

KEYPLAN

FOR INFORMATION

- NOTES:
- 1. TOPOGRAPHY PROVIDED BY TERRAPOINT CANADA INC.
 - 2. COORDINATE GRID IS SHOWN IN UTM (NAD83) ZONE 17 AND IS IN METRES.
 - 3. AS-CONSTRUCTED INFORMATION FOR EXPLORATION CAMP PROVIDED BY GENIVAR IN 2008.

LEGEND:

	WATER		PLANNED BORROW AREA		RIVER/STREAM/DRAINAGE		COMMERCIAL LEASE
	QUARRY		EXISTING ROCK QUARRY		RAW WATER INTAKE PIPELINE		PROJECT DEVELOPMENT AREA
	ROAD						

DESIGNED BY C. LEISTNER DATE 2014-10-21	DRAWN BY J. BAJAGIC DATE 2014-10-21
CHECKED BY S. POTTER DATE 2014-10-21	DISCIP. ENGR. A. GRZEGORCZYK DATE 2014-10-21
PROJ. DES. COORD. T. THERTELL DATE 2014-10-21	PROJ. ENGR. J. CLELAND DATE 2014-10-21
PROJ. MGR. J. CLELAND DATE 2014-10-21	

ISSUE AUTHORIZATION

REV.	ISSUE FOR	AUTH.	BY	DATE
A	ISSUE FOR USE	C.L.	A.G.	

HATCH

Baffinland

MARY RIVER PROJECT

MINE SITE
INFRASTRUCTURE FOOTPRINT
WORK PLAN 2015

SCALE
1:15000
OR AS NOTED

DWG. NO.
H349000-4000-00-015-0021

REV.
A

ORIGINAL SHEET SIZE: ISO A1 (841 x 594)

Appendix B:
2015 Marginal Closure and Reclamation
Financial Security Estimate
(H349000-1000-07-126-0019)

**Baffinland Iron Mines Corporation
Mary River Project
2015 Marginal Closure and Reclamation Financial Security Estimate**



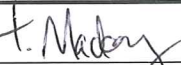
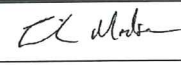
						
2014-10-31	0	Approved for Use	C. Gonzalez	A. Grzegorzczuk	T. Mackay	E. Madsen
Date	Rev.	Status	Prepared By	Checked By	Approved By	Approved By

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(2015)**

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1. Introduction

1.1 Purpose

The purpose of this document is to provide a summary of the financial security estimated to be required for marginal closure and reclamation liability increase associated with the Mary River Project 2015 Work Plan. Estimated costs are attributed to the activities required to meet the reclamation objectives outlined in the Mary River Interim Mine Closure and Reclamation Plan (BAF-PH1-830-P16-0012) for the Mary River Project (the 'Project'). This work is being conducted under the Qikiqtani Inuit Association Commercial Lease (No. Q13C301), the Type 'A' Water Licence, 2AM-MRY1325, construction Type 'B' Water Licence, 8BC-MRY1416, and the exploration Type 'B' Water Licence, 2BE-MRY1421.

The 2015 Complete Project Financial Security Assessment is intended to be inclusive of all closure and reclamation costs estimated to be required for a 3rd Party Contractor to perform the work in a 'worst-case' scenario for all disturbed areas, project components and project activities existing on the Mary River Project site upon conclusion of the 2015 Work Plan.

1.2 Process

The 2015 Marginal Closure and Reclamation Financial Security Estimate was developed incorporating current site conditions and all applicable activities described in the Baffinland Iron Mine Corporation's 2015 Work Plan (October 31, 2014). The estimated marginal closure and reclamation financial security required to account for 2015 planned work is intended to be aggregated with previous Project closure and reclamation security bonding. Estimated project-wide closure and reclamation security bonding totals for the Mary River Project to-date are presented in Table 7-1. The estimated marginal closure and reclamation security required to account for the 2015 Work Plan is proposed to be aggregated with the 2014 Complete Project Financial Security Assessment H349000-1000-07-126-0018, Rev. 1 (see Appendix C) and these totals are inclusive of all closure and reclamation costs estimated to be required for a 3rd Party Contractor to perform the work in a 'worst-case' scenario for all disturbed areas, project components and project activities existing on the Mary River Project site upon conclusion of the 2015 Work Plan including legacy exploration phase liabilities. See Section 2.1 for further discussion on the 2014 Complete Project Financial Security Assessment which was a financial security 're-baseline' of the Mary River Project conducted in 2014 between the QIA and Baffinland. See Section 5.1 for more discussion on the specific 'worst-case' closure scenario considered for the purpose of the 2015 Marginal Closure and Reclamation Financial Security Estimate.

1.3 Applied Rates

The 2015 Marginal Closure and Reclamation Financial Security Estimate was developed by applying the direct cost unit rates established in the 2014 Complete Project Financial Security Assessment (to quantities of functional units of each activity or project component proposed under the 2015 Work Plan to establish a direct cost estimate). Based on the direct cost estimate, indirect costs required to support direct cost work were accounted for in line with assumptions and considerations applied in the 2014 Complete Project Financial Security

Assessment. Indirect costs are additional costs outside of costs required for direct reclamation activities that are required to ensure reclamation objectives are met. The sum of direct and indirect estimated costs for the 2015 Work Plan was then differentiated separately based on: water license authorization (Type A/B Water Licence activities); geographic liability allocation (IOL vs. Crown land); and relation to land or water liability. Appendix A presents the Mary River Project Estimate Breakdown Structure (EBS) which demonstrates how this process accounts for all activities or project components proposed under the 2015 Work Plan and all previous project financial security liabilities as described in the 2014 Complete Project Financial Security Assessment.

