3)

Reagent addition rates

Reagent	kg reagent/m3 water		cost in $/kg, FOB site	Annual reagent cost
H2O2		kg/m3		$0
lime		kg/m3		$0
ferric sulphate		kg/m3		$0
ferrous sulphate		kg/m3		$0
flocculents		kg/m3		$0
			TOTAL	$0

Supplies and Labour

power, kW-hr	0	rate, $/kW-hr	$0
misc. supplies, hoses, tools			$0
sampling equip.			$4,200
equip. maintenance and parts			$5,000
water analysis			$6,400
reporting			$0
truck rental			$0
annual mileage			$0
road maintenace & snow plowing			$0
electrician/mechanic for treatment plant & power supply			$0
		Annual cost	$15,600
labor, hourly rate	$75.00		
men per day for water treatment work			3
on site, days per year			1
spring/fall maintenance, extra work			0
hours worked per year			24
annual labor cost			$1,800
		Total, labour and supplies	$17,400
TOTAL ANNUAL COSTS, reagents + labour + supplies + site access			$106,276
Average treatment cost, $/m3			$0.00

Water analyses	
samples per month	0
analysis cost/sample	0
shipping	0
Total Water Sampling	0

Site Access	
road	$0
air	$88,876
winter road	$0
annual site access cost	$88,876

Figure 3-11: 2013 Work Plan Closure Cost Estimate for On-Going Water

3.11.1 On-Going Water Assumptions

Water quality monitoring costs during post closure will only be related to the survey visits. Prices were extracted from the 2011 Exploration Phase A&R Plan:

- Sampling equipment: $4,200;
- Equipment maintenance and parts: $5,000;
- Water analysis: $6,400;
- Annual labour cost: $1,800 (3 men per day, 1 day per year at hourly rate $75,00); and
- Annual site access cost: $88,875.52 (2011 Charter quote for a round trip Ottawa – Iqaluit – Mary River).

Necessary equipment will be left on site: at least one Weatherhaven building and an ATV at Mary River.

3.12 Indirect Costs

This section aims at clarifying how indirect costs are taken into account. Indirect costs include all the costs that are not directly linked to the decommissioning, demolition, dismantling, clean-up, etc. They consist of labour wages, management costs, workers accommodation and food.

3.12.1 Labour Wages

Unit costs in RECLAIM take into account the price associated with labour. However, due to the location of the Project, labour conditions are different from regular Projects and therefore indirect cost associated with labour are also included.

3.12.2 Management Costs

Similarly to labour wages, management costs are already included in RECLAIM. The “summary” spreadsheet allocates the management cost as well as the engineer costs as a percentage of the total reclamation costs, mobilization excluded. Both management and engineering costs are assumed to be 5%. This percentage may be adapted if necessary.

3.12.3 Workers Accommodation and Board

Workers accommodation and board is included in the “mobilization” spreadsheet under the Objective: Workers accommodation.

AG:lm

Attachment(s)/Enclosure
Attachment A: Appendix G-3 Cost Estimation Details For Closure 2013 Abandonment and Reclamation Plan For Advanced Exploration Activities

Attachment A

Appendix G-3 Cost Estimation Details for Closure of the 2013 Abandonment and Reclamation Plan for Advanced Exploration Activities.

2013 A&R Plan Cost Estimation Details for Closure

				Project Site Abandonment	Labour				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 2013 Contingency	Basis for 2013 Estimate
#	Type	Refer to Tab	Objective	***Grand Total***				$ 37,206				$11,900	$49,106	$49,106	$ -	$ -	$ -	$ -	8%	$4,146		
1	A	Bldgs & Equip	Specialized Items	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
2	A	Bldgs & Equip	Specialized Items	Drain, isolate and secure camp water systems	Person Day	1		$ -	Hours			$ -	$ -						0%	$ -		
3	A	Bldgs & Equip	Specialized Items	Drain, isolate and secure Camp sewage treatment plant, lines and lagoons	Person Day	1		$ -	Hours			$ -	$ -						0%	$ -		
4	A	Bldgs & Equip	Specialized Items	Drain, isolate and secure all local fuel storage supply systems	Person Day	1		$ -	Hours			$ -	$ -						0%	$ -		
5	A	Bldgs & Equip	Specialized Items	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%	$ -		
6	A	Bldgs & Equip	Specialized Items	Secure all barrelled fuel in secondary containment	Person Day	1		$ -	Hours			$ -	$ -						0%	$ -		
7	A	Bldgs & Equip	Specialized Items	Secure all hazardous waste in secondary containment	Person Day	1		$ -	Hours			$ -	$ -						0%	$ -		
8	A	Bldgs & Equip	Specialized Items	Isolate and safely secure all mechanical and electrical elements.	Person Day	1		$ -	Hours			$ -	$ -						0%	$ -		

				Bulk Sample Pit	Labour				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 2013 Contingency	Basis for 2013 Estimate
#	Type	Refer to Tab	Objective	***Grand Total***																		
1	B	Open Pit	Other Items	Decommission bulk sample pit	Person Day	0	$ -	$ -	Hours	0	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	0%	$ -		
2	B	Open Pit	Other Items	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
3	B	Open Pit	Other Items	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
4	B	Open Pit	Other Items	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
5	B	Open Pit	Other Items	Decommission explosives magazine	Person Day	0	$ -	$ -	Hours	0	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	0%	$ -		All explosives decommissioned in 2010. No further decommissioning of magazines required.

				Mineral Exploration Areas (Dep. 1-3)		Labour				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 2013 Contingency	Basis for 2013 Estimate
#	*Type*	Refer to Tab	Objective	***Grand Total***					***$19,028***				***$64,695***	***$83,723***	***$ -***	***$ -***	***$83,723***	***$ -***	***$ -***	***10%***	***$8,582***		
1	B			Decommission mineral exploration areas	3				$19,028				$64,695	$83,723	$ -	$ -	$83,723	$ -	$ -		$8,582		
2	B	Water	Remove Pipelines	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.
3	B	Open Pit	Other Items	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 kilometres from the main camp. There are 18 holes requiring reclamation at Deposit #1. Assume a very conservative 1 hour per hole, 2 man labour crew with helicopter support. For General labour and helicopter rates see Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
4	B	Open Pit	Cover/ Contour Slopes	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
5	B	Bldgs & Equip	Specialized Items	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
6	B	Open Pit	Other Items	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
7	B	Bldgs & Equip	Specialized Items	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		Labour				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 2013 Contingency	Basis for 2013 Estimate
#	*Type*	Refer to Tab	Objective	***Grand Total***					**$ 15,024**				**$ 87,768**	**$102,792**	**$ -**	**$ -**	**$102,792**	**$ -**	**$ -**	**9%**	**$9,402**		
1	B	Bldgs & Equip	Specialized Items	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 actual 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.
2	B	Bldgs & Equip	Specialized Items	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
3	B	Bldgs & Equip	Specialized Items	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
4	B	Bldgs & Equip	Specialized Items	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
5	B	Bldgs & Equip	Specialized Items	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	Labour				Equipment				Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency (%	Contingency	Basis for 2013 Contingency	Basis for 2013 Estimate
						Units	# Units	Unit Rate	Cost	Units	# Units	Unit Rate	Cost										
#	*Type*	Refer to Tab	Objective	***Grand Total***					***$113,295***				***$156,112***	***$269,407***	***$ -***	***$ -***	***$269,407***	***$ -***	***$ -***	***10%***	***$26,941***		
1	**A**			**Mary River Stockpiles**	**3**				**$38,097**				**$48,784**	**$86,881**	**$ -**	**$ -**	**$86,881**	**$ -**	**$ -**		**$8,688**		
2	A	Rock Pile	STABILIZE SLOPES	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
3	**A**	**Rock Pile**	**COVER DUMP**	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.
4	A			**Milne Inlet Stockpiles**	**3**				**$75,198**				**$107,328**	**$182,526**	**$ -**	**$ -**	**$182,526**	**$ -**	**$ -**		**$18,253**		
5	**A**	Rock Pile	STABILIZE SLOPES	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 arctic. 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
6	A	**Rock Pile**	**COVER DUMP**	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 Milne Inlet 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	Labour				Equipment											Contingency (%)	Contingency	Basis for 2013 Contingency	Basis for 2013 Estimate
						Units	Person Days	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				
#	*Type*	Refer to Tab	Objective	***Grand Total***					***$916,281***				***$805,762***	***$1,722,043***	***$0***	***$598,907***	***$1,119,732***	***$3,404***	***$0***	***14%***	***$248,247***		
1	A	Bldgs & Equip	Specialized Items	**Site Contractor Decommissioning and Demob - Mary River Camp**	**2**		**213.5**		**$201,192**				**$93,408**	**$294,600**	**$ -**	**$ 294,600**	**$ -**	**$ -**	**$ -**		**$44,190**		
2	A	Bldgs & Equip	Specialized Items	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 .
3	A	Bldgs & Equip	Specialized Items	Ship material by land to Milne Inlet for shipment	2	Person Day	42	$996	$41,832	Hours	624	$132	$82,368	$124,200	$ -	$ 124,200	$ -	$ -	$ -	15%	$18,630		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) 6280/38 cubes/truck/ 2 truck trips/shift= 83 person shifts + 25% for loader support = 104 person shifts. 104 person shifts & 1248 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 .
4	A	Bldgs & Equip	REMOVE NON-CONTAMINATED BUILDINGS	**Decommissioning Mary River camp**	**3**		**241**		**$269,012**				**$294,264**	**$563,276**	**$ -**	**$ -**	**$ 563,276**	**$ -**	**$ -**		**$74,721**		
5	A	Bldgs & Equip	REMOVE NON-CONTAMINATED BUILDINGS	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 .
6	A	Bldgs & Equip	REMOVE NON-CONTAMINATED BUILDINGS	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 .
7	A	Bldgs & Equip	REMOVE NON-CONTAMINATED BUILDINGS	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 .
8	A	Bldgs & Equip	REMOVE NON-CONTAMINATED BUILDINGS	~~Decommission concrete sewage tanks~~										$0	$ -	$ -	$ -	$ -	$ -		$0	Scope well defined and time requirement is short	Progressively Rehabilitated

				Camp and Related Facilities	Year	Labour				Equipment				Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency (%)	Contingency	Basis for 2013 Contingency	Basis for 2013 Estimate
						Units	Person Days	Unit Rate	Cost	Units	Equip Hrs	Unit Rate	Cost										
9	A	Bldgs & Equip	REMOVE NON-CONTAMINATED BUILDINGS	Burn appropriate materials or Landfill	3	Person Day	64	$996	$63,744	Hours	672	$141	$94,752	$158,496	$ -	$ -	$ 158,496	`	$ -	15%	$23,774	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 = 10400m3. 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. = 11960 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 = 11960/27 cubes/truck/10.5 hrs/day/0.5hrs/trip= 21 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 = 21 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 = 32 haul track man days and 32 support man haul days. Assume weighted equipment rate based on equipment used. Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
10	A	Bldgs & Equip	REMOVE NON-CONTAMINATED BUILDINGS	Ship material by land to Milne Inlet for sealift Yr. 3	2	Person Day	42	$996	$41,832	Hours	624	$132	$82,368	$124,200	$ -	$ 124,200	$ -	$ -	$ -	15%	$18,630		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) 6280/38 cubes/truck/ 2 truck trips/shift= 83 person shifts + 25% for loader support = 104 person shifts. 104 person shifts & 1248 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 .
11	A	Bldgs & Equip	REMOVE NON-CONTAMINATED BUILDINGS	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
12	A	Bldgs & Equip	DISPOSE MOBILE EQUIPMENT	**Organize material for shipment**	**2**		**106**		**$74,034**				**$46,050**	**$120,084**	**$ -**	**$ 120,084**	**$ -**	**$ -**	**$ -**		**$18,013**		
13	A	Bldgs & Equip	DISPOSE MOBILE EQUIPMENT	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 .

						Labour				Equipment												
				Camp and Related Facilities	Year	Units	Person Days	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 2013 Contingency	Basis for 2013 Estimate
14	A	Bldgs & Equip	DISPOSE MOBILE EQUIPMENT	Nuna	2	Person Day	14	$958	$13,412	Hours	72	$125	$9,000	$22,412	$ -	$ 22,412	$ -	$ -	$ -	15%	$3,362	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.	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 .
15	A	Bldgs & Equip	DISPOSE MOBILE EQUIPMENT	Package BIM sea cans for backhaul	2	Person Day	14	$439	$6,146	Hours	17	$66	$1,122	$7,268	$ -	$ 7,268	$ -	$ -	$ -	15%	$1,090		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. Decrease by 1.07 times to account for additional sea cans (previously 60 now 56) General labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
16	A	Bldgs & Equip	DISPOSE MOBILE EQUIPMENT	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 .
17	A	Bldgs & Equip	DISPOSE MOBILE EQUIPMENT	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 .
18	A	Bldgs & Equip	Specialized Items	**General site cleanup**	**3**		**73**		**$36,503**				**$6,528**	**$43,031**	**$ -**	**$ -**	**$ 43,031**	**$ -**	**$ -**		**$6,455**		
19	A	Bldgs & Equip	Specialized Items	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 .
20	A	Bldgs & Equip	Specialized Items	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 .
21	A	Bldgs & Equip	GRADE AND CONTOUR MILL & PLANT SITE	**Contouring & grading**	**3**		**25**		**$24,900**				**$41,424**	**$66,324**	**$ -**	**$ -**	**$ 66,324**	**$ -**	**$ -**		**$9,949**		
22	A	Bldgs & Equip	GRADE AND CONTOUR MILL & PLANT SITE	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 .
23	A	Bldgs & Equip	GRADE AND CONTOUR MILL & PLANT SITE	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 .
24	A	Bldgs & Equip	GRADE AND CONTOUR MILL & PLANT SITE	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 .
25	A	Bldgs & Equip	Specialized Items	**Decommission Refuge Sites**	**3**		**2**		**$1,992**				**$904**	**$2,896**	**$ -**	**$ -**	**$ 2,896**	**$ -**	**$ -**		**$145**		

				Camp and Related Facilities	Year	Labour				Equipment				Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency (%)	Contingency	Basis for 2013 Contingency	Basis for 2013 Estimate
						Units	Person Days	Unit Rate	Cost	Units	Equip Hrs	Unit Rate	Cost										
26	A	Bldgs & Equip	Specialized Items	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 .
27	A	Bldgs & Equip	Specialized Items	**Site Contractor Decommissioning and Demob - Milne Inlet Camp**	**2**		**70**		**$71,440**				**$20,388**	**$91,828**	**$ -**	**$ 91,828**	**$ -**	**$ -**	**$ -**		**$13,774**		
28	A	Bldgs & Equip	Specialized Items	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 .
29	A	Bldgs & Equip	Specialized Items	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 .
30	A	Bldgs & Equip	REMOVE NON-CONTAMINATED BUILDINGS	**Decommission Milne Inlet camp (4 month operation @ Avg 4 person/day)**	**3**		**52**		**$55,660**				**$89,796**	**$145,456**	**$ -**	**$ -**	**$ 145,456**	**$ -**	**$ -**		**$21,818**		
31	A	Bldgs & Equip	REMOVE NON-CONTAMINATED BUILDINGS	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 .
32	A	Bldgs & Equip	REMOVE NON-CONTAMINATED BUILDINGS	Truck waste from Milne Inlet Camp to Mary River Camp for land filling	3	Person Day	53	$996	$52,788	Hours	636	$135	$85,860	$138,648	$ -	$ -	$ 138,648	$ -	$ -	15%	$20,797	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 =1465m3. 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= 27 man days @ 4 trucks/day = 7 days. Assume Supporting equipment required = D7 & 345 =7haul days *2 supporting equipment = 14 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= 41 haul track man days and 12 support man haul days=53 man days total Assume weighted equipment rate based on equipment used.
33	A	Bldgs & Equip	DISPOSE MOBILE EQUIPMENT	**Organize material for shipment**	**3**		**108**		**$82,922**				**$22,968**	**$105,890**	**$ -**	**$ -**	**$ 105,890**	**$ -**	**$ -**		**$15,884**		
34	A	Bldgs & Equip	DISPOSE MOBILE EQUIPMENT	Nuna	2	Person Day	42	$958	$40,236	Hours	72	$67	$4,824	$45,060	$ -	$ 45,060	$ -	$ -	$ -	15%	$6,759		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 .