2. Regulatory Context

An annual adjustment to reclamation security is required under Section 9.2 of the Commercial Lease, No. Q13C301, agreed to between Baffinland Iron Mines Corporation (Baffinland) and the Qikiqtani Inuit Association (QIA), as well as a requirement under the Type 'A' Water Licence 2AM-MRY1325 (Part J, Item 3). The 2015 Marginal Reclamation and Closure Security Estimate therefore represents Baffinland's proposed annual adjustment to the reclamation security for the work described in the 2015 Work Plan to be completed. The 2015 Marginal Closure and Reclamation Security Estimate has been developed in accordance with conditions outlined within Section 9.2 of the Commercial Lease; conditions outlined within Type A Water Licence 2AM-MRY1325, Part J, Item 3 and Schedule J; and in consideration of the QIA Abandonment and Reclamation (A&R) Policy (QIA, 2013). The amount of security required to be posted following the Annual Security Review (ASR) is based on an estimate of the highest reclamation liability in the upcoming year¹ or 'worst case' scenario.

2.1 2014 Mary River Project Financial Security 'Re-baseline'

On October 31, 2013, in conjunction with Baffinland's 2014 Work Plan, Baffinland submitted the 2014 Marginal Reclamation and Closure Security Estimate, H349000-1000-07-126-0017, for the Mary River Project (the Project) to the Nunavut Water Board (NWB), the QIA, and Aboriginal Affairs and Northern Development Canada (AANDC). The 2014 Marginal Reclamation and Closure Security Estimate represented Baffinland's proposed annual adjustment to reclamation security for 2014. The NWB invited AANDC, QIA and other stakeholders to provide comments or similar updated estimates regarding the reclamation liability estimate based on the scope of Baffinland's activities and undertakings for the upcoming 2014-2015 season. As outlined by a Nunavut Water Board letter on January 23, 2014² discussions, clarifications and amendments took place between relevant parties and agreement was achieved with NWB, QIA, AANDC and Baffinland for the 2014-2015 year that Baffinland's proposed additional amount of \$3,959,000 (\$3,793,000 plus \$166,000) should be added to the global financial security amount. This agreement however was contingent on a

¹ As per Type 'A' Water Licence 2AM-MRY1325, Schedule C, Part 6, Item c.

² Nunavut Water Board, Letter dated January 23, 2014. Re: Licence No. 2AM-MRY1325, Baffinland Iron Mines Corporation Type "A" Water Licence, Mary River Iron Mine Project: Direction from Nunavut Water Board Under the Annual Security Review Process Established Under Part C and Schedule C of the Water Licence

good faith understanding between Baffinland and QIA³ that although this amount was agreed to be held for the current period there were still discrepancies between the QIA estimated closure and reclamation cost and the closure and reclamation cost proposed by Baffinland. The NWB recognized this issue and it was acknowledged that there may be adjustments to the global security amount in subsequent years as continued discussions regarding the calculation of security under the Commercial Lease may result in further submissions, changes and refinement to the respective positions of the QIA and Baffinland when the NWB and the parties embark on the ASR process for the 2015-2016 season⁴.

To address the issue, the QIA and Baffinland agreed to engage in a consultation process to seek resolution for the discrepancies in the estimated closure and reclamation costs of the Project by 're-baselining' the Project's closure and reclamation financial security estimate based on project specific unit costs up to and including the completion of the 2014 Work Plan activities. The goal of this consultation process was to establish agreement on a closure and reclamation cost value for all components of the Mary River Project upon conclusion of the 2014 Work Plan with a secondary objective of establishing a set of assumptions/unit rates that can be used moving forward into future ASR processes. This process was termed the Mary River Project '2014 Complete Project Financial Security Assessment'.

The 2014 Complete Project Financial Security Assessment development process was conducted February through October 2014 between the QIA, Baffinland, and their respective technical representatives. The development process included monthly meetings, a site visit, and teleconferences to facilitate resolution of the discrepancies in the estimated closure and reclamation costs of the Project.