				Camp and Related Facilities	Year	Labour				Equipment				Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency (%)	Contingency	Basis for 2013 Contingency	Basis for 2013 Estimate
						Units	Person Days	Unit Rate	Cost	Units	Equip Hrs	Unit Rate	Cost										
35	A	Bldgs & Equip	DISPOSE MOBILE EQUIPMENT	BIM Barge Loader	2	Person Day	12	$958	$11,496	Hours	24	$166	$3,984	$15,480	$ -	$ 15,480	$ -	$ -	$ -	15%	$2,322	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.	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 .
36	A	Bldgs & Equip	DISPOSE MOBILE EQUIPMENT	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 .
37	A	Bldgs & Equip	DISPOSE MOBILE EQUIPMENT	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 .
38	A	Bldgs & Equip	Specialized Items	**General site cleanup**	**3**		**31**		**$16,394**				**$6,900**	**$23,294**	**$ -**	**$ -**	**$ 23,294**	**$ -**	**$ -**		**$3,494**		
39	A	Bldgs & Equip	Specialized Items	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 .
40	A	Bldgs & Equip	Specialized Items	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 .
41	A	Bldgs & Equip	GRADE AND CONTOUR MILL & PLANT SITE	**Contouring & grading**	**3**		**12**		**$10,368**				**$21,120**	**$31,488**	**$ -**	**$ -**	**$ 31,488**	**$ -**	**$ -**		**$4,723**		
42	A	Bldgs & Equip	GRADE AND CONTOUR MILL & PLANT SITE	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 .
43	A	Bldgs & Equip	GRADE AND CONTOUR MILL & PLANT SITE	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 .
44	A	Bldgs & Equip	GRADE AND CONTOUR MILL & PLANT SITE	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 .
45	B			**Decommission Mid - Rail Camp (14 days @ 6 man camp)**	**3**		**76**		**$33,364**				**$95,400**	**$128,764**	**$ -**	**$ -**	**$ 128,764**	**$ -**	**$ -**		**$19,315**		
46	B	Bldgs & Equip	Remove Non-Contaminated Buildings	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	(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 .
47	B	Bldgs & Equip	Remove Non-Contaminated Buildings	Decommission/Package genset and incinerator	3	Person Day	4	$439	$1,756	Hours			$0	$1,756	$ -	$ -	$ 1,756	$ -	$ -	15%	$263		

				Camp and Related Facilities	Year	Labour				Equipment				Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency (%)	Contingency	Basis for 2013 Contingency	Basis for 2013 Estimate
						Units	Person Days	Unit Rate	Cost	Units	Equip Hrs	Unit Rate	Cost										
48	B	Bldgs & Equip	Remove Non-Contaminated Buildings	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	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.	
49	B	Bldgs & Equip	Specialized Items	Decommission lay down areas	3	Person Day	2	$439	$878	Hours			$0	$878	$ -	$ -	$ 878	$ -	$ -	15%	$132		
50	B	Bldgs & Equip	Specialized Items	General site cleanup	3	Person Day	6	$439	$2,634	Hours			$0	$2,634	$ -	$ -	$ 2,634	$ -	$ -	15%	$395		
51	B	Bldgs & Equip	Specialized Items	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		
52	B	Bldgs & Equip		**Decommission Steensby Inlet Camp (14 Days @ 6 man camp)**	**3**		**86**		**$38,500**				**$66,612**	**$105,112**	**$ -**	**$ -**	**$ 105,112**	**$ -**	**$ -**		**$15,767**		
53	B	Bldgs & Equip	Remove Non-Contaminated Buildings	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 .
54	B	Bldgs & Equip	Remove Non-Contaminated Buildings	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 .
55	B	Bldgs & Equip	Remove Non-Contaminated Buildings	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 .
56	B	Bldgs & Equip	Specialized Items	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 .
57	B	Bldgs & Equip	Remove Non-Contaminated Buildings	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 .
58	B	Bldgs & Equip	Specialized Items	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 .
59	B	Bldgs & Equip	Dispose Mobile Equipment	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 .
60	B	Bldgs & Equip	Dispose Mobile Equipment	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 .
61	B	Bldgs & Equip	Dispose Mobile Equipment	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	Labour				Equipment													
						Units	Person Days	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 2013 Contingency	Basis for 2013 Estimate
#	Type	Refer to Tab	Objective	***Grand Total***					***$2,074,341***				***$1,158,216***	***$3,232,557***	***$0***	***$356,384***	***$604,091***	***$746,870***	***$1,525,212***	***12%***	***$387,907***		
1	A	Bldgs & Equip	SPECIALIZED ITEMS	**Year 2 Freshet Management Field Activities 2**		**480**			**$356,384**				**$0**	**$356,384**	**$0**	**$356,384**	**$0**	**$0**	**$0**		**$17,819**		
2	A	Bldgs & Equip	SPECIALIZED ITEMS	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
3	A	Bldgs & Equip	SPECIALIZED ITEMS	**Year 3 Freshet Management Field Activities 3**		**480**			**$356,384**				**$0**	**$356,384**	**$0**	**$0**	**$356,384**	**$0**	**$0**		**$17,819**		
4	A	Bldgs & Equip	SPECIALIZED ITEMS	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

						Labour				Equipment													
				Roads and Airstrips	Year	Units	Person Days	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 2013 Contingency	Basis for 2013 Estimate
5	A	Bldgs & Equip	SPECIALIZED ITEMS	**Year 4 Freshet Management Field Activities 4**		**480**			**$356,384**				**$0**	**$356,384**	**$0**	**$0**	**$0**	**$356,384**	**$0**		**$17,819**		
6	A	Bldgs & Equip	SPECIALIZED ITEMS	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
7	A	Bldgs & Equip	Specialized Items	**MI Tote Road Operation**					**$23,904**				**$31,680**	**$55,584**	**$0**	**$0**	**$55,584**	**$0**	**$0**		**$5,558**		
8	A	Bldgs & Equip	Specialized Items	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.
9	A	Bldgs & Equip	RECLAIM ROADS	**#1 Deposit Haul Roads**					**$64,242**				**$106,650**	**$170,892**	**$0**	**$0**	**$170,892**	**$0**	**$0**		**$25,602**		
10	A	Bldgs & Equip	RECLAIM ROADS	Inspect and repair any erosion and/or permafrost damage 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 .
11	A	Bldgs & Equip	RECLAIM ROADS	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 .
12	A	Bldgs & Equip	RECLAIM ROADS	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.

				Roads and Airstrips	Year	Labour				Equipment													Basis for 2013 Contingency	Basis for 2013 Estimate
						Units	Person Days	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		
13	A	Bldgs & Equip	RECLAIM ROADS	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 .
14	A	Bldgs & Equip	RECLAIM ROADS	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 .
15	A			**Milne Inlet Tote Road**					**$885,444**				**$997,464**	**$1,882,908**	**$0**	**$0**	**$0**	**$357,696**	**$1,525,212**		**$358,697**			
16	A	Bldgs & Equip	RECLAIM ROADS	Inspect and repair any erosion and/or permafrost damage 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		Assume Milne Inlet Tote 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 .
17	A	Bldgs & Equip	RECLAIM ROADS	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	Scope is well defined with supporting as built drawings and documentation. A 15% contingency is deemed appropriate to address productivity estimates.	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	Labour				Equipment				Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency	Contingency	Basis for 2013 Contingency	Basis for 2013 Estimate
						Units	Person Days	Unit Rate	Cost	Units	Equip Hrs	Unit Rate	Cost										
18	A	Bldgs & Equip	RECLAIM ROADS	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 supporting as built drawings and documentation. A 15% contingency is deemed appropriate to address productivity estimates. Labour, Equipment & Charter Rates Table .
19	A	Bldgs & Equip	RECLAIM ROADS	Remove all round culvert crossings and stabilize slopes.	6	Person Day	751	$996	$747,996	Hours	5632	$138	$777,216	$1,525,212	$0	$0	$0	$0	$1,525,212	20%	$305,042		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
20	A	Bldgs & Equip	RECLAIM ROADS	**General access Roads**					**$19,920**				**$12,870**	**$32,790**	**$0**	**$0**	**$0**	**$32,790**	**$0**		**$4,919**		
21	A	Bldgs & Equip	RECLAIM ROADS	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 .
22	A	Bldgs & Equip	SPECIALIZED ITEMS	**Airstrips**					**$11,679**				**$9,552**	**$21,231**	**$0**	**$0**	**$21,231**	**$0**	**$0**		**$2,123**		
23	A	Bldgs & Equip	SPECIALIZED ITEMS	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 & labour 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 .
24	A	Bldgs & Equip	SPECIALIZED ITEMS	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	Labour				Equipment				Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency (%)	Contingency	Basis for 2013 Contingency	Basis for 2013 Estimate
						Units	Person Days	Unit Rate	Cost	Units	Equip Hrs	Unit Rate	Cost										
#	Type	Refer to Tab	Objective	***Grand Total***					***$197,428***				***$284,158***	***$481,586***	***$0***	***$55,000***	***$426,586***	***$0***	***$0***	***22%***	***$104,873***		
1	A	Open Pit	Other Items	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.
2	A	Open Pit	Other Items	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	Geotechnical inspection and report defini ng criteria and scope for reclamation com pleted by EBA engineering in 2009. Area s requiring immediate attention were addr essed in 2009. Three of the four permitte d borrow areas have been partially reclai
3	A	Open Pit	Other Items	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	med -The estimate has not included any partial reclamation activities. These only required dozer and grading. Estimate ba sed on the scope of work developed in th e EBA report. See the following referenc es for scope (Appendix D) See Operato r labour & equipment rates - Appendix G- 3, , 2012 A&R Schedule of Labour, Equip
4	A	Open Pit	Other Items	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	See Appendix G-3, Estimate of A & R Borrow Area Material requirements Table for detailed estimate

				Fuel Storage Facilities	Year		Labour			Equipment												
						Units	Person Days	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 2013 Contingency	Basis for 2013 Estimate
#	Type	Refer to Tab	Objective	***Grand Total***					***$428,583***				***$272,462***	***$701,045***	***$0***	***$405,805***	***$295,240***	***$0***	***$0***	***20%***	***$141,472***		
1	A	Bldgs & Equip	REMOVE NON-CONTAMINATED BUILDINGS	**Mary River Fuel Farm**					**$123,856**				**$132,792**	**$256,648**	**$0**	**$88,524**	**$168,124**	**$0**	**$0**		**$47,234**		
2	A	Bldgs & Equip	REMOVE NON-CONTAMINATED BUILDINGS	Return excess fuel at Mary River to Milne Inlet	2	Person Day	35	$996	$34,860	Hours	416	$129	$53,664	$88,524	$0	$88,524	$0	$0	$0	10%	$8,852	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 Sept 30 2012 Fuel balance of approximate 3,462,600 L Haul hours = 3,462,600 l / 50,000 l/trip / 2 trips/shift * 12 hours/shift = 416 hours and 35 working days. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table .
3	A	Bldgs & Equip	REMOVE NON-CONTAMINATED BUILDINGS	Drain, fold, and containerize Mary River bladder tanks	3	Person Day	45	$800	$36,000	Hours	36	$66	$2,376	$38,376	$0	$0	$38,376	$0	$0	10%	$3,838	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 8 days (decrease from 2012 estimate drums are partially drained - drain, remove pipe & package) =24 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 .
4	A	Bldgs & Equip	REMOVE NON-CONTAMINATED BUILDINGS	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 .
5	A	Bldgs & Equip	REMOVE NON-CONTAMINATED BUILDINGS	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 .

				Fuel Storage Facilities	Year	Labour				Equipment												
						Units	Person Days	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 2013 Contingency	Basis for 2013 Estimate
6	A	Bldgs & Equip	REMOVE NON-CONTAMINATED BUILDINGS	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 .
7	A	Bldgs & Equip	REMOVE NON-CONTAMINATED BUILDINGS	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 .
8	A	Bldgs & Equip	REMOVE NON-CONTAMINATED BUILDINGS	**Milne Inlet Fuel Farm**					**$304,727**				**$139,670**	**$444,397**	**$0**	**$317,281**	**$127,116**	**$0**	**$0**		**$94,238**		
9	A	Bldgs & Equip	REMOVE NON-CONTAMINATED BUILDINGS	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.
10	A	Bldgs & Equip	REMOVE NON-CONTAMINATED BUILDINGS	Drain, flush and dismantle and remove 5 ML fuel storage tank	2	Person Day	39	$439	$17,121	Lot	60	$217	$13,020	$30,141	$0	$30,141	$0	$0	$0	20%	$6,028	Although issued for construction drawings have been completed, no specifications or manufacturing 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. Assume 3 man crew 3 days to drain.
11	A	Bldgs & Equip	REMOVE NON-CONTAMINATED BUILDINGS	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.
12	A	Bldgs & Equip	REMOVE NON-CONTAMINATED BUILDINGS	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 .

				Fuel Storage Facilities	Year	Labour				Equipment												
						Units	Person Days	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 2013 Contingency	Basis for 2013 Estimate
13	A	Bldgs & Equip	REMOVE NON-CONTAMINATED BUILDINGS	Drain, fold, and containerize Milne bladder tanks	2	Person Day	44	$800	$35,200	Hours	144	$66	$9,504	$44,704	$0	$44,704	$0	$0	$0	10%	$4,470	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 7 days (drain, remove pipe & package) = 21 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 .
14	A	Bldgs & Equip	REMOVE NON-CONTAMINATED BUILDINGS	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 .
15	A	Bldgs & Equip	REMOVE NON-CONTAMINATED BUILDINGS	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 .
16	A	Bldgs & Equip	REMOVE NON-CONTAMINATED BUILDINGS	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 drawings 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
17	A	Bldgs & Equip	REMOVE NON-CONTAMINATED BUILDINGS	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 .
18	A	Bldgs & Equip	REMOVE NON-CONTAMINATED BUILDINGS	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		Labour			Equipment												
						Units	Person Days	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 2013 Contingency	Basis for 2013 Estimate
19	A	Bldgs & Equip	REMOVE NON-CONTAMINATED BUILDINGS	Execute civil works to transport potential hydrocarbon contaminated soil from Milne Inlet non - bulk fuel farm lined containment areas	3	Person Day	15	$996	$14,940	Hours	180	$110	$19,800	$34,740	$0	$0	$34,740	$0	$0	30%	$10,422	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. 5ML fuel tank base = 137x51*0.3=2096 m3. 5ML Fuel Tank Berm =12*(2*137+2*51) = 4500Labour & equipment estimates =6678 cubes /27 cubes/truck W no pup = 247 Trips 247 trips/20trips/day/truck(10 hr@30 min/trip)= 13 days/berm. There are 5 lined berms at Milne = 2.0 days with one truck hauling. To make the process efficient, assume 5 day with two trucks and an operator for the dozer and one for the loader operation support = 15 man days. Scope based on as built (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 .
20	A	Bldgs & Equip	REMOVE NON-CONTAMINATED BUILDINGS	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 levelled and contoured . Scope based on as built (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	Labour				Equipment												
						Units	Person Days	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 2013 Contingency
#	Type	Refer to Tab	Objective	***Grand Total***					***$0***				***$0***	***$0***	***$0***	***$0***	***$0***	***$0***	***$0***	***0%***	***$0***	
1	A	Chemicals	Other	Prepare explosives for shipping			Person Day		$0	Hours			$0	$0	$0					0%	$0	
2	A	Chemicals	Other	Ship explosives to Milne Inlet			Person Day		$0				$0	$0					$0	0%		
3	A	Chemicals	Other	Ship explosives via land to Milne Inlet			Person Day		$0	Hours			$0	$0	$0					0%	$0	

				Waste Management	Year	Labour				Equipment													
						Units	Person Days	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 2013 Contingency	Basis for 2013 Estimate
#	Type	Refer to Tab	Objective	***Grand Total***					***$137,217***				***$422,076***	***$559,293***	***$0***	***$203,142***	***$356,151***	***$0***	***$0***	***19%***	***$108,265***		
1	A	Bldgs & Equip	Specialized Items	**Operate Landfill**					**$111,552**				**$185,472**	**$297,024**	**$0**	**$0**	**$297,024**	**$0**	**$0**		**$57,283**		
2	A	Bldgs & Equip	Specialized Items	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.
3	A	Bldgs & Equip	Specialized Items	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
4	A	Bldgs & Equip	Specialized Items	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
5	A	Bldgs & Equip	Specialized Items	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
6	A	Bldgs & Equip	Specialized Items	**Ship waste by land Mary River to Milne Inlet**					**$5,337**				**$31,662**	**$36,999**	**$0**	**$0**	**$36,999**	**$0**	**$0**		**$7,400**		
7	A	Bldgs & Equip	Specialized Items	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 w aste type production has been estimated from recent site generation rates. The preparation estimate rates is based on 2010 contractor in voiced rates & productivity . A 20% contingen cy 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