In October 2014, upon conclusion of the 2014 Complete Project Financial Security Assessment development process, Baffinland submitted to QIA the 2014 Complete Project Financial Security Assessment Report (H349000-1000-07-126-0018) which documents the agreed estimating guidelines, procedures, assumptions and results used in the preparation of the functional site specific unit costs, quantities, direct costs and indirect costs required for the 2014 Complete Project Financial Security Assessment. Although some items have been identified as requiring further discussion, as respectively noted in the report, the 2014 Complete Project Financial Security Assessment is the proposed basis moving forward for the purpose of future ASR process and presents the unit costs/assumptions for which the 2015 Marginal Closure and Reclamation Financial Security Estimate are based. Baffinland's position is the aggregate of the 2015 Marginal Closure and Reclamation Financial Security Estimate and the 2014 Complete Project Financial Security Assessment represent the total global closure and reclamation costs estimated to be required for a 3rd Party Contractor to perform the work in a 'worst-case' scenario for all disturbed areas, project components and project activities existing on the Mary River Project site upon conclusion of the 2015 Work

³ Baffinland Iron Mines Corporation and the Qikiqtani Inuit Association joint submission, filed with the NWB on January 15, 2014

⁴ Nunavut Water Board, Letter dated January 23, 2014. Re: Licence No. 2AM-MRY1325, Baffinland Iron Mines Corporation Type "A" Water Licence, Mary River Iron Mine Project: Direction from Nunavut Water Board Under the Annual Security Review Process Established Under Part C and Schedule C of the Water Licence

Plan. See Appendix C for the full 2014 Complete Project Financial Security Assessment Report.

3. 2015 Marginal Activities and Closure and Reclamation Cost Estimate

3.1 2015 Planned Marginal Activities

The 2015 Marginal Reclamation and Closure Security Estimate was developed to estimate the closure and reclamation security required for planned activities not captured in previous estimates of the Project⁵. As described in the 2015 Work Plan (Baffinland, October 31 2014), planned marginal work in 2015 is being conducted under the amended Project Certificate No.005, QIA Commercial Lease No. Q13C301, Type 'A' Water Licence 2AM-MRY1325 and, Type 'B' Water Licence 8BC-MRY1416. Work activities planned to occur in 2015/2016 primarily relate to completion construction activities and on-going operations work and include:

- The continued development and construction of infrastructure required at Milne Port and the Mine Site for the Mary River Project.
- Development and operation of the mine, ore crushing and land transportation, stockpiling and marine shipment of ore.
- At Milne Port, vessels carrying fuel, equipment and supplies for use at both the Mine Site and Milne Port will arrive during open water (approximately between mid July and mid October 2015). Material, fuel and supplies required for construction and operational activities will be transported to the Mine Site year round via the Tote Road.
- Ongoing environmental baseline data collection and geotechnical drilling will continue to support the construction and operation of the Project. These activities will resume at the Milne Port site, along the Tote Road, at the Mine Site, at numerous quarry sites and at other Project development areas.
- Continued environmental monitoring in accordance with the approved NIRB Project Certificate, licences, authorizations management plans and environmental effects and monitoring programs.
- Continued archaeological surveys at project component areas, as required.
- Operation of the aerodrome at the Mine Site, which will support year round passenger and freight service by aircraft. Adjustments to the existing aerodrome flight path to improve aviation safety at Mary River Mine Site.
- Continued fuel transfer from Milne tank farm to the Mine Site tank farm along the Tote Road to support ongoing construction and operations activities.

⁵ Previous reclamation security applied to the Project is described in the 2014 Complete Project Financial Security Assessment (H349000-1000-07-126-0018, Rev. 1).

- Use of additional Jet A (Type-1) Fuel Tanks at the Mary River Mine Site.
- Continue to construct remaining earth/rock fill for laydown areas, the ore dock, ore stockpile pad, runoff sedimentation collection ponds, and local site roads.
- Potential design and construction of a new landfarm at the Mary River Mine Site if it is deemed necessary during 2015.

4. Planned Progressive Reclamation in 2015

There will be continued progressive reclamation of areas of currently used and previously used in association with exploration and construction phases of the Project. It should be noted no progressive reclamation credits have been applied for in the 2015 Marginal Reclamation and Closure Security Estimate for any planned progressive reclamation conducted in 2015 or any progressive reclamation completed in 2014. Progressive reclamation plans in 2015 will include:

- Ongoing long term management of calcium chloride salt storage and use at the Project Site. This includes waste segregation of salt bags and proper disposal of collected materials in accordance with Baffinland's Waste Management Plan (BAF-PH1-830-P16-0028) as well as identifying and containing compromised salt packages to prevent materials being distributed around the site. The salt is stored at both the Mary River Mine Site and Milne Port Site and is stored there for use in exploration drilling as well as for dust suppression on Project roads and camp pads.
- Ongoing testing, managing, and disposal of the historical inventory incinerator bottom ash at the Mary River Mine Site and Milne Port. Ash that is tested and determined to be non-hazardous will be disposed of in the existing Mine Site Landfill, and ash that is identified as hazardous will be sent off site for disposal in a licenced facility in southern Canada. Ongoing ash generation, testing, and disposal will be done in accordance with Baffinland's Waste Management Plan (BAF-PH1-830-P16-0028).
- Completion of the decommissioning of the historical bladder farm at Milne Port. Work includes management of hydrocarbon impacted soils within the existing landfarm facility.
- Continuation of the decommissioning activities associated with the decommissioning of the existing bladder farm at the Mary River Mine Site. Work includes the treatment of oily water contact water and the management/storage of hydrocarbon impacted soils prior to placement in a landfarm facility. Consideration will be given to designing and constructing a new landfarm at the Mary River Mine Site if it is deemed necessary during 2015.
- Continue the development and implementation of a long term multi-year plan to address localized areas of permafrost degradation associated with current borrow areas including Km97, and taking into consideration the longer term designs for the Tote Road upgrades and new quarry development.

- Demobilization of equipment and supplies not required for near term activities, as well as the current inventory of hazardous waste and other materials by means of sealift from Milne Port Site.
- Continue development of the Mine Site landfill and deposition of non-hazardous wastes in accordance with the landfill operations and maintenance manual. Consideration will be given to designing and constructing a new landfill at the Milne Port Site if it is deemed necessary during 2015. Note that this activity would require application and approval from the NWB and QIA.
- Discharge of treated sewage effluent stored in PWSP's at the Mary River Exploration Camp and Milne Port Site after treatment as required. Two periods of discharge are planned, the first corresponding to freshet (May-June), and the second later in the summer if required.
- Consideration will be given to the requirement for an additional PWSP to be located near the Mary River Mine Site sewage treatment plant. If a PWSP is deemed necessary during 2015, it will be constructed and commissioned.
- Ongoing removal from the site, or safe disposal on-site of infrastructure, equipment and supplies no longer required for ongoing construction and operations. The items are defined by the Mary River Project Interim Closure and Reclamation Plan (BAF-PH1-830-P16-0012), and include infrastructure and site materials, fuel caches, drums, barrels, buildings and contents, docks, water pumps and lines, material and equipment prior to the expiry of applicable permits. Where required, internal roads will be re-graded to restore natural drainage to reduce erosion.
- Unless otherwise identified within the approved Interim Closure and Reclamation Plan, where roads are no longer in use, Baffinland will remove culverts and open the natural drainage channel. In carrying out this activity, measures will be implemented to minimize erosion and sedimentation.
- Areas that have been contaminated by hydrocarbons from normal fuel transfer, handling and storage activities will be reclaimed to meet objectives as outlined in the Government of Nunavut's Environmental Guideline for Site Remediation, 2010. The use of reclaimed soils for the purpose of back fill or general site grading may be carried out upon consultation and approval by the Government of Nunavut, Department of Environment and an Inspector.

5. 2015 Marginal Closure and Reclamation Cost Estimate

The incremental or marginal closure and reclamation cost estimated to be required to account for the activities described in Section 3.1 is presented in Section 7 and Appendix A.

The 2015 Marginal Reclamation and Closure Security Estimate to support the 2015 Work Plan (Baffinland, October 31 2014) has been developed in accordance with principles,

methodology, and closure objectives defined within the Mary River Project Interim Mine Closure and Reclamation Plan (BAF-PH1-830-P16-0012).

The 2015 Marginal Reclamation and Closure Security Estimate was developed using the same set of assumptions, methodologies and outcomes used to determine the site specific unit costs and final direct and indirect costs allowances of the 2014 Complete Project Financial Security Assessment, presented in Appendix C. This includes using a site-specific costing model made up of a detailed direct cost estimate for each of the reclamation activities identified for each project component (e.g. site development, mobile equipment, stockpiles, site utilities, etc.). A cost is developed based on the number of person-days, equipment hours and fuel consumption estimated to complete each reclamation activity required for each project component. Thus, the cost of each reclamation activity is estimated on the basis of the product of the quantity of functional unit costs and the estimate of an individual unit cost.

Contingency for the 2015 Marginal Reclamation and Closure Security Estimate is established based on experience and the level of confidence in the accuracy of the representative costs for reclamation of the Project. In this case, a contingency of 12.5% for all activities was chosen. This is primarily based on the fact that reclamation activities required for the planned marginal activities being conducted in 2014 for the Mary River Project are predominantly an earthworks exercise with simple demolition.

In addition, the 2015 Marginal Reclamation and Closure Security Estimate includes a 10% allowance of direct costs for mobilization and demobilization of equipment, 3.9% of direct costs for engineering fees, and a 9.4% of direct costs for supervision, project management and contract administration. See Section 6 and Appendix C for a more detailed discussion of these assumptions.

5.1 Closure Scenario

The 2015 Marginal Reclamation and Closure Security Estimate is based on a scenario that assumes all planned activities for 2015 Work Plan have taken place on site and all material/consumables (excluding fuel) that are mobilized to site in 2015 are in full inventory.

Although during an unforeseen closure scenario, Baffinland would have sufficient fuel on-site to supply reclamation activities, the reclamation estimate accounts for the cost of mobilizing 50% of new fuel to site as a conservative assumption to address concerns raised by stakeholders that there may be a potential for some on-site fuel not meeting quality and accessibility requirements. It should be noted that Baffinland is of the position that assuming 50% of fuel required for reclamation requires mobilization, remaining fuel has significant salvage value that is not claimed in this estimate, and that on-site fuel would meet quality and accessibility requirements for reclamation, that the reclamation estimate is sufficiently conservative to account for any reclamation liability associated with fuel mobilization and demobilization.

6. Assumptions

6.1 Direct Cost Assumptions

The following sections described the direct cost assumptions used to establish the direct costs applied in the 2015 Marginal Reclamation and Closure Security Estimate. Please refer to Appendix A for details of this cost allocation based on the Estimate Breakdown Structure, Appendix B for locations of below noted facilities, and Appendix C for assumptions relating to the applied unit rates, unless noted otherwise.

All total dollar figures were rounded to nearest '000.