				Waste Management	Year	Labour				Equipment				Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency (%)	Contingency	Basis for 2013 Contingency	Basis for 2013 Estimate
						Units	Person Days	Unit Rate	Cost	Units	Equip Hrs	Unit Rate	Cost										
8	A	Bldgs & Equip	Specialized Items	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
9	A	Bldgs & Equip	Specialized Items	**Sewage - Mary River**					**$13,944**				**$198,918**	**$212,862**	**$0**	**$203,142**	**$9,720**	**$0**	**$0**		**$41,600**		
10	A	Bldgs & Equip	Specialized Items	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.
11	A	Bldgs & Equip	Specialized Items	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
12	A	Bldgs & Equip	Specialized Items	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 as builts 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
13	A	Bldgs & Equip	Specialized Items	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

					Labour				Equipment													
				Waste Management	Year	Units	Person Days	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 2013 Contingency	Basis for 2013 Estimate
14	A	Bldgs & Equip	Specialized Items	**Sewage - Milne**					**$6,384**				**$6,024**	**$12,408**	**$0**	**$0**	**$12,408**	**$0**	**$0**		**$1,981**		
15	A	Bldgs & Equip	Specialized Items	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
16	A	Bldgs & Equip	Specialized Items	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
17	A	Bldgs & Equip	Specialized Items	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
18	A	Bldgs & Equip	Specialized Items	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	Labour				Equipment				Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency (%)	Contingency	Basis for 2013 Contingency	Basis for 2013 Estimate
						Units	Person Days	Unit Rate	Cost	Units	Equip Hrs	Unit Rate	Cost										
#	Type	Refer to Tab	Objective	***Grand Total***					***$558,000***				***$190,080***	***$748,080***	***$0***	***$90,000***	***$658,080***	***$0***	***$0***	***16%***	***$120,912***		
1	A	Chemicals	CONTAMINATED SOILS	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	$90,000	$90,000	Hours	0	0	$0	$90,000	$0	$90,000	$0	$0	$0	30%	$27,000	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 $90K.
2	A	Bldgs & Equip	Specialized Items	**Land farm Operation**			**140**		**$158,600**				**$158,600**	**$317,200**	**$0**	**$0**	**$658,080**	**$0**	**$0**				
3	A	Bldgs & Equip	Specialized Items	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
4	A	Bldgs & Equip	Specialized Items	Food & accommodations	3	Person Day	$0	$0	$0					$0	$0	$0	$0	$0	$0				Year 3 cost for food and accommodations in cluded in general "camp operation" workshe et
5	A	Bldgs & Equip	Specialized Items	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 in cluded in general "camp operation" workshe et
6	A	Bldgs & Equip	Specialized Items	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 in cluded in general "camp operation" workshe et
7	A	Bldgs & Equip	Specialized Items	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 in cluded in general "camp operation" workshe et. To occur every 4 years, 6 days on site, 2 days travel

				General Site Area	Year	Labour				Equipment				Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency (%)	Contingency	Basis for 2013 Contingency	Basis for 2013 Estimate
						Units	Person Days	Unit Rate	Cost	Units	Equip Hrs	Unit Rate	Cost										
#	Type	Refer to Tab	Objective	***Grand Total***					***$1,561,800***				***$0***	***$1,561,800***	***$0***	***$480,600***	***$600,600***	***$480,600***	***$0***	***10%***	***$156,180***		
1	A	Bldgs & Equip	Specialized Items	**Project Management & Supervision Year 2**					**$480,600**				**$0**	**$480,600**	**$0**	**$480,600**	**$0**	**$0**	**$0**		**$48,060**		
2	A	Bldgs & Equip	Specialized Items	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
3	A	Bldgs & Equip	Specialized Items	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
4	A	Bldgs & Equip	Specialized Items	**Project Management & Supervision Year 3**					**$600,600**				**$0**	**$600,600**	**$0**	**$0**	**$600,600**	**$0**	**$0**		**$60,060**		
5	A	Bldgs & Equip	Specialized Items	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
6	A	Bldgs & Equip	Specialized Items	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
7	A	Bldgs & Equip	Specialized Items	**Project Management & Supervision Year 4**					**$480,600**				**$0**	**$480,600**	**$0**	**$0**	**$0**	**$480,600**	**$0**		**$48,060**		
8	A	Bldgs & Equip	Specialized Items	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
9	A	Bldgs & Equip	Specialized Items	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	Labour				Equipment				Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency (%)	Contingency	Basis for 2013 Contingency	Basis for 2013 Estimate
						Units	Person Days	Unit Rate	Cost	Units	Equip Hrs	Unit Rate	Cost										
#	Type	Refer to Tab	Objective	***Grand Total***					***$35,088***				***$4,470,434***	***$4,505,522***	***$0***	***$3,225,680***	***$575,726***	***$629,916***	***$74,200***	***10%***	***$469,912***		
1	A	Bldgs & Equip	Specialized Items	**Freight Sealift Milne Inlet to Valleyfield Year 2**	**2**				**$11,952**				**$2,826,528**	**$2,838,480**	**$0**	**$2,838,480**	**$0**	**$0**	**$0**		**$283,848**		
2	A	Bldgs & Equip	Specialized Items	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
3	A	Bldgs & Equip	Specialized Items	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.)
4	A	Bldgs & Equip	Specialized Items	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.
5	A	Bldgs & Equip	Specialized Items	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.)
6	A	Bldgs & Equip	Specialized Items	Land freight for site contractor and BIM owned equipment currently located at MR and Milne Inlet	2				$0	Cubic meters	15742	$38	$598,196	$598,196	$0	$598,196	$0	$0	$0	10%	$59,820	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 Long year - 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 (2971). See Appendix G-4, 2011A&R Plan Estimating Docs\Sealift\Land freight backhaul quotes
7	A	Bldgs & Equip	Specialized Items	**Freight Sealift Milne Inlet to Valleyfield Year 3**	**3**				**$0**				**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**		**$0**		

				Sealift Materials	Year	Labour				Equipment				Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency (%)	Contingency	Basis for 2013 Contingency	Basis for 2013 Estimate
						Units	Person Days	Unit Rate	Cost	Units	Equip Hrs	Unit Rate	Cost										
8	A	Bldgs & Equip	Specialized Items	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	
9	A	Bldgs & Equip	Specialized Items	**Freight Sealift Milne Inlet to Valleyfield Year 4**	**4**				**$11,952**				**$617,964**	**$629,916**	**$0**	**$0**	**$0**	**$629,916**	**$0**		**$62,992**		
10	A	Bldgs & Equip	Specialized Items	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
11	A	Bldgs & Equip	Specialized Items	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
12	A	Bldgs & Equip	Specialized Items	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
13	A	Bldgs & Equip	Specialized Items	Demobilize decommissioned material and 3rd party contractor equipment from MI	4				$0	Revenue 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.)
14	A	Bldgs & Equip	Specialized Items	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)
15	A	Bldgs & Equip	Specialized Items	**Bulk Fuel Demobilization Sealift - Milne Inlet Year 2**	**2**				**$7,200**				**$380,000**	**$387,200**	**$0**	**$387,200**	**$0**	**$0**	**$0**		**$58,080**		

				Sealift Materials	Year	Labour				Equipment				Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency (%)	Contingency	Basis for 2013 Contingency	Basis for 2013 Estimate
						Units	Person Days	Unit Rate	Cost	Units	Equip Hrs	Unit Rate	Cost										
16	A	Bldgs & Equip	Specialized Items	Dedicated charter - Bulk Fuel Tanker to backhaul bulk fuel to refinery for disposal	2	Person Day	12	$600	$7,200	Sailing	1	########	$380,000	$387,200	$0	$387,200	$0	$0	$0	15%	$58,080	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 3.46 million litres 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/litre. 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/litre. 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. 2012 freight cost = $0.10*3462600 litres+ 4 day demurrage ($40,000)
17	A	Bldgs & Equip	Specialized Items	Salvage of Baffinland owned fuel 2	2				$0				$0		$0	$0	$0	$0	$0		$0		No allowance made for salvage value
18	A	Bldgs & Equip	Specialized Items	**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**		
19	B	Bldgs & Equip	Specialized Items	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	
20	B	Bldgs & Equip	Specialized Items	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.)
21	B	Bldgs & Equip	Specialized Items	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	Labour				Equipment				Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency (%)	Contingency	Basis for 2013 Contingency	Basis for 2013 Estimate
						Units	Person Days	Unit Rate	Cost	Units	Equip Hrs	Unit Rate	Cost										
22	A	Bldgs & Equip	Specialized Items	**Freight Sealift Milne Inlet to Port of Valleyfield Year 6**					**$3,984**				**$70,216**	**$74,200**	**$0**	**$0**	**$0**	**$0**	**$74,200**		**$7,420**		
23	A	Bldgs & Equip	Specialized Items	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
24	A	Bldgs & Equip	Specialized Items	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	228	$198	$45,144	$45,144	$0	$0	$0	$0	$45,144	10%	$4,514	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). = 569 cubes * 0.4 = 228 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.)
25	A	Bldgs & Equip	Specialized Items	Land freight cost for Year 6 backhaul sealift	6	Person Day			$0	Cubic meters	569	$38	$21,622	$21,622	$0	$0	$0	$0	$21,622	10%	$2,162	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. 569 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	Labour				Equipment										Contingency (%)	Contingency	Basis for 2013 Contingency	Basis for 2013 Estimate
						Units	Person Days	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				
#	Type	Refer to Tab	Objective	***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***		
1	A			**A&R Fuel Purchase**	**2**				**$0**				**$2,900,091**	**$2,900,091**	**$0**	**$2,900,091**	**$0**	**$0**	**$0**		**$375,358**		
2	A	Bldgs & Equip	Specialized items	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 litres 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 barrelled fuel quotation Assumes mobilization of fuel by Hercules aircraft and Sealift and is costed in separate tasks.
3	A	Mobilization	MOBILIZE MISC. SUPPLIES	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
4	A			**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
5	A	Mobilization	MOBILIZE WORKERS	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 positioned 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
6	A	Mobilization	MOBILIZE WORKERS	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
7	A	Mobilization	MOBILIZE WORKERS	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
8	A	Bldgs & Equip	Specialized items	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 Operations	Year	Labour				Equipment				Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency (%)	Contingency	Basis for 2013 Contingency	Basis for 2013 Estimate
						Units	Person Days	Unit Rate	Cost	Units	Equip Hrs	Unit Rate	Cost										
9	A	Bldgs & Equip	Specialized items	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
10	A	Bldgs & Equip	Specialized items	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
11	A			**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
12	A	Mobilization	MOBILIZE WORKERS	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
13	A	Mobilization	MOBILIZE WORKERS	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
14	A	Mobilization	MOBILIZE WORKERS	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
15	A	Bldgs & Equip	Specialized items	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
16	A	Bldgs & Equip	Specialized items	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
17	A	Bldgs & Equip	Specialized items	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
18	B	Bldgs & Equip	Specialized Items	**Steensby Inlet Camp Operation**	**3**				**$18,104**				**$200**	**$18,304**	**$0**	**$0**	**$18,304**	**$0**	**$0**		**$1,830**		
19	B	Bldgs & Equip	Specialized Items	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

						Labour				Equipment													
				Camp Operations	Year	Units	Person Days	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 2013 Contingency	Basis for 2013 Estimate
20	B	Bldgs & Equip	Specialized Items	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
21	B	Bldgs & Equip	Specialized Items	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
22	B	Bldgs & Equip	Specialized Items	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
23	A	Bldgs & Equip	Specialized Items	**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 demobbing bladders at 16 for 2 weeks
24	A	Bldgs & Equip	Specialized Items	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
25	A	Bldgs & Equip	Specialized Items	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
26	A	Bldgs & Equip	Specialized Items	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
27	A	Bldgs & Equip	Specialized Items	**Milne Inlet Year 3 - Operate avg 5 - person camp**	**6**				**$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.
28	A	Bldgs & Equip	Specialized Items	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.
29	A	Bldgs & Equip	Specialized Items	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
30	A	Bldgs & Equip	Specialized Items	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
31	A			**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

				Camp Operations	Year	Labour				Equipment				Total cost	Yr 1 Cost	Yr 2 Cost	Yr 3 Cost	Yr 4 Cost	>Yr 4 Cost	Contingency (%)	Contingency	Basis for 2013 Contingency	Basis for 2013 Estimate
						Units	Person Days	Unit Rate	Cost	Units	Equip Hrs	Unit Rate	Cost										
32	A	Bldgs & Equip	Specialized Items	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 days month =620 days. See labour rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
33	A	Bldgs & Equip	Specialized Items	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
34	A	Mobilization	MOBILIZE WORKERS	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
35	A	Mobilization	MOBILIZE WORKERS	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
36	A	Bldgs & Equip	Specialized Items	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
37	B	Bldgs & Equip	Specialized	**MidRail Operate 7 person camp**	**3**				**$7,204**				**$200**	**$7,404**	**$0**	**$0**	**$7,404**	**$0**	**$0**		**$461**		
38	B	Bldgs & Equip	Specialized Items	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
39	B	Bldgs & Equip	Specialized Items	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
40	B	Bldgs & Equip	Specialized Items	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	Labour				Equipment													
						Units	Person Days	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 2013 Contingency	Basis for 2013 Estimate
#	Type	Refer to Tab	Objective	***Grand Total***					***$241,000***				***$64,500***	***$305,500***	***$0***	***$21,100***	***$21,100***	***$21,100***	***$242,200***	***24%***	***$73,950***		
1	A	PostClosure	MONITORING & INSPECTIONS	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	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
2	A	PostClosure	MONITORING & INSPECTIONS	**Environmental Monitoring Year 2**					**$8,200**				**$12,900**	**$21,100**	**$0**	**$21,100**	**$0**	**$0**	**$0**		**$4,790**		
3	A	PostClosure	MONITORING & INSPECTIONS	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
4	A	PostClosure	MONITORING & INSPECTIONS	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
5	A	PostClosure	MONITORING & INSPECTIONS	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 unfo	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
6	A	PostClosure	MONITORING & INSPECTIONS	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 Iqaluit round trip price. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
7	A	PostClosure	MONITORING & INSPECTIONS	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.
8	A	PostClosure	MONITORING & INSPECTIONS	**Environmental Monitoring Year 3**					**$8,200**				**$12,900**	**$21,100**	**$0**	**$0**	**$21,100**	**$0**	**$0**		**$4,790**		
9	A	PostClosure	MONITORING & INSPECTIONS	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
10	A	PostClosure	MONITORING & INSPECTIONS	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
11	A	PostClosure	MONITORING & INSPECTIONS	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
12	A	PostClosure	MONITORING & INSPECTIONS	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 Iqaluit round trip price. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
13	A	PostClosure	MONITORING & INSPECTIONS	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.
14	A	PostClosure	MONITORING & INSPECTIONS	**Environmental Monitoring Year 4**					**$8,200**				**$12,900**	**$21,100**	**$0**	**$0**	**$0**	**$21,100**	**$0**		**$4,790**		

						Labour				Equipment													
				Environmental Monitoring	Year	Units	Person Days	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 2013 Contingency	Basis for 2013 Estimate
15	A	PostClosure	MONITORING & INSPECTIONS	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
16	A	PostClosure	MONITORING & INSPECTIONS	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
17	A	PostClosure	MONITORING & INSPECTIONS	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 unfo	2012 estimate based on 2 person,2 days per year to complete inspection & sampling and 1 day travel on either side.
18	A	PostClosure	MONITORING & INSPECTIONS	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 Iqaluit round trip price. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
19	A	PostClosure	MONITORING & INSPECTIONS	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
20	A	PostClosure	MONITORING & INSPECTIONS	**Environmental Monitoring Year 5**					**$8,200**				**$12,900**	**$21,100**	**$0**	**$0**	**$0**	**$0**	**$21,100**		**$4,790**		
21	A	PostClosure	MONITORING & INSPECTIONS	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
22	A	PostClosure	MONITORING & INSPECTIONS	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
23	A	PostClosure	MONITORING & INSPECTIONS	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
24	A	PostClosure	MONITORING & INSPECTIONS	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 Iqaluit round trip price. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
25	A	PostClosure	MONITORING & INSPECTIONS	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
26	A	PostClosure	MONITORING &	**Environmental Monitoring Year**					**$8,200**				**$12,900**	**$21,100**	**$0**	**$0**	**$0**	**$0**	**$21,100**		**$4,790**		
27	A	PostClosure	MONITORING & INSPECTIONS	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
28	A	PostClosure	MONITORING & INSPECTIONS	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

				Environmental Monitoring	Year	Labour				Equipment													
						Units	Person Days	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 2013 Contingency	Basis for 2013 Estimate
29	A	PostClosure	MONITORING & INSPECTIONS	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
30	A	PostClosure	MONITORING & INSPECTIONS	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 Iqaluit round trip price. See Operator labour & equipment rates - Appendix G-3, 2012 A&R Schedule of Labour, Equipment & Charter Rates Table
31	A	PostClosure	MONITORING & INSPECTIONS	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 **2013 A & R Plan**

	Net Book Value at end 2010	Salvage Value	2013 Salvage Value (Year 1)	2014 Salvage Value (Year 2)	2015 Salvage Value (Year 3)	2016 Salvage Value (Year 4)	>2016 Salvage Value (>Year 4)	Basis for 2013 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 barge 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. **Barrelled Fuel** - 2011 Book value of fuel = $1.38/l (purchase price) + $50 drum deposit - Total number barrels at Mary River, 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.