All costs in Canadian Dollars (CAD).

6.1.1 *Grade and Re-Contour*

The 2015 Marginal Reclamation and Closure Security Estimate allocates an additional \$461,000 in closure and reclamation cost to account for a marginal increase of disturbed areas that would have to be graded and re-contoured in an unforeseen closure scenario. This cost allocation is based on an additional 369,795 m² of disturbed areas not considered in previous estimates at a unit rate of \$1.81/m². These areas are comprised of:

- Km 2 and km 97 Borrow Sources – 41,795 m²
- Waste Rock Road (2 km x 10 m) – 20,000 m²
- Waste Rock Stockpile Phase 1 Pad – 190,000 m²
- Pit #1 Development – 55,000 m²
- Truck Weigh Scale Facility Pad – 13,000 m²
- Additional Laydown Areas – 20,000 m²

6.1.2 *Grade and Re-Contour with Liner Removal*

The 2015 Marginal Reclamation and Closure Security Estimate allocates an additional \$114,000 in closure and reclamation cost to account for a marginal increase of disturbed areas that would have to have liner removed and then be graded and re-contoured in an unforeseen closure scenario. This cost allocation is based on an additional 21,383 m² of area with liner not considered in previous estimates at a unit rate of \$5.31/m². These areas are comprised of:

- Waste Rock Pond – 6,000 m²
- Mary River Mine Site Landfarm (tentative) – 14,083 m²
- Storage facility near warehouse (30 m x 30 m) – 900 m²
- Fuel tank Containment Area – 400 m²

NOTE: Mary River Mine Site Landfarm will be designed and constructed if it is deemed necessary during 2015 however cost was included to maintain conservatism in estimate. Cost

allocation assumes same design and construction type as Landfarm developed at Milne Port in 2014.

6.1.3 **Fuel Tank Reclamation**

The 2015 Marginal Reclamation and Closure Security Estimate allocates an additional \$31,000 plus cover material application costs to account for the closure and reclamation cost of two (2) 50,000L and one (1) 75,000L Jet A (Type-1) Fuel Tanks located at the Mary River Mine Site aerodrome apron. This cost allocation is based on a unit rate of Medium Mobile Diesel Tanks (3,000L to 500kL) not considered in previous estimates at a unit rate of \$10,481/ea. This Medium Mobile Diesel Tank unit rate was developed for the purpose of the 2015 Marginal Reclamation and Closure Security Estimate and was not used in previous estimates. It is based on the following:

The functional unit for each category of tanks was defined as one (1) tank. The unit cost was calculated as \$10,481.05/medium mobile fuel tanks. This unit cost is inclusive of the emptying of the tank and collection of fuel, decontamination, disassembly, load and transport. The cleaning, plugging, disassembly and removal of all associated pipeline infrastructure is included in the unit cost. Disposal and cover of scrap material, grade and re-contour, and liner removal is not included in the unit cost.

Table 6-1 presents the detail of man-hours and equipment-hours for each of the unit costs in the reclamation of the Medium Mobile Diesel Tank.

Table 6-1: Man-hours and Equipment-hours to Remove Medium Mobile Fuel Tanks

Unit	Functional Unit	Man-hours	Equipment-hours
Medium Mobile Fuel Tanks	Each	42.73	37.65

To determine the unit cost, the following assumptions were made:

- For Medium Mobile fuel tanks, assume crew of two (2) for seven (7) hours to disassembly (remove piping and cap), crew of one (1) for ten (10) hours to empty tank and collect fuel, crew of one (1) for five (5) hours to decontaminate, crew of two (2) for four (4) hours to load, and crew of one (1) for three (3) hours to transport (round trip).
- For medium fuel tanks, assume one (1) load will be required at 50% of the speed, to transport a tank to a disposal location.
- Fuel consumption (as dollar value) represents 10% of the equipment usage cost for reclamation activities.
- Labour cost was calculated based on a blended labour rate estimated as \$100/h.
- Equipment cost was calculated based on a blended labour rate estimated as \$150/h.

- Total unit cost was calculated as the sum of labour cost, fuel consumption cost, and equipment cost.
- The unit cost was based on estimated productivity.

6.1.4 Buildings and Flooring/Foundations

The 2015 Marginal Reclamation and Closure Security Estimate allocates an additional \$277,000 in closure and reclamation costs to account for a marginal increase of one (1) warehouse building at Mary River Mine Site. This cost allocation is based on an additional footprint of 1,296 m² not considered in previous estimates.

The breakdown of the total additional cost is based on the following application of the following unit rates in proportion to build footprint:

- Demolish and Decontaminate Building – Foldaway Contaminated Building.
- Demolish Pre-cast foundation.
- Slab on Grade.

6.1.5 Fill application

The 2015 Marginal Reclamation and Closure Security Estimate allocates an additional \$17,000 in closure and reclamation cost to account for a marginal increase of materials to be disposed on-site in an unforeseen closure scenario. This cost allocation is based on an additional 2,358 m³ of additional compacted volume of material disposed on site not considered in previous estimates. It was assumed that the material to be disposed of will have a depth of six (6) meters and therefore the total area to be covered by fill was identified as 393 m², at a unit rate of \$44.37/m².

6.2 Indirect Cost Assumptions

The following sections described the indirect cost assumptions used to establish the indirect costs applied in the 2015 Marginal Reclamation and Closure Security Estimate. Please refer to Appendix A for details of this cost allocation based on the Estimate Breakdown Structure and Appendix C for further discussion of the applied assumptions and/or exclusions.

6.2.1 On-Site Fuel Demobilization & Reclamation Fuel Mobilization

The 2015 Marginal Reclamation and Closure Security Estimate allocates an additional \$33,000 to account for the de-mobilization of the marginal increase of existing fuel on-site (\$5,000) from previous estimates and the mobilization of fuel required for the marginal increase in reclamation activities (\$28,000).

This allocation is based on assuming a fuel reclamation unit rate of \$0.10/L for Type-1 fuel and the assumption 50% of the maximum storage capacity of Type-1 fuel on-site will require reclamation (de-mobilization) in a closure scenario. The maximum total capacity of available fuel storage on-site upon completion of the 2015 Work Plan is 51.1ML. 50% of that total volume would amount to 25.55 ML. The total reclamation cost of on-site fuel therefore is \$2,555,000 (25,550,000L x \$0.10/L for Type-1 fuel). Previous estimates (see Appendix C)

allocates \$2,550,000 for the reclamation cost of on-site fuel. Therefore an additional \$5,000 is accounted for in the 2015 Marginal Reclamation and Closure Security Estimate.

In addition to on-site fuel reclamation, the 2015 Marginal Reclamation and Closure Security Estimate also accounts for the cost of mobilizing 50% of the fuel required for marginal reclamation and closure activities, including direct activities, power generation, and heat production. Direct marginal reclamation activities are estimated to require 66,285L of Type-1 fuel (see Appendix A). Marginal increases in camp operation during reclamation is estimated to require 565 person-days. Each person-day on site is assumed to consume 116L of Type-1 fuel for heat and power generation. Fuel mobilization rate is assumed to be \$0.40/L. Therefore, the 2015 Marginal Reclamation and Closure Security Estimate allocates \$28,000 for fuel mobilization.

See Appendix C for more detail on L/person-day assumption and Appendix A for person-day quantity calculation.

6.2.2 Explosive Material Removal

In the event of unplanned closure, the 2015 Marginal Reclamation and Closure Security Estimate allocates \$553,000 to account for the removal and disposal of the highest amount of explosives on-site during the 2015 Work Plan. This cost is based on explosives reclamation unit rate of \$2.37/kg and an assumption of an additional 233,380 kg of explosives is on-site, and not accounted for in previous estimates, which require reclamation for the purpose of the 2015 Marginal Reclamation and Closure Security Estimate.

It should be noted that the 2015 Work Plan states 603,000 kg of explosive material will be mobilized to site in 2015. However, explosive material is a consumable and previous estimates (see Appendix C) have allocated costs for the removal of 369,620 kg of explosive material. Therefore the 2015 Marginal Reclamation and Closure Security Estimate only allocates a reclamation cost of the marginal increase.

6.2.3 Mobilization of Workers Required for Reclamation

The 2015 Marginal Reclamation and Closure Security Estimate allocates an additional \$54,000 for worker mobilization.

Detailed assumptions for mobilization of workers required for marginal closure and reclamation activities are:

- Person-hours required to complete direct cost marginal reclamation activities are 6,564 hrs or 656 total person-days on-site (based on a 10hr/day).
- Assume 70% of hires (460 person-days) are from southern communities and 30% (197 person-days) from northern communities.
- Cost per person-day on site for worker mobilization from southern communities is \$85.45/person-day on-site (See Appendix C).
- Cost per person-day on site for worker mobilization from northern communities is \$75.00/person-day on-site (See Appendix C).

6.2.4 Worker Accommodation & Camp Operation

The 2015 Marginal Reclamation and Closure Security Estimate allocates an additional \$148,000 for worker accommodation and camp operation during marginal reclamation activities. Assumptions for worker accommodation and camp operation are:

- Person-hours required to complete direct cost marginal reclamation activities are 6,564 hrs or 656 total person-days on-site (based on a 10hr/day), see Appendix A for person-day quantity calculation.
- Cost for accommodation and camp operation is assumed to be \$225/person-day and includes camp maintenance, catering, housekeeping, and fuel costs. See Appendix C for more detail on cost for accommodation and camp operation per person-day cost assumption.

6.2.5 Mobilization and Demobilization of Equipment and Materials

The 2015 Marginal Reclamation and Closure Security Estimate allocates an additional \$90,000 to account for mobilization and demobilization of equipment and materials. These are indirect costs for moving equipment and materials to and from the reclamation site. The amount is based on Baffinland and Hatch's conservative assumption that mobilization and demobilization cost are estimated as 10% of total direct costs.

Mobilization and demobilization costs are inclusive of equipment, materials and consumables required for reclamation and demobilization of reclamation equipment, 3rd Party Equipment, and misc-equipment, materials, waste, and consumables that have yet to be identified at the time of this estimate. See Appendix C for more detail on the basis of this indirect cost allocation.

6.2.6 Engineering Fees

The 2015 Marginal Reclamation and Closure Security Estimate includes an engineering design and execution planning indirect cost allowance of an additional \$35,000 or 3.9% of the total direct costs. See Appendix C for more detail on the basis of this indirect cost allocation.