Appendix C
February 25, 2013 Meeting Notes

Meeting with NRCan -
Discussion on Geochemistry and Water Quality Model Overview

Date: February 25, 2013

Group/Organization: Baffinland, NRCan, AANDC, CANMET, WIA, EC, NWB

Meeting Location: 580 Booth Street, Ottawa – NRCan Boardroom

PRESENT:

Erik Madsen, Baffinland
Jim Millard, Baffinland
Michael Anderson, Baffinland (by telephone)
Fernand Beaulac, Baffinland
John Binns, Hatch
Steve Walker, AMEC
Kathleen Cavallaro, NRCan
John Clarke, NRCan
Y.T. John Kwong, CANMET
Robert Johnstone, NRCan
Murray Ball, AANDC
Amy Shen, AANDC
Mark Lupp, AANDC (SNC Lavalin)
Morgan Schaurte, QIA
Anne Wilson, EC
Reg Ejeckam (EC)
David Hohnstein, NWB
Sean Joseph, NWB

NOTES:

The agenda circulated by K. Cavallaro (NRCan) and included:

1) Welcome, introductions and call for additional agenda items.
2) NRCAN's role and expertise in EA, permitting, & geochemical investigations (NRCAN)
3) Updated Technical Information and work completed to date. (Baffinland Presentation)
    a. Nature of the ore and status of waste rock characterization to date
    b. Work completed on modelling of waste rock runoff pit and water quality
4) Land owner comments and concerns (AANDC and QIA)
5) Other party comments/questions (EC, NWB)
6) Other

Discussions

1. Opening Remarks

- Introduction by NRCan:
  - purpose of meeting is for Baffinland to provide an update on its waste rock characterization program
- Baffinland states that:
  - BIM welcomes comments/input from NRCan experts
  - BIM outlined 2012-2014 Waste Characterization program (included in Class A Water Licence application) last May with NRCan
  - the discussion with NRCan will provide clarification to reviewers on concern as expressed in the Type A water Licence review process and review some outstanding commitments from PHC report related to this topic

2. Technical presentation by Baffinland (Steve Walker - AMEC)

- The presentation document (electronic version) is attached.
- Remarks/comments made during presentation:
  - Slides 5 to 20 – waste rock characterization work
    - NRCan (J.C.) – wanted confirmation that term “mineralized waste” was referred to as “deleterious ore” in May 2012 presentation – Response = yes;
    - BIM (F.B.) – solicit comments on waste rock characterization programs from all parties
    - NRCan (J.K.) – do you know the grain size of the sulphide material and the types of sulphide
    - BIM (S.W.) – Response -
      1. Pyrite is the dominant sulphide with minor amounts of other types of sulphides.
      2. Based on thin section mineralogy to-date, sulphides tend to be fine grained. Coarser pyrite has been noted during logging in more sulphide rich zones.
    - NRCan (R.J.) asked about representativity of samples for the waste rock. Would you say there is even distribution in boreholes?
    - BIM (S.W.) – Response - yes sampling is representative of the deposit 1 within the limits of available drilling coverage. Samples were collected for exploration purposes, mine planning and geochem (environmental). All AMEC/Baffinland sampling programs relied on a sample preselection

approach (from existing borehole logs) to provide targeted coverage within available boreholes based on logged rock types and to provide good spatial coverage. A similar sampling strategy has been employed for each round of sampling.

- BIM (J.M.) – notes two physical limitations for drilling
    1. Terrain and topography limit accessibility for the drills (health and safety of drilling crews)
    2. Short season limits drilling activities (mid June to August)
- BIM (J.M.) – in 2012, 100% of the drilling was in waste rock for environmental purposes to fill gaps.
- BIM (S.W. & J.M.) – 2012 drilling substantially improved previously identified gaps in sampling of hanging wall and particularly the foot wall.
- QIA comment (M.S) – why is PAG now 11% of waste rock versus 22% as stated in FEIS?
- BIM response (S.W., J.M., M.A.)
    1. FEIS provided a conservative estimate of PAG and overestimated amount of PAG due to lack of information on foot wall waste rock which represents approximately 46% of waste rock

o Slides 21 to 26 – Kinetic Testing

- BIM (S.W.) notes that humidity test cells focus on PAG rock
- NRCan (J.K.) why is pH of humidity cell down to 5.5 if waste rock is dominated by chlorite and other silicates?
- BIM (S.W.) – Response - difficult to explain. May be related to grain size of material. Mineralogy is complex (metamorphic rocks possibly hydrothermal overprinting)..
- BIM (S.W.) Humidity cells are operated under laboratory conditions which are more aggressive (higher temperature and higher flushing rates) than field conditions.
- QIA (M.S.) – have you seen spikes in Hg in laboratory analyses (QA/QC checks)?
- BIM (S.W., J.M.) – Good question – this needs to be looked into.
- EC (R.E.) – The low rate of metal release – is it due to temperature?

- BIM (S.W.) - Response – Humidity cells are run at ambient temperature lab conditions and the models account for lower anticipated temperatures at site. The metal release is also very low.

o Slides 27 to 32 – Water Quality Modelling

- QIA (M.S) – does modelling take into account expected climate change (ie 100 year options to weather)
- BIM (S.W., M.A.) – model assumes aggradation of permafrost within the stockpile and a 10 m active layer. Experience at Ekati is that maximum extent of thaw is 5 m.
- BIM (J.M.) – construction of the waste rock pile is to enhance aggradation of permafrost conditions. Initial layer of rock will be placed on frozen tundra to ensure minimum seepage through an unfrozen layer.
- QIA (M.S.) – Do you start from freezing conditions in model?
- BIM (S.W.) – Response – Waste Rock model assumes post closure. Steady state condition refers to established freezing at the base of the active layer and assumes flow only within the active layer.
- Reg (EC).) – would you expect “hot spots”? The sulphide could cause hot spots within waste rock pile.
- BIM (S.W., J.M.) – Response - Though “Hot spots” are possible, generally there are low sulphide concentrations overall in waste rock (ca. 1% and lower).
- BIM (J.M.) – as construction proceeds, thermistor strings will be embedded in the waste rock pile (as per Ekati and other northern mines) to track progress of permafrost
- BIM (S.W, J.M.) – It should be further noted that there is a commitment in the waste rock management plan for ground temperature monitoring and thermal modeling of the waste rock pile when suitable data becomes available.
- QIA (M.S) – Do you have thermistors at site currently?
- BIM (J.M) - Response - Yes and the active layer is approx. 2 metres at maximum thaw in late August.
- AANDC (M.L) – have model runs been made for different pit wall mineralogy?
- BIM (S.W.) – no – model was run based on expected waste rock types at pit wall. Some key considerations. A limitation of the model remains the lack of a site specific acidic source

term. Model assumes release of ARD after 5 years whereas gradual to no pH decline in humidity cell work at laboratory temperatures is suggesting lag time may be longer. Model takes a conservative approach.

- AANDC (M.L.) – The data reported right now has it been included in an updated model?
- BIM (E.M.) – Response - pit water quality predictions will be updated once the 2012-2014 characterization program is completed. As the Closure plan is updated it will include updates to the water quality modeling. For the Type A review, BIM retains predictions made and presented for the FEIS.
- AANDC (M.L.) – commented it was good to see cross sections as it shows low acid rock potential in outer regions of pit. Are there any model runs for early closure when pit wall mineralogy will be different than at ultimate development? Where will drainage go from waste rock?
- BIM (J.M.) – There are two drainage locations – one to Mary River and one to Camp Lake. Plan will be to store PAG in one drainage area.
- AANDC (M.L.) – Has BIM looked at modeling of accelerated filling.
- BIM (E.M.) – Yes this was requested by AANDC and the proposal on time of filling pit - approx. 4 years and volume was presented at technical meeting in January in Pond Inlet. Moving forward we see this as a closure issue and information will be provided as we learn more from the characterization program.
- QIA (M.S.) – Still confused on why the drop from 15% to 11% of PAG waste rock as in FEIS the number was 22 %
- BIM (M.A.) – At the time we submitted in FEIS – we referred to quantity/tonnage of PAG waste rock by correlating with the numbers and results of samples – but now we have actual data and an updated waste rock model from recent drilling and this now provides us with actual modeled waste rock volumes for specific waste rock units. NRCan (J.K.) – There is a knowledge gap regarding mineralogy of sulphides and NP minerals. – Coarse sulphide grain sizes can be slow oxidize. Could slightly acidic pH (5.5) be related to very

dilute unbuffered atmospheric water with very little reaction with solids. Also, fine grained minerals such as chlorite and biotite can retain more water and promote higher rates of weathering than coarser minerals. BIM is talking about test piles – JK feels test pile would be useful and would provide more insight into larger scale waste rock oxidation over time.

- BIM (J.M., S.W.) – Response – Potential pad locations have been identified and potential waste rock material is accessible at surface and take John's point that finer grained waste rock material (schists) should be considered in a test pile where possible. SW noted that humidity cells contain range of grain size and mineralogy and this can be looked at more closely. Some cells are fairly dilute and weakly acidic atmospheric pH water may play a role, but there is generally evidence of some degree of sulphide oxidation in most humidity cells.
- NRCan (J.C.) – enquired about source of research data on temperature controls for sulphide oxidation used in models.
- BIM (S.W.) – sources are available in modeling reports and include MEND documents as a primary source.

2. Land Owners Comments and Concerns

- Mine closure considerations
  - QIA (M.S.) – how long after mine closure will monitoring of pit water quality continue?
  - BIM (E.M.) – Final A&R Plan states closure objectives – references 3 years of closure followed by 5 years of monitoring – noted monitoring will continue until closure objectives are achieved – BIM commitment.
  - AANDC (M.B.) – proponent must allow for all closure cost to be covered in A&R Plan. Pit water quality post closure remains a concern. How do we ensure that the security posted by proponent cover long term post closure costs?
  - BIM (E.M. & F.B.) – the development of a comprehensive closure plan is a process. At this stage we have a "Preliminary" Closure and reclamation Plan and since BIM does not anticipate any long term legacy problems with this mine, no costs are included for the

possibility of treatment of pit water post closure. However, BIM notes that the final A&R Plan will be informed by the on-going waste rock characterization program which will continue for the life of mine. As more information is obtained on waste rock properties, humidity cells, and mining operational data (over the 21 year mine life), the water quality prediction model will provide more insight as to the ultimate pit water quality post closure. If at some time during this period, modelling indicates the requirement for treatment of the pit water, then the Interim A&R Plan will be updated to reflect this requirements and the closure costs will reflect the cost of treatment or other possible mitigation measures.

- AANDC (M.B.) – what if closure happens prior to end of mine life?
- BIM (F.B./E.M.) – notes that the deposit No. 1 is a mountain and that according to current mining plans (based on 18 Mtpa), there will be not physical pit until approximately year 12 of the mining operation. Hence, Baffinland will have at least 12 to 16 years of waste rock characterization, humidity test cells, test pile information, and operational monitoring data to inform the requirements of the final closure plan. To address the concerns of AANDC, BIM suggests that AANDC put forward a condition of the water licence that would ensure this is done.
- Reviewed the outstanding PHC commitments related to this topic:
  - #6 – AANDC (MB) - noted he recognizes now that model is not at a detailed stage at this point. But wants assurances that information on deep lakes will be something looked at in the future.
  - BIM – (J.M.) – Fair point, as we obtain more data and look into research of other deep lakes in northern climate we will include in updates to the interim closure plan.
  - AANDC – This seems acceptable approach moving forward on this item.
  - #14 and #15 & #19 – AANDC (MB) – Noted that BIM had committed to seepage sampling related to the AEMP to add a station. He notes that there is not much movement on mitigation measures. And the point was made that the NWB acknowledged at Tech meeting and PHC that any mitigations of filling the pit will not be screened by NIRB or NWB at this point in process. May still need to be addressed, issue is related to the security deposit – possible

accumulated risk over the upcoming years. The pit is in that category. A mitigation plan needs to be developed well in advance of the pit reaching development.

- BIM – Response – as noted 2012-2014 program ongoing, as data is generated will be updated in Interim closure plan. Again noted that there is not real pit for about 10-12 years so have time to obtain data (more drilling, test piles) and look at mitigation measures. Discussion as above that AANDC put forward a proposed water licence clause to reflect the concern noted in #14 and #15
- #17 – This was been dealt with as BIM as suggested a station in AEMP.
- #28 – This is still an ongoing issue with EC and BIM – may be something that will be presented with different view points and hearing and the Board will be left to decide.

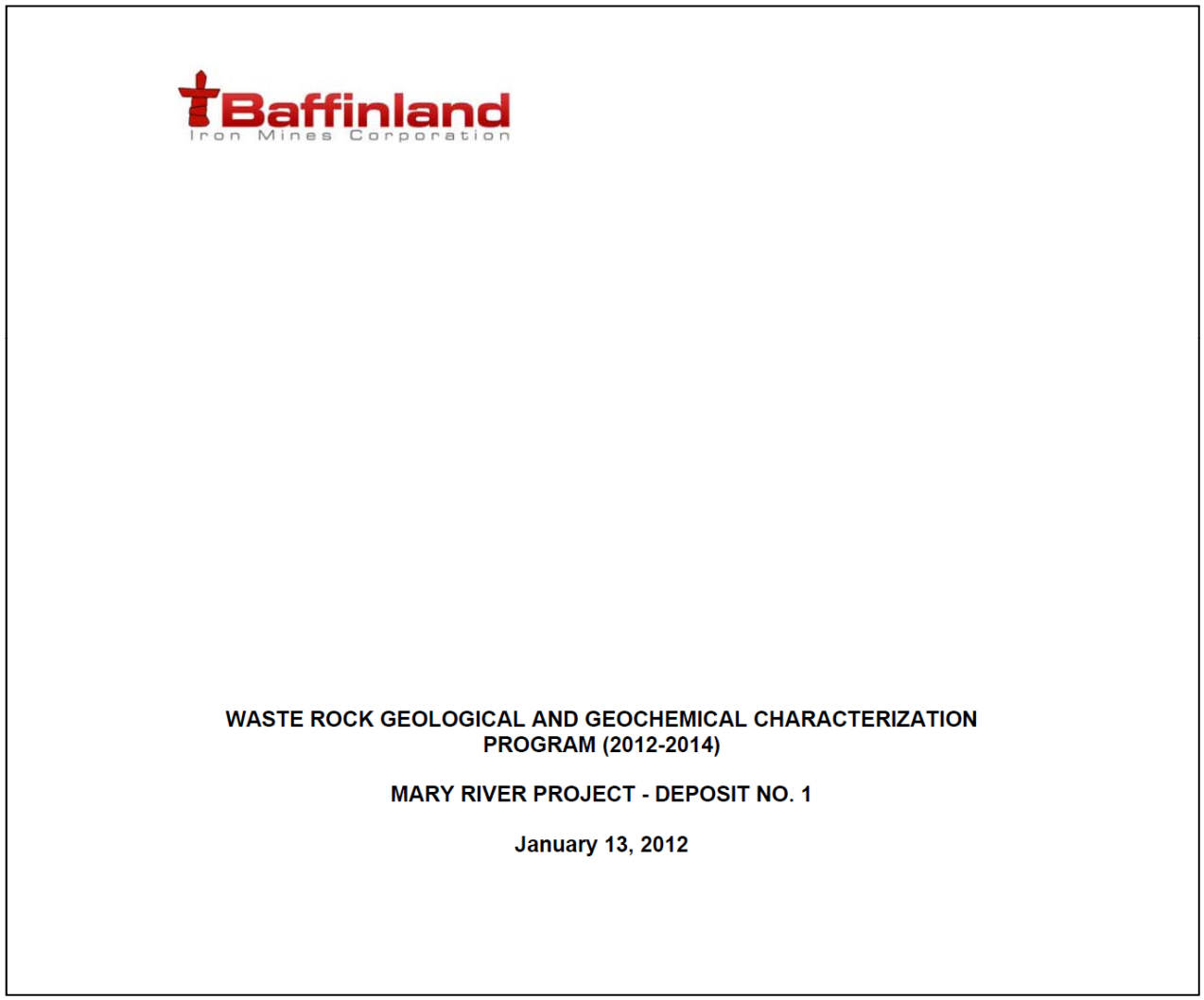
NWB (DH) – Final comments. Good discussion – there seems to be acknowledgement that plans need to be developed moving forward. There is time for this as a pit will not be developed for 10-12 years. There are still some concerns regarding securities.