6.2.7 Supervision, Project Management and Contract Administration

The 2015 Marginal Reclamation and Closure Security Estimate includes a project supervision, management and contract administration indirect cost allowance of an additional \$165,000 or 9.4% of direct cost, contaminated soil treatment, and post closure monitoring. Project supervision, management and contract administration indirect costs include, but are not limited to:

- Contract strategy, administration and expediting;
- Construction logistics, planning, scheduling, supervision and manpower forecasts;
- Labour relations, safety;
- Field office management, temporary facilities;
- Materials receiving and warehousing;

- Progress monitoring, trending and reporting;
- Cost performance monitoring, trending and claims processing; and
- Quality assurance.

See Appendix C for more detail on the basis of this indirect cost allocation.

6.2.8 Contingency

The 2015 Marginal Reclamation and Closure Security Estimate includes an additional contingency of \$256,000 or 12.5% of the total of direct costs, mobilization and demobilization of equipment and materials, worker accommodation and camp operation, and mobilization of workers. See Appendix C for more detail on the basis of this indirect cost allocation.

A 12.5% contingency was determined based on Baffinland experience since 2006 in North Baffin Island and review of the Qikiqtani Inuit Association (QIA) Abandonment and Reclamation Policy for Inuit Owned Lands (2013), Appendix D. Reclamation activities for the Mary River Project are predominantly an earthworks exercise with simple demolition. It is Baffinland's position therefore that high allowances for contingency are not required as the reclamation program will be relatively simple.

6.3 Exclusions

The listed activities are recognized by Baffinland as being required to be conducted in a unforeseen closure and reclamation scenario but additional costs have not been included in the 2015 Marginal Reclamation and Closure Security Estimate on the basis that it is Baffinland's position 2015 Work Plan activities do not warrant additional cost allocations to these activities not already included in previous estimates. For detail on the indirect cost allocations attributed to these activities to date in previous estimates, see Appendix C. Excluded activities from the 2015 Marginal Reclamation and Closure Security Estimate are:

- Off-Site Disposal of Hazardous and Non-Hazardous Waste.
- Contaminated Soil Treatment.
- Closure and Post Closure Monitoring.

7. 2015 Marginal Reclamation and Closure Security Cost Summary

Table 7-1 presents the total closure and reclamation security posted to-date and proposed adjustments to be posted as a result of the 2014 Complete Project Financial Security Assessment the 2015 Marginal Reclamation and Closure Security Estimate. Table 7-2 presents a summary of the 2015 Marginal Reclamation and Closure Security Estimate to support the 2015 Work Plan (Baffinland, October 31, 2014) in a categorized breakdown format in accordance to principles, methodology, and closure objectives defined within the Mary River Project Interim Closure and Reclamation Plan (BAF-PH1-830-P16-0012). The estimated marginal reclamation and closure security required project-wide is presented by project component, required marginal reclamation and closure security based on land ownership, and required marginal reclamation and closure security by assumed land and water liability.

Table 7-1: Mary River Project Total Closure and Reclamation Security Summary¹

	A	B	C	D	E	F	G	H
	Authorization	Liability	Pre-baseline Liability (\$)	2014 Re-Baseline (\$)	Difference (\$)	Marginal 2015 (\$)	Total (\$)	Adjustment to be posted (\$)
					D-C		D+F	E+F-Type B construction
1	Type A 2AM-MRY1325	IOL	40,231,000	38,961,000	(1,270,000)	2,236,000	41,197,000	819,000
2		Crown	166,000	-	(166,000)	-	-	(166,000)
3		Water	2,172,000	2,193,000	21,000	-	2,193,000	21,000
4		Land	38,225,000	36,769,000	(1,456,000)	2,236,000	39,005,000	633,000
5	Subtotal Type A		40,397,000	38,961,000	(1,436,000)	2,236,000	41,197,000	653,000
6	Type B Construction 2BC-MRY1416	IOL	147,000	See note 3	-	-	-	-
7		Crown	-		-	-	-	-
8		Water	-		-	-	-	-
9		Land	147,000		-	-	-	-
10	Subtotal Type B Construction		147,000		-	-	-	-
11	Type B Exploration 2BE-MRY1421	IOL	165,000	165,000	-	-	165,000	-
12		Crown	1,082,000	1,082,000	-	-	1,082,000	-
13		Water	18,000	18,000	-	-	18,000	-
14		Land	1,229,000	1,229,000	-	-	1,229,000	-
15	Subtotal Type B Exploration		1,247,000	1,247,000	-	-	1,247,000	-
16	DFO	IOL	-	-	-	-	-	-
17		Crown	3,566,000	3,566,000	-	-	3,566,000	-
18		Water	3,566,000	3,566,000	-	-	3,566,000	-
19		Land	-	-	-	-	-	-
20	Subtotal DFO		3,566,000	3,566,000	-	-	3,566,000	-
21	AANDC Land Lease 47H/16-1-2	IOL	-	-	-	-	-	-
22		Crown	-	5,856,000	5,856,000	-	5,856,000	5,856,000
23		Water	-	-	-	-	-	-
24		Land	-	5,856,000	5,856,000	-	5,856,000	5,856,000
25	Subtotal AANDC Land Lease		-	5,856,000	5,856,000	-	5,856,000	5,856,000
27	GRAND TOTAL		45,357,000	49,630,000	4,420,000	2,236,000	51,866,000	6,509,000