Geochemistry and Water Quality Model Overview

Baffinland Mary River Project

Presentation at NRCan, February 25, 2013

2012 to 2014 Program



Baffinland Iron Mines Corporation

WASTE ROCK GEOLOGICAL AND GEOCHEMICAL CHARACTERIZATION PROGRAM (2012-2014)

MARY RIVER PROJECT - DEPOSIT NO. 1

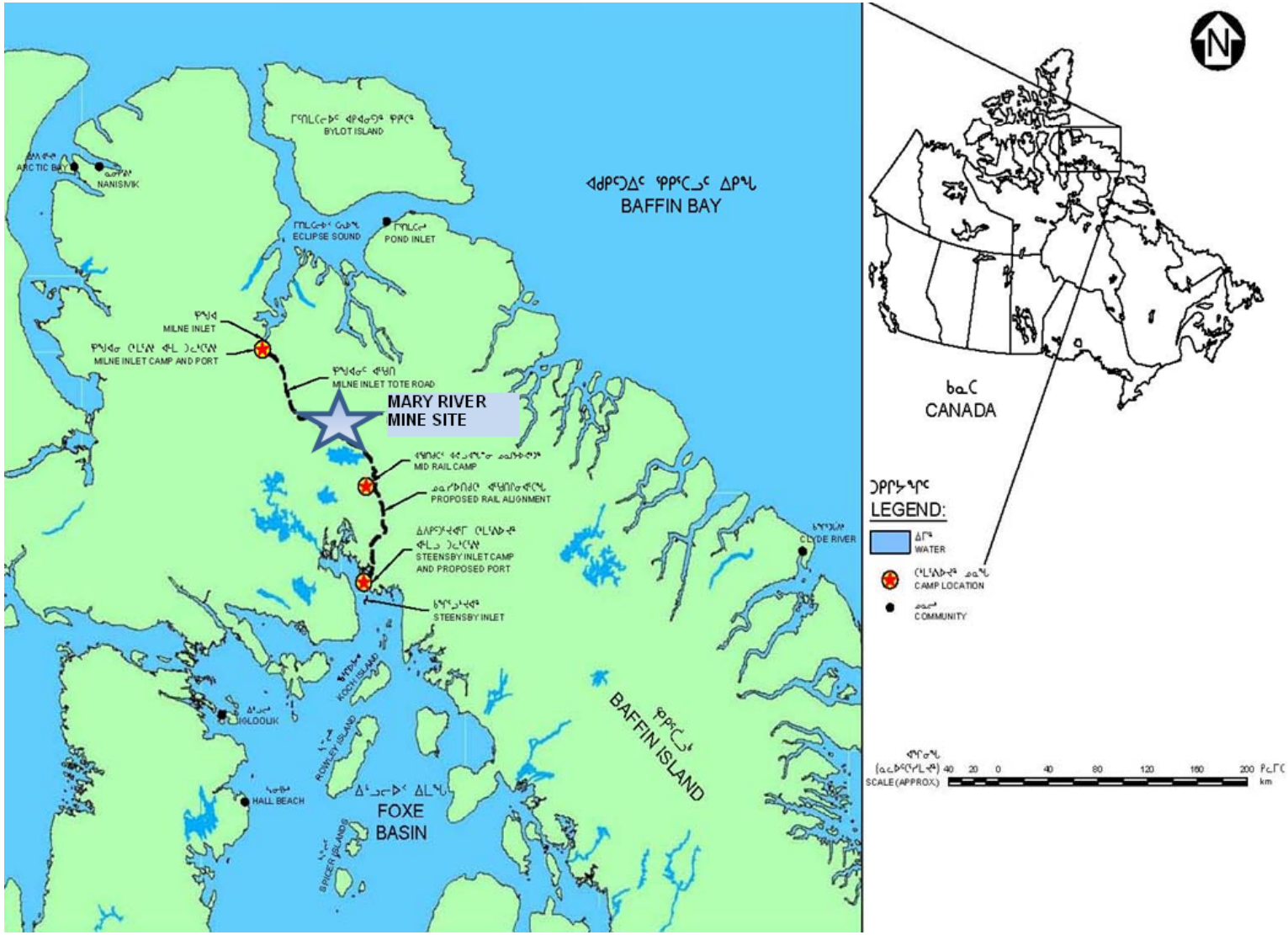
January 13, 2012

FEIS. Volume 3, Appendix 3B, Attachment 5.

Outline

1. Introduction
2. Summary of work completed in 2012
3. Waste rock characterization results
4. Updated in-pit waste rock geological model
5. Existing water quality model overview
6. Summary and Status

Site Location



Mary River Deposit 1 - Ore

- High grade Algoma type iron formation (direct shipping).
- Hematite, magnetite and mixed hematite-magnetite-specular hematite varieties.
- Deposit consists of a number of lensoidal bodies.
  - vary in their proportion of the main iron oxide minerals and impurity content of sulphur and silica (rarely manganese).

Summary of Sampling to 2011

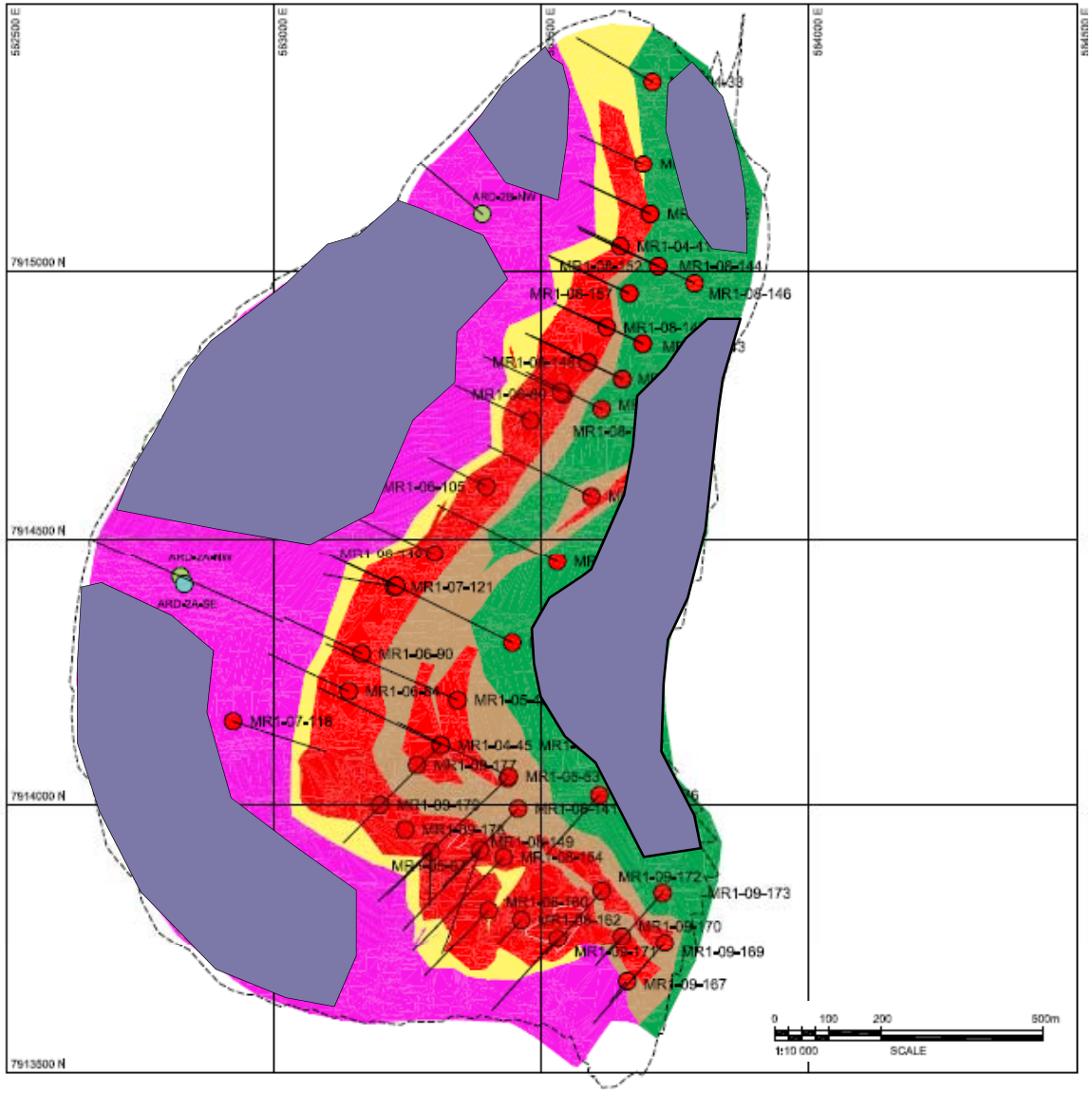
Numbers of Samples by Material Type

Program	Waste Rock	Ore	Overburden
KP 2006-2007	97	21	7
KP 2008	-	23*	-
AMEC 2010	180	-	-
AMEC/Baffinland 2011	377	-	-
Total	654**	44	7

* Bulk sample program

** Total number of in-pit samples is 613

Unsampled regions of pit (2011)



LEGEND:

- HIGH GRADE IRON FORMATION
- FOOT WALL SCHIST
- FOOT WALL WASTE (UNDIFFERENTIATED)
- HANGING WALL SCHIST
- HANGING WALL WASTE (UNDIFFERENTIATED)
- LIFE OF MINE PIT BOUNDARY

Unsampled regions of pit

2012 – 2014 Program Progress

- Waste rock drilling (1313 m – summer 2012).
  - Continuous (2 m) sampling for ICP metals and S (489 samples) from 5 boreholes, plus 230 sample subset for acid-base accounting (ABA).
  - Followup work being initiated (mineralogy, possible additional humidity cells).

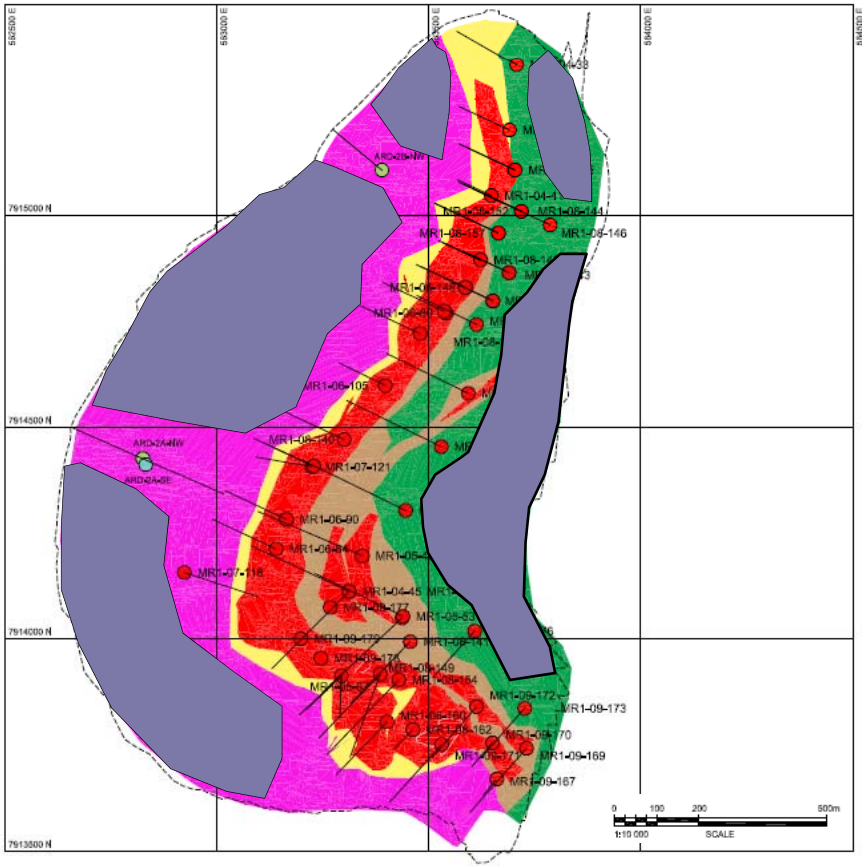
- Objectives of additional drilling and sampling:
  1. Provide more coverage of previously unsampled waste regions (drilling, sampling and ABA analysis completed).
  2. Better assess continuity of acid potential (AP) and neutralization potential (NP) and the potential for segregation (analysis in progress).

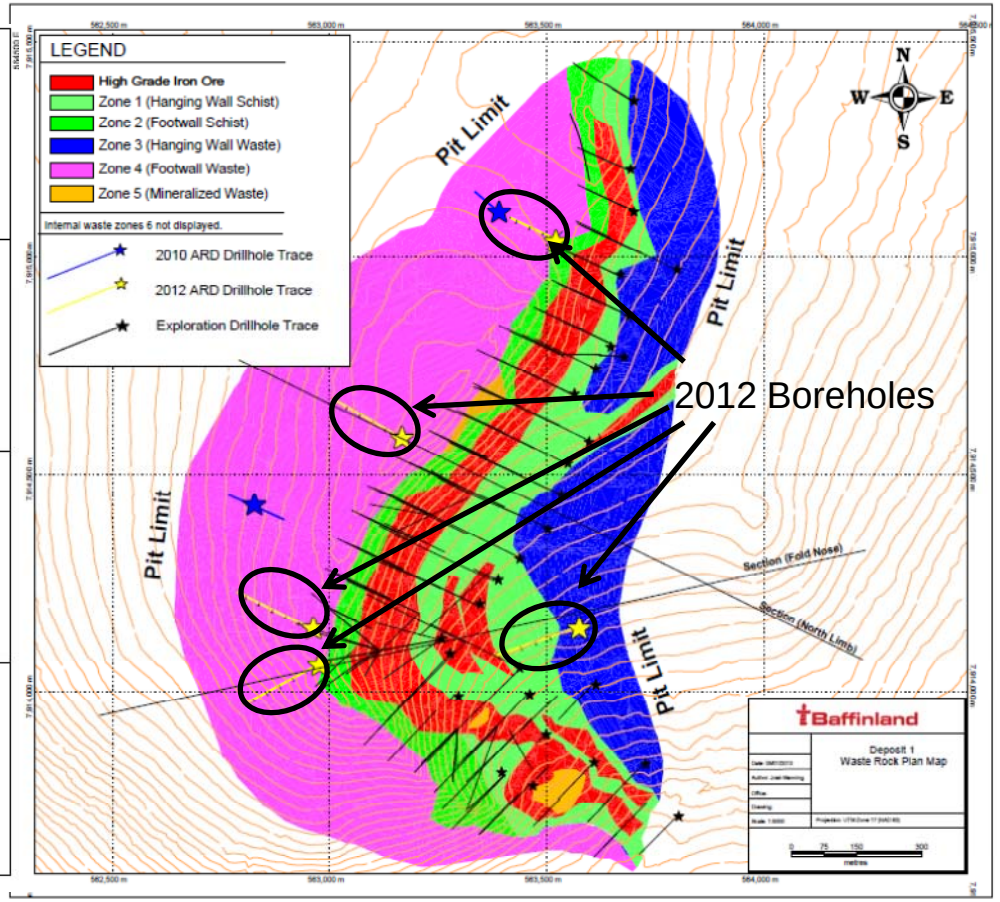
- Mineralogy (qualitative XRD of entire 2011 sample set).
  - Potential links between fine chlorite (and other silicates) and available NP are being explored.

2012 – 2014 Program Progress

- On-going humidity cell test work (since 2011).
  - 9 standard cells (80 weeks).
  - 8 carbonate depleted cells (64 weeks).
- Update of in-pit waste rock model (all ABA data to date).
- Site reconnaissance for potential field test pad materials and locations.

Waste Rock Drilling 2012





Mary River Deposit 1 - Waste

Waste Type	In-Pit Tonnage (Mt)	Waste (%)	Lithologies (in approximate order of abundance)
Hanging wall (HW)	77.5	14	meta-volcanic (tuff); greywacke; amphibolite; chlorite, mica or amphibole schist; ultramafite; and gneiss
Hanging wall schist (HWS)	139.6	25	chlorite, mica, or amphibole schist; amphibolite; greywacke; and meta-volcanic (tuff); inter-bedded zones of banded iron formation
Internal waste (IW)	2.1	0.4	schist; amphibolite; and meta-volcanic (tuff)
Mineralized waste (MW)	9.7	1.7	high grade iron formation (elevated Mn, S or P); and banded iron formation
Footwall schist (FWS)	74.1	13	chlorite, mica, or amphibole schist; gneiss; greywacke; amphibolite; and meta-volcanic (tuff); inter-bedded zones of banded iron formation
Footwall (FW)	263.0	46	gneiss; metasediments (e.g., greywacke); chlorite, mica or amphibole schist; and amphibolites
Total	566	100	

Sulphide is main source of S

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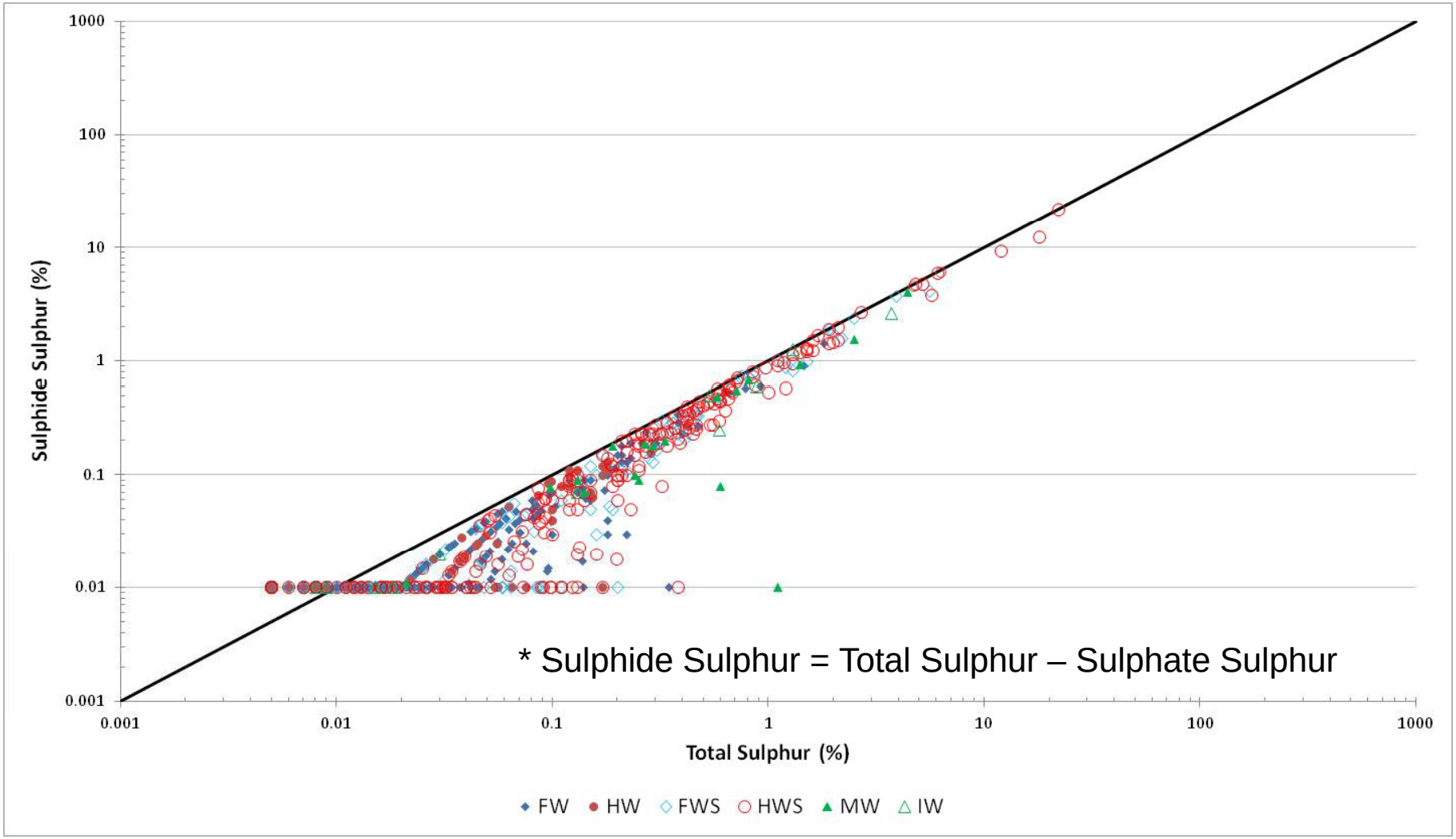
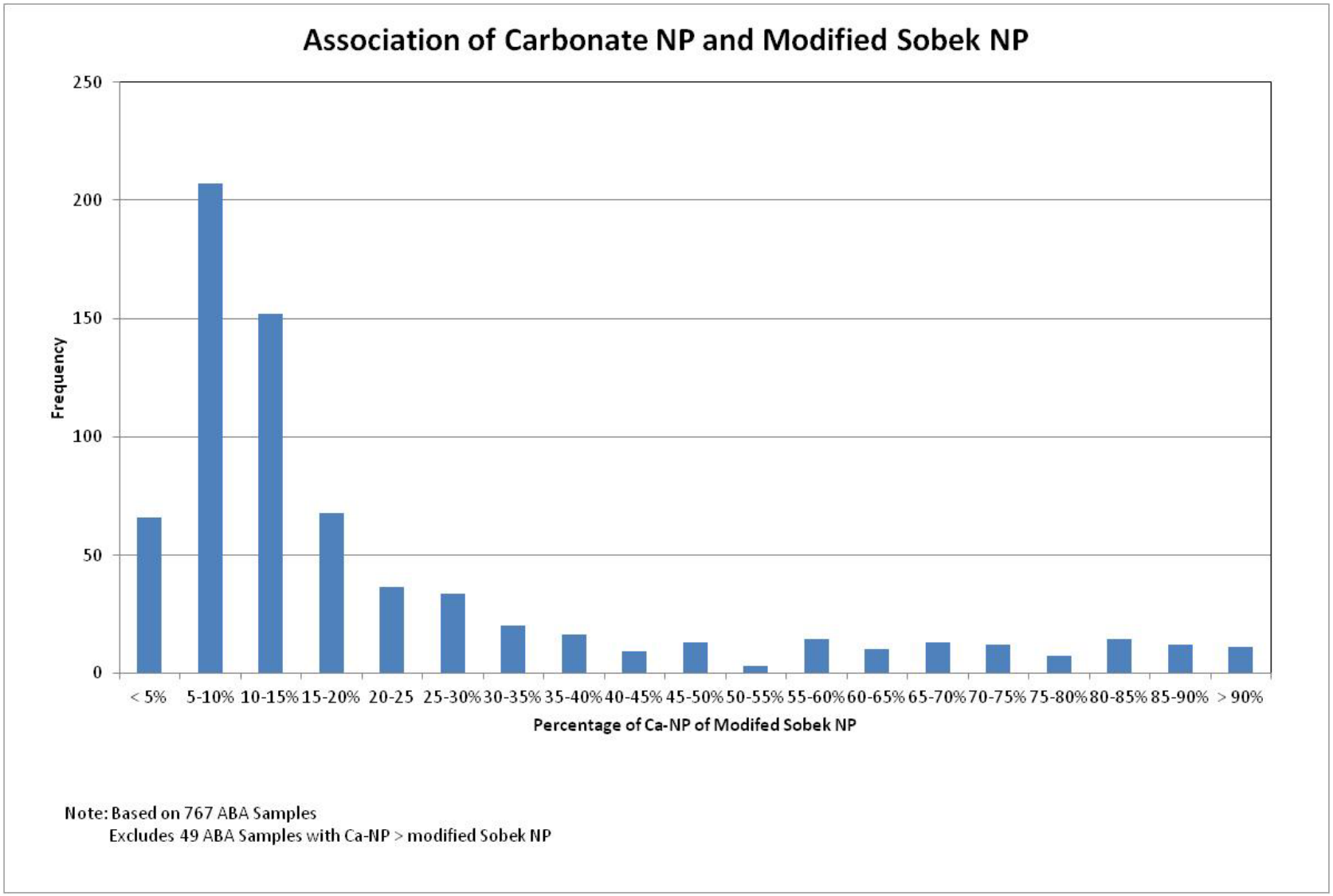
Total Sulphur vs. Sulphide Sulphur*



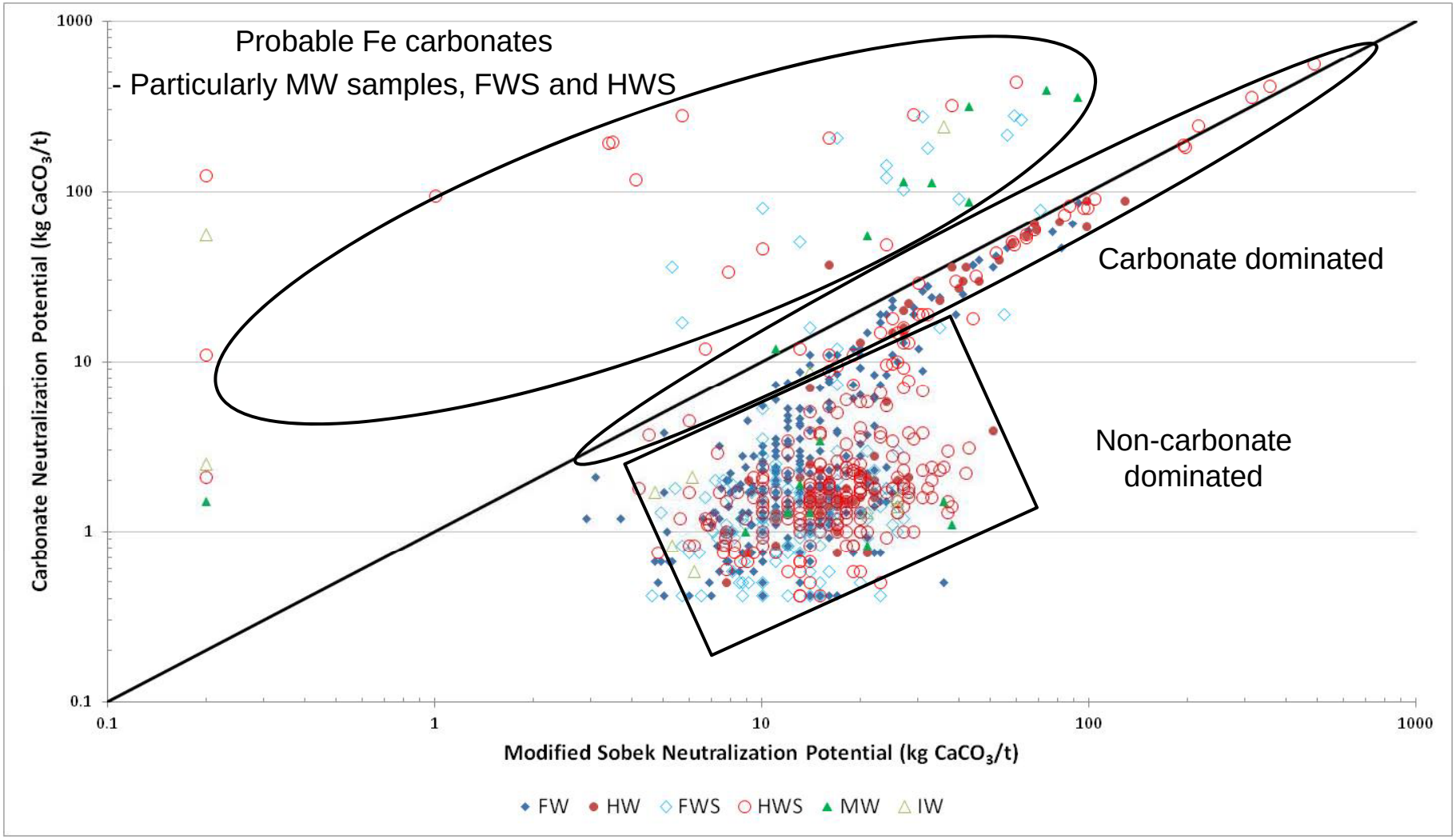
Materials have low carbonate neutralization potential (NP)



Note: Based on 767 ABA Samples
Excludes 49 ABA Samples with Ca-NP > modified Sobek NP

Forms of NP

Modified Sobek NP vs. Carb NP



NP vs. acid potential (AP)

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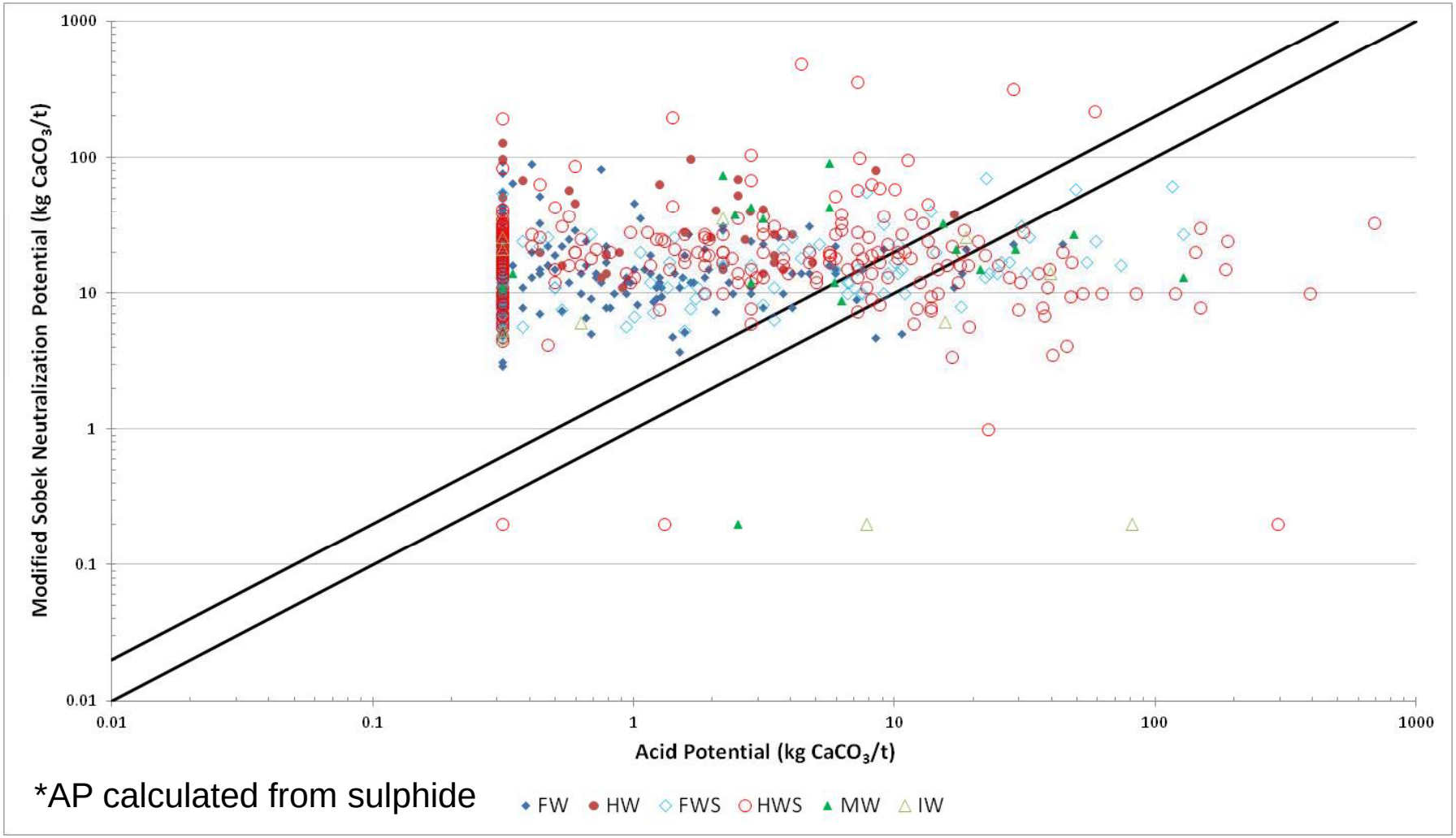
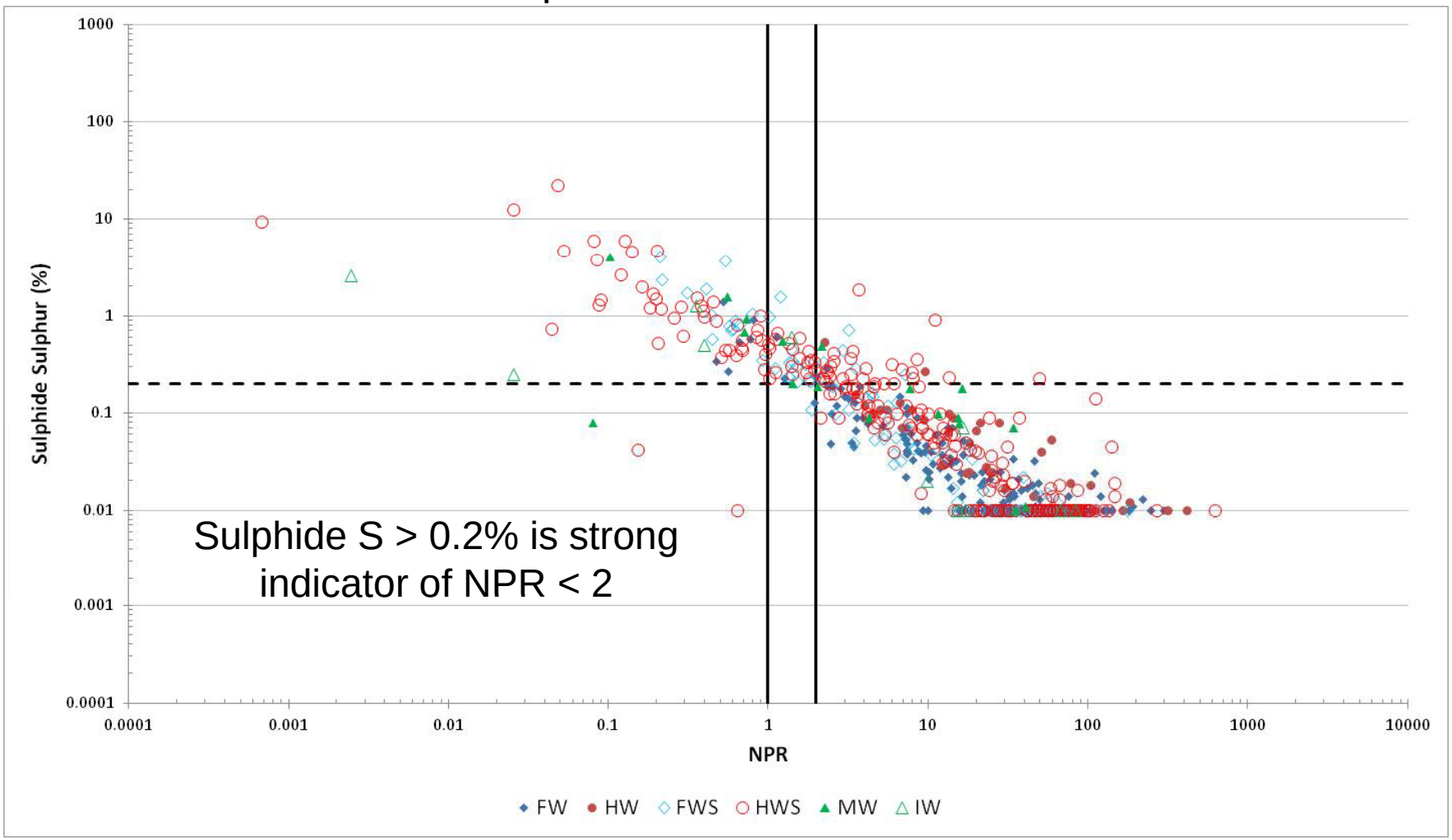
Modified Sobek NP vs. AP*