¹ All totals rounded to nearest '000 in CAD

² 2014 Re-baseline refers to 2014 Complete Project Financial Security Assessment, H349000-1000-07-126-0018, Rev. 1

³ The reclamation costs associated to the Type 'B' Water Licence 2BC-MRY1416 was captured under 2014 Complete Project Financial Security Assessment. The current sum of \$147,000 posted under this licence is proposed to be relocated under Type 'A' Water licence 2AM-MRY1325 upon amendment.

Table 7-2: 2015 Estimated Closure and Reclamation Security Detailed Summary^{1,2}

Cost	2014 Re-Baseline (\$)	2015 Marginal Increase (\$)	Total for 2015 (\$)	IOL	Crown Land	Water Liability	Land Liability
Direct Cost							
Project Wide	873,000	54,000	927,000	927,000	-	-	927,000
Milne Port	9,931,000	-	9,931,000	6,101,000	3,830,000	227,000	9,704,000
Construction Facilities & Services	2,731,000	-	2,731,000	2,731,000	-	-	2,731,000
Mine Site	6,671,000	772,000	7,444,000	7,444,000	-	1,115,000	6,329,000
Tote Road	4,042,000	76,000	4,118,000	4,118,000	-	-	4,118,000
Mary River Exploration Activities	1,022,000	-	1,022,000	135,000	887,000	15,000	1,007,000
Total Direct Costs (\$)	25,270,000	902,000	26,172,000	21,455,000	4,717,000	1,357,000	24,815,000
Indirect Cost							
Off-Site Disposal of Waste & Material	1,969,000	-	1,969,000	1,658,000	311,000	-	1,969,000
Fuel	3,098,000	33,000	3,131,000	2,642,000	489,000	-	3,131,000
Ammonium Nitrate (explosive Material)	876,000	553,000	1,429,000	1,291,000	138,000	-	1,429,000
Contaminated Soil Treatment	234,000	-	234,000	197,000	37,000	-	234,000
Mobilization of Workers Required for Reclamation	996,000	54,000	1,050,000	893,000	157,000	-	1,050,000
Worker Accommodation & Camp Operation	2,630,000	148,000	2,778,000	2,363,000	415,000	-	2,778,000
Mobilization and Demobilization of Equipment and Materials by Sealift	2,425,000	90,000	2,515,000	2,132,000	383,000	-	2,515,000
Geotechnical Inspections	150,000	-	150,000	126,000	24,000	-	150,000
Project Environmental Site Assessment	90,000	-	90,000	76,000	14,000	-	90,000
Closure & Post Closure Monitoring	851,000	-	851,000	717,000	134,000	851,000	-
Engineering Fees	946,000	35,000	981,000	832,000	149,000	-	981,000
Supervision, Project Management & Contract Administration	2,381,000	165,000	2,546,000	2,170,000	376,000	-	2,546,000
Contingency	3,923,000	256,000	4,179,000	3,559,000	620,000	-	4,179,000
Mary River Exploration Activities	225,000	-	225,000	30,000	195,000	3,000	222,000
DFO Financial Security for Ore Dock (Construction and Monitoring)	3,566,000	-	3,566,000	-	3,566,000	3,566,000	-
Total Indirect Costs (\$)	24,360,000	1,334,000	25,694,000	18,684,000	7,010,000	4,420,000	21,274,000
Total Cost (\$)	49,630,000	2,236,000	51,866,000	40,139,000	11,727,000	5,777,000	46,089,000

¹All totals rounded to nearest '000

²All totals in CAD



8. Closure and Reclamation Objectives

The Mary River Project Interim Closure and Reclamation Plan (BAF-PH1-830-P16-0012) (the 'Plan') has been prepared to address mine closure in various scenarios. This interim plan incorporates 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 addresses temporary and long-term closure as well as final cessation of operations. Public health and safety is 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. 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 three (3) years, followed by 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 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 QIA and 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:

- Adhere to QIA A&R Policy (2013) and Mine Site Reclamation Policy for Nunavut (INAC, 2002). A concordance table of 2013 closure assumptions with the QIA reclamation policy is presented in Appendix A.
- Return the Project affected sites to "wherever practicable, self-sustaining ecosystems that are compatible with a healthy environment and human activities" (Mine Site Reclamation Policy for Nunavut, 2002).
- Where practical, undertake progressive reclamation to reduce the environmental risk once the mine ceases operation (INAC, 2002; INAC, 2002a; Northwest Territories Water Board, 1990; and QIA, 2013).
- 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, whenever 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).

9. Supporting Documents

In addition to information presented within this document, please refer to the following appendices for supporting information:

- Refer to Appendix A for Complete Project Financial Security Assessment Estimate Breakdown.
- Refer to Appendix B for Updated Layouts.
- Refer to Appendix C for the 2014 Complete Project Financial Security Assessment Report, H349000-1000-07-126-0018, Rev. 1.

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