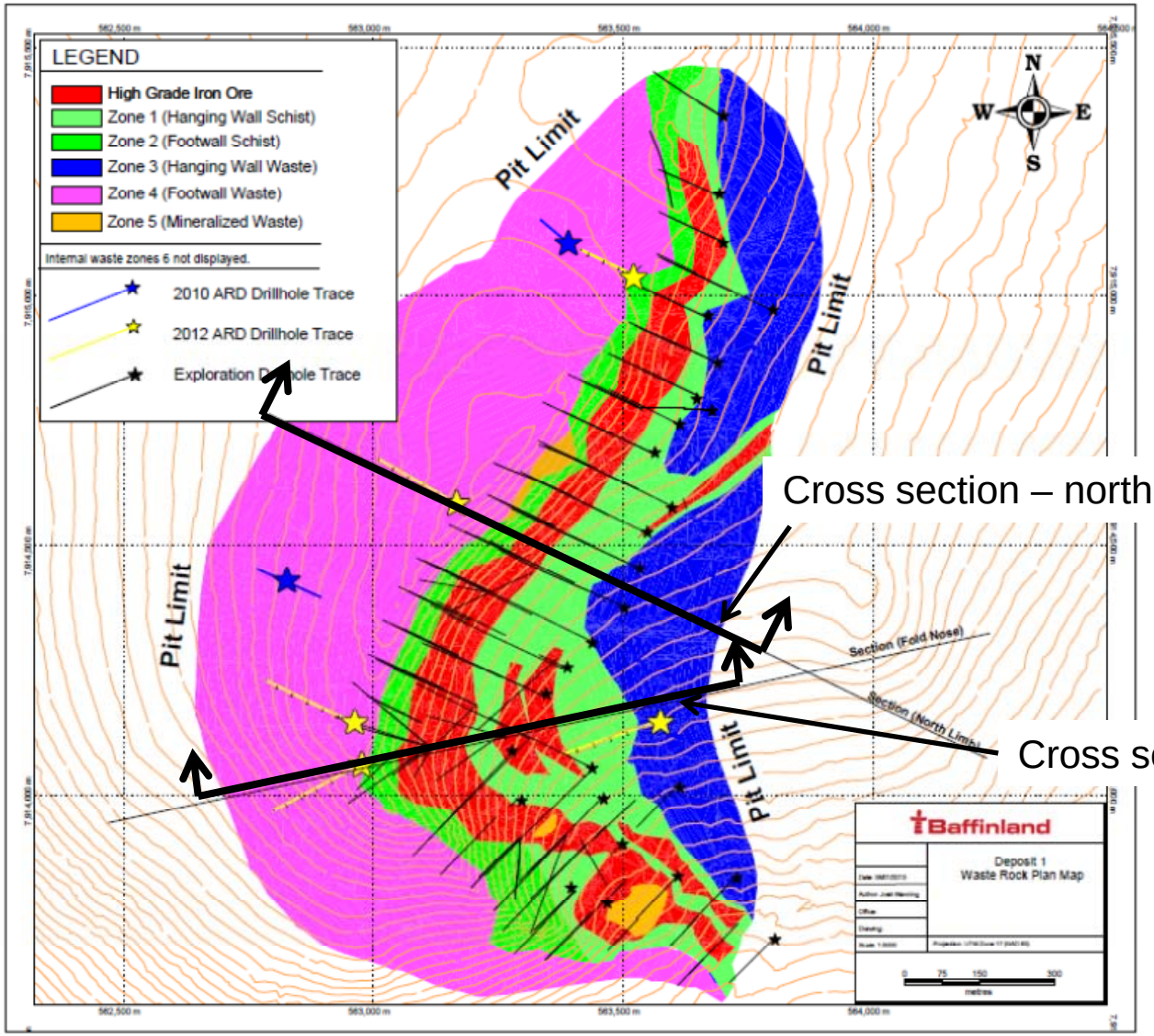
*AP calculated from sulphide

Sulphide S vs. NPR*



* Neutralization Potential Ratio (NPR) = Modified Sobek NP/AP

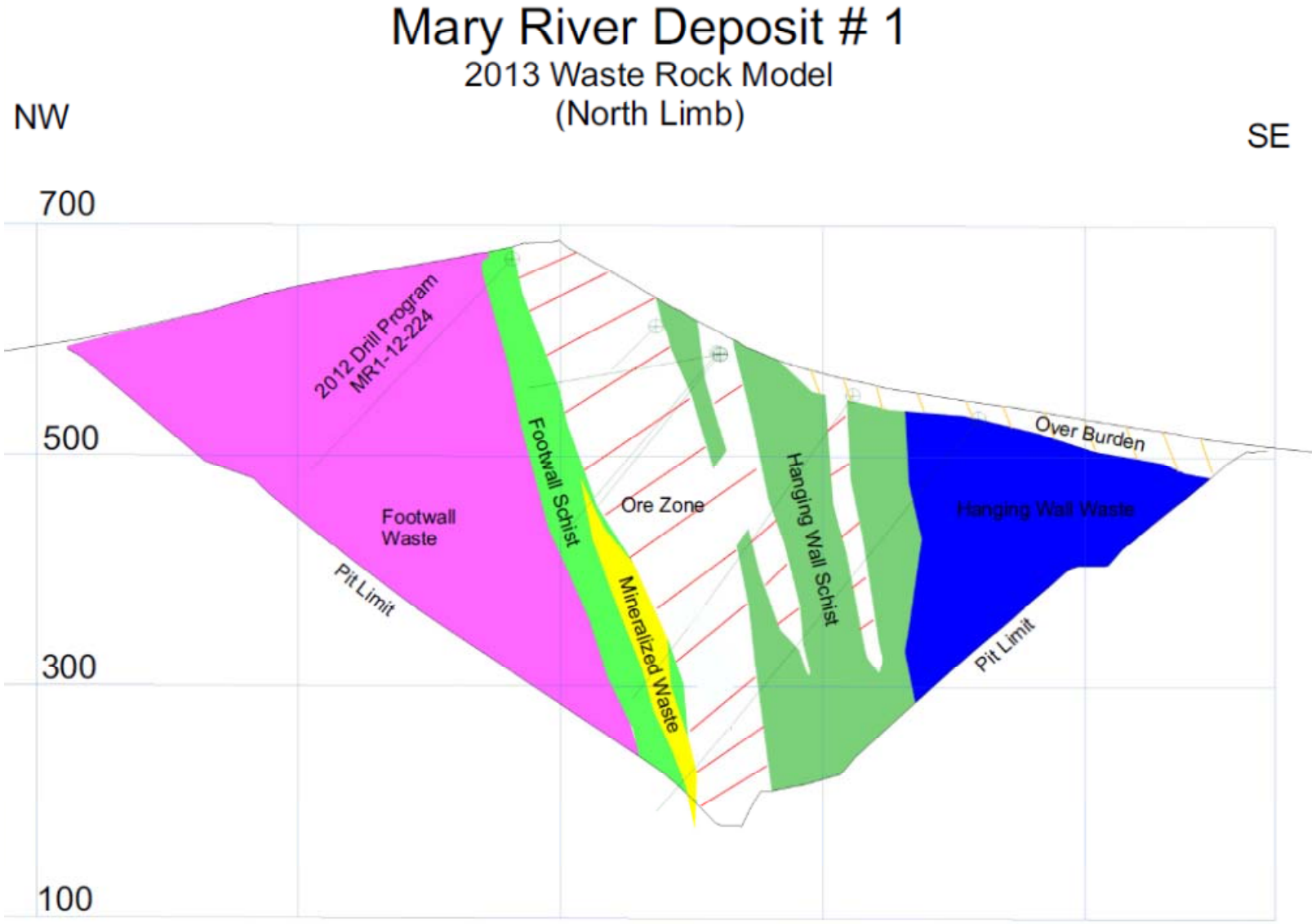
2012 Drilling and Updated Waste Rock Model (plan view)



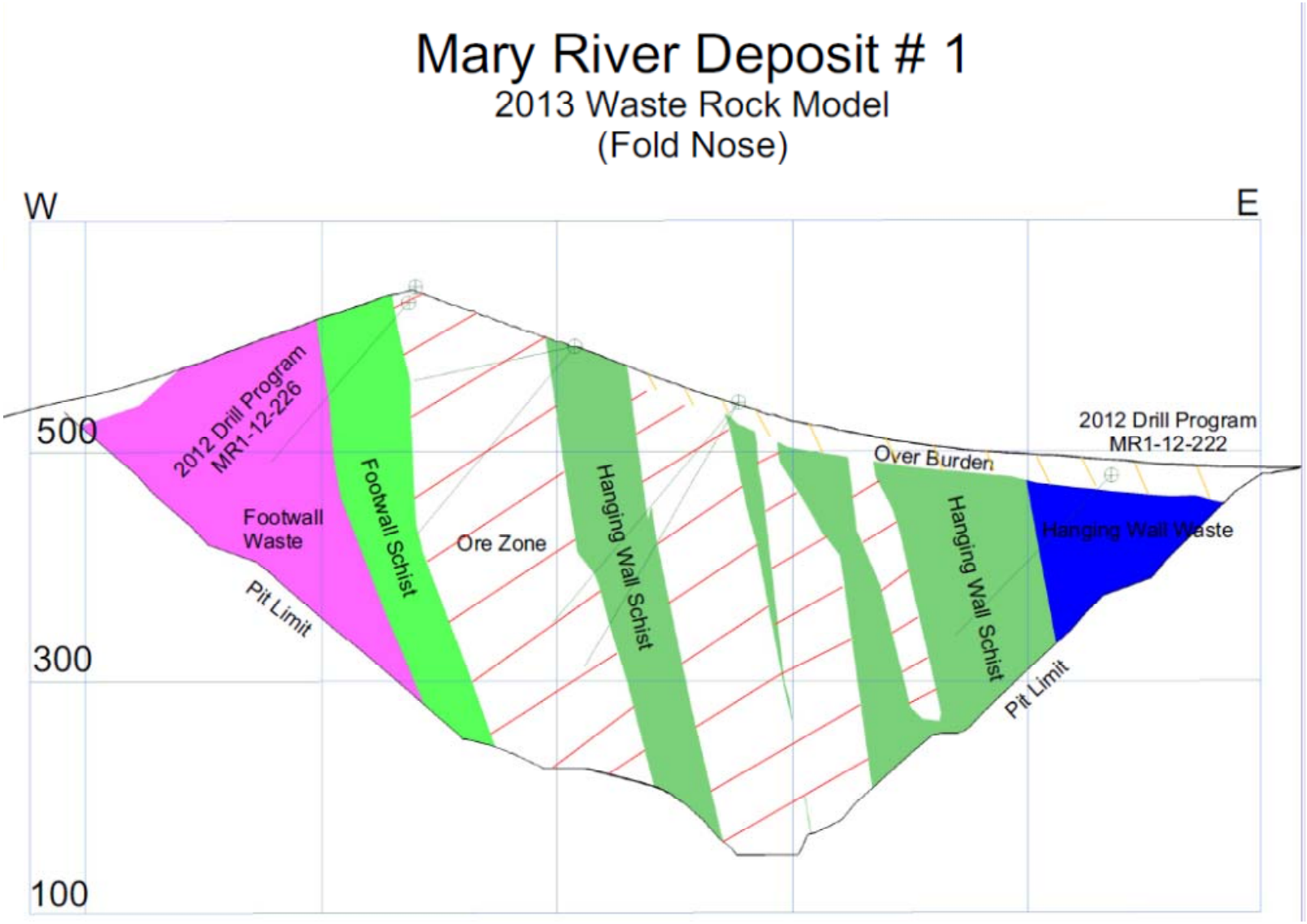
Cross section – north limb

Cross section – fold nose

Cross Section – North Limb



Cross Section – Fold Nose



Inferred PAG Tonnage

Based on the waste rock model potentially acid generating (PAG*) rock represents 10.9% of the total waste rock.

Waste Rock Domain	Tonnage (Mt)	No. Samples	Mean S %	Mean NPR**	% Samples NPR <2	PAG tonnage (Mt)
HW	77.5	61	0.10	17.7	0.0	0.0
HWS	139.6	260	0.68	1.6	27.7	38.6
IW	2.1	7	0.31	1.5	42.9	0.9
MW	9.7	21	1.06	1.3	38.1	3.7
FWS	74.1	161	0.30	2.4	15.5	11.5
FW	263.0	449	0.06	15.7	2.7	7.0
Total	566	959				61.8

* Assumed NPR < 2 represents PAG rock

** NPR = Modified Sobek NP/AP

2008 Kinetic Testing

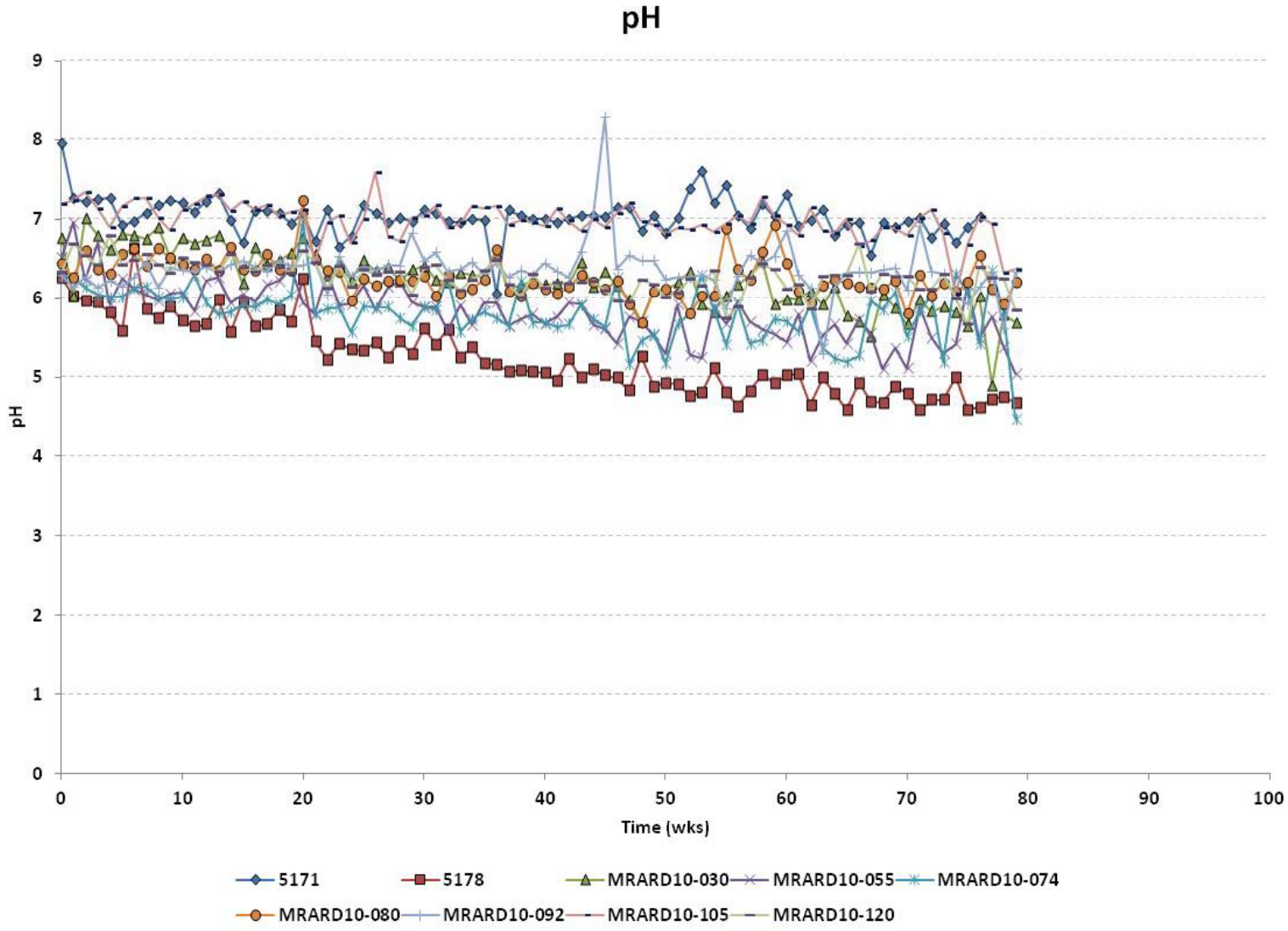
- Ten standard humidity cells were initiated by Knight Piésold in 2008 and operated for 53 weeks.
  - 7 of the samples had NPR <2.
  - pH for most samples remained generally circum-neutral for the duration of testing with the lowest steady pH in the range of 5.5 to 6.5 for two hanging wall and two footwall samples.
  - Generally low metal release rates.

Humidity Cell Summary

AMEC Standard Humidity Cells (currently 80 weeks operation)

- 9 cells representing a range in lithologies and
  - 0.2 to 1% sulphide.
  - Range of NPR (0.45 to 2.5, 5 cells NPR <1).
  - Low carbonate NP (0.5 to 5.5 kg $CaCO_3$/t) and carbonate NPR <1.
- All but two cells have essentially undetectable alkalinity.
- Most cells continue to exhibit circum-neutral pH.
- Minimum steady pH observed is 4.6 for sample with 0.9 % sulphide (elevated for this site).
- Remainder of samples exhibit steady to fluctuating pH in the range of 5.5 to 7 (a few exhibiting possible gradual decline).
- Elevated Ni, Zn (Cu, Co and Cd) in two cells (pH 4.6 to 5.5).

pH of Standard Cells

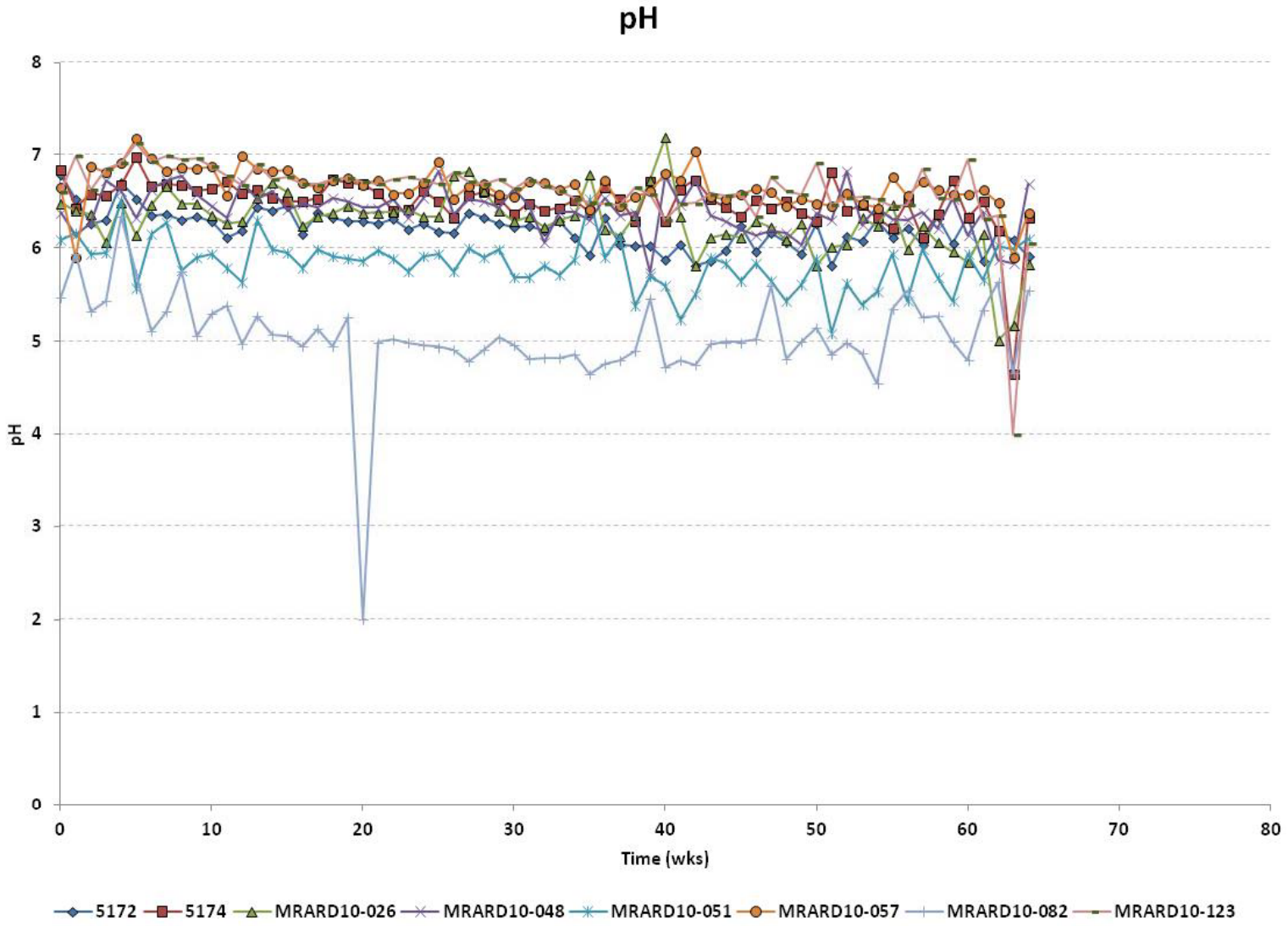


Humidity Cell Summary

Carbonate Depleted Cells (currently 64 weeks operation)

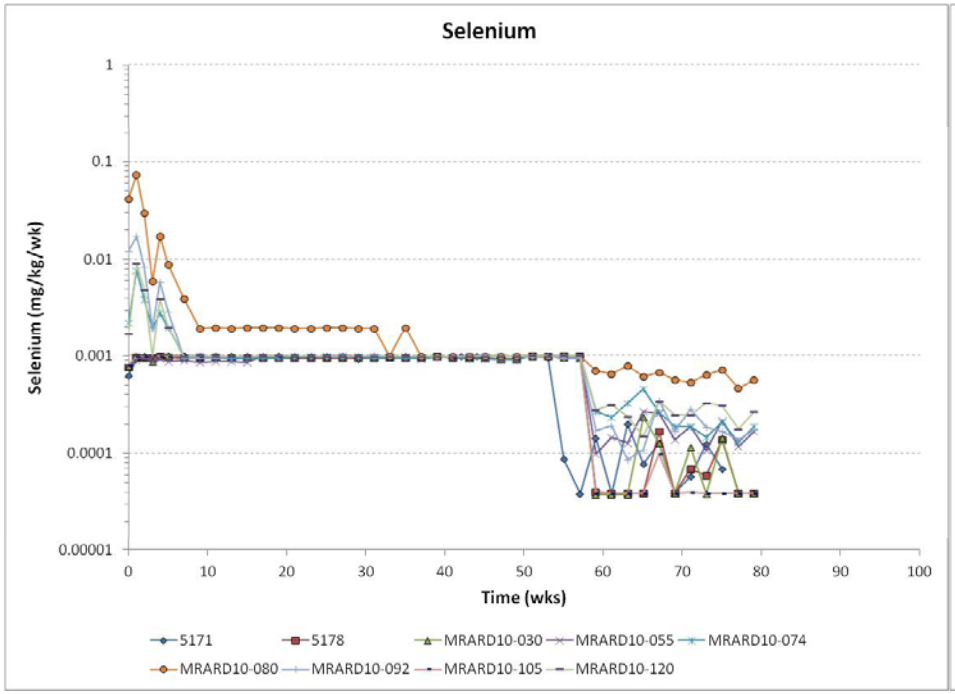
- 8 cells representing a range in lithologies and 0.02 to 0.4% sulphide.
- Most cells still exhibiting circum-neutral pH.
- Minimum observed steady pH was 5 for one cell.
- Remainder of samples exhibit steady to fluctuating pH in the range of 5.5 to 6.5.
- Generally low metal release rates.

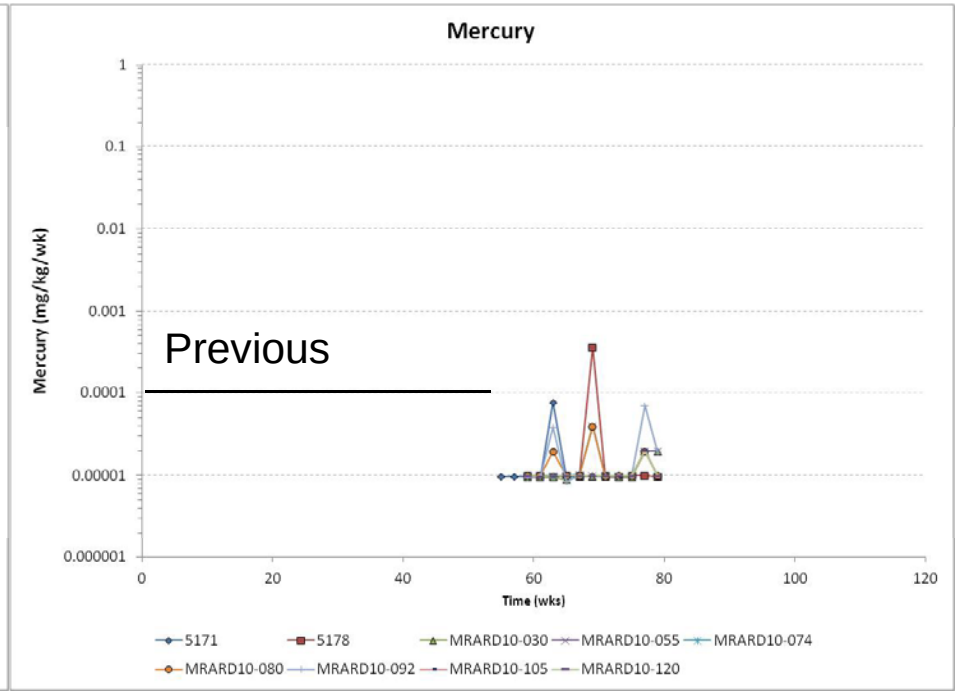
pH of Carbonate Depleted Cells



Se and Hg

- Analytical detection limits in humidity cells for Se and Hg were reduced in 2012.
- Standard cell results are shown. NP depleted cells are similar to lower.





Geochemical Models

- Nordstrom (2000)

  "A geochemical model is a theoretical construct based on principles of physical chemistry and hydrogeologic systems. Geochemical models do not usually provide unique answers but they do constrain the possibilities and they often integrate a large amount of data."

Mine Water Quality Prediction

- Model goals:
  - Predict the approximate mine water quality during operations and at closure in order to:
    - Determine if the mine water will likely exceed applicable environmental criteria/standards.
    - Determine if the mine water will require treatment, and if so, what potential treatment methods.
- Flexible, 'living' model that can be modified as the mine develops to incorporate new data
- Conservative, uses worst-case scenarios and data
- What the model won't do:
  - Predict exact concentrations for any given time.

General Model

- Mass-balance approach:

  $$\text{Concentration} = \frac{\text{Mass of Available soluble metals}}{\text{Mine flood water Volume}}$$

- Exposed surfaces are assumed to oxidize and produce soluble metal compounds.
- These compounds accumulate on the mine surfaces until flooded, when they are released to the mine water in dissolved form.
- Cold climate allowance for reduced sulphide oxidation during winter based on available studies.
- Spreadsheet-based, utilizes existing site data and information, and other site data where applicable.

Water Quality Model Assumptions

- Key Overall Model Assumptions:
  - Available humidity cell data at the time included 53 weeks for previous KP cells and 21 weeks for AMEC standard humidity cells (no acidic cells).
  - ARD on-set time for exposed PAG is 5 years based on carbonate depletion calculations.
  - Decreased sulphide oxidation rates in response to cold climate.
- Key Pit Model Assumptions
  - PAG quantities on pit walls assumed to be the same as overall PAG quantities for each waste unit.
  - PAG drainage quality was based on NAG leachate metal results scaled to an estimated sulphate release (acid conditions) for low sulphide materials.
- Key Waste Rock Stockpile Model Assumptions
  - Segregation and encapsulation of any PAG rock within interior (permafrost zone) of stockpile.
  - Seepage only occurs within the active layer (10 m thick non PAG rock) in stockpile and no infiltration is lost to permafrost zone (steady-state).

Existing Water Quality Model Results

- Mass balance based model for waste rock indicates drainage water quality generally low in metals (below MMER) when PAG managed within aggregating permafrost within the pile.

- Mass balance based model for pit water quality during operations.
  - Predicts As, Cu, Pb, Ni and Zn will be below MMER limits during mine life.
  - An overall decline in water quality of pit drainage is predicted over life of mine due to assumed ARD on-set on pit walls potentially resulting in pH values below the MMER limit of 6.

Summary

- Updated geological waste rock model indicates that little PAG waste rock is found in the outlying regions (HW and majority of FW) that form a large portion of final pit wall.
- Greater quantities of PAG material appear to be located in schistose-iron formation bearing regions proximal to the ore zone.
  - These wastes will be encapsulated within the waste rock stockpile.
- Based on the current waste model estimate a smaller overall quantity of PAG (~ 11%) is expected.
- Humidity cells continue to indicate generally low metal release rates.
  - Exception is two anomalous cells with elevated Ni and Zn.
- Updates to water quality models are planned.

New Data Impact on Model Status

- Improved waste rock geology model (additional drilling).
  - Overall reduction in anticipated PAG rock (15% total to 10%).
  - Generally less PAG expected in peripheral areas of the pit leading to lower PAG exposure on final pit wall.
- Prolonged near steady pH (pH 5 to 6.5) in non-carbonate humidity cells under laboratory conditions suggesting potentially extended lag time to acid on-set in most PAG materials under field (cold conditions).
- Generally declining trend in metal release rates for most humidity cells expected to lead to overall decrease in modeled non-PAG rock metal loadings.
- Lower detection limit for Se and Hg in humidity cells expected to lower release rates for these parameters by ca. one order of magnitude.
- Lack of site specific acidic source term for PAG material remains a limitation in predicting future pit water quality.