

APPENDIX D.8

2017 MARGINAL RECLAMATION AND CLOSURE SECURITY ESTIMATE



ᓄᓇᓂᓪ ᐃᓕᓕᓂᓪ ᑲᓂᓕᓂᓪ
NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

Date: January 20, 2017

File No: 2AM-MRY1325
By Email and Regular Mail

Honourable Carolyn Bennett, PC, MP
Minister of Indigenous and Northern Affairs Canada
21st Floor, 10 Wellington, North Tower
Gatineau, QB K1A 0H4
Email: carolyn.bennett@parl.gc.ca;
minister@aadnc-aandc.gc.ca

PJ Akeeagok, President
Qikiqtani Inuit Association
P.O. Box 1340
Iqaluit, NU X0A 0H0
Email: pakeeagok@qia.ca

Todd Burlingame
VP, Sustainable Development
Baffinland Iron Mines Corporation
2275 Upper Middle Road East, Suite 300
Oakville, ON L6H 0C3
Email: todd.burlingame@baffinland.com

Re: Type “A” Water Licence No. 2AM-MRY1325, Baffinland Iron Mines Corporation Licence, Mary River Project: Direction from Nunavut Water Board Under the 2017 Annual Security Review Process Established Under Part C and Schedule C of the Water Licence

As set out in the Nunavut Water Board’s (NWB or Board) Decision¹ recommending the issuance of Type “A” Water Licence No. 2AM-MRY1325 (the Water Licence) in 2013 and Amended Licence in 2015, and as required under Part C and Schedule C of the Water Licence, the amount of financial security the Board requires Baffinland Iron Mines Corporation (the Licensee or BIMC) to post under the Water Licence is subject to periodic review, and adjustment, if required

¹ Nunavut Water Board, Reasons for Decision for 2AM-MRY1325, June 12, 2013 at pp. 54-63.

by the Board, under the process described in the Water Licence as the Annual Security Review (ASR). The amount of security required to be posted following the ASR is based on both an estimate of the highest reclamation liability for land and water in the upcoming year (the global security amount), as well as any reductions from the global security amount, up to and including the previous year, to reflect the financial security that may be provided by BIMC to the Qikiqtani Inuit Association (QIA) under the reclamation requirements of the QIA commercial lease and to INAC for reclamation under the Water Licence. This information and the parties' comment submissions, provided during the course of the ASR, are considered by the Board in order to determine the total security amount that must be held under the Water Licence for the upcoming year.

As indicated in the NWB's guidance letter issued to the parties on October 5, 2016 with respect to the 2017 ASR Process required to set the security amount that must be posted under the Water Licence to cover liabilities up to and including the first quarter of 2017 to the first quarter of 2018 (the 2017 ASR), the Board specifically requested comment on the following:

Is the existing global security amount as set by the Board during the 2016 ASR process adequate to reflect the updated scope of activities and undertakings proposed to be undertaken by BIMC in its 2017 Work Plan (to be filed with the Board by November 1, 2016 as required under Schedule J, Item 1 in the Licence)?

After the NWB's October 5, 2016 correspondence commenced the 2017 ASR process and the NWB's additional guidance, a number of submissions in support of the 2017 ASR Process from the Proponent, the QIA and INAC were received and distributed. **Appendix A**, attached to this correspondence, provides a summary of the procedural history in addition to the key documentation provided and activities undertaken by the NWB associated with the 2017 ASR Process.

The Board has placed all non-confidential information associated with the 2017 ASR Process on its public registry. For further details, consult the NWB's File Transfer Protocol (FTP) site using the following link:

[ftp://ftp.nwb-oen.ca/registry/2%20MINING%20MILLING/2A/2AM%20-%20Mining/2AM-MRY1325%20BIMC/3%20TECH/2%20SECURITY%20\(C\)/2016/](ftp://ftp.nwb-oen.ca/registry/2%20MINING%20MILLING/2A/2AM%20-%20Mining/2AM-MRY1325%20BIMC/3%20TECH/2%20SECURITY%20(C)/2016/)

The NWB's Jurisdiction to Furnish Security Under the Water Licence

The Board's jurisdiction to require a licensee to furnish security is established under s. 76 of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* as follows:

76. (1) The Board may require an applicant, a licensee or a prospective assignee to furnish and maintain security with the Minister in the form, of the nature, subject to such terms and conditions and in an amount prescribed by, or determined in accordance with, the regulations or that is satisfactory to the Minister.

In addition, the *Nunavut Waters Regulations* (the Regulations) further specify the limits on the Board's jurisdiction and state the following:

10. (1) For the purposes of subsection 76(1) of the Act, the Board may fix the amount of security required to be furnished by an applicant for a licence, a licensee or a prospective assignee in an amount not exceeding the aggregate of
(a) the costs of the abandonment of the undertaking;
(b) the costs of the restoration of the site of the undertaking;
(c) the costs of any ongoing measures that may remain to be taken after the abandonment of the undertaking; and
(d) the compensation that a person, including the designated Inuit organization, who is adversely affected by the use of waters or deposit of waste may be entitled to under section 13 of the Act.

With respect to this Water Licence in particular, the Board recognized at the outset that because a significant part of the Mary River Project was located on Inuit Owned Land (IOL), it was reasonable to expect that the QIA would wish to hold a substantial portion of the security for reclamation and restoration of the undertaking on IOL. This also meant that if the security amount required under the Water Licence was the full global security amount that would be required for full reclamation of the undertaking, with no consideration of the security that has been secured by the QIA for reclamation under the commercial lease between BIMC and the QIA, there could be significant over-bonding. This situation would result in the Board exercising its jurisdiction to fix an amount of security in excess of what is permissible under s. 10(1) of the Regulations.

Reflecting these concerns about over-bonding, and as set out in the Board's previous decisions, the Board developed an approach to security that would allow the Board to factor security held under land-based instruments into the Board's fixing of security under the water licences for the Project:

... the Board's focus in assessing security is that the Applicant must have posted sufficient security, through all means, when taken together, to ensure that the overall reclamation of the site (land and water) has been adequately addressed. Consequently, the Board's starting point to assess security remains considering the security requirements holistically and then deducting from the aggregate land and water reclamation totals any security held under other instruments, with the remainder being secured under the water licence.²

On this basis, the Board incorporated into Part C and Schedule C of the Water Licence a mechanism by which the Board can receive evidence from BIMC and the QIA regarding the financial security requirements under the commercial lease to be considered in the Board's fixing of the amount of security that should be held under the Water Licence. In addition to recognizing that the Board must consider reclamation security held by landowners into the total financial security for the undertaking, the Board was also be aware that the total costs of security required to ensure reclamation of the undertaking may vary greatly over the life cycle of the Mary River Project. Consequently, the Board

² Nunavut Water Board, Reasons for Decision for 2AM-JER1119, December 21, 2012 at p. 47.

included in Part C and Schedule C of the Water Licence a mechanism for conducting periodic review of the security fixed under the Water Licence to reflect the objective, as stated in the *Mine Site Reclamation Policy for Nunavut* (INAC, 2002) that:

*The total financial security for final reclamation required at any time during the life of the mine should be equal to the total outstanding reclamation liability for land and water combined (calculated at the beginning of the work year, to be sufficient to cover the highest liability over that time period)*³

The 2017 Annual Security Review (ASR) Process

To date, the NWB has conducted security reviews under the Water Licence annually commencing in 2013. Although the timing and detailed process steps have varied slightly from year to year, key elements remain the same. The 2017 ASR Process commenced with the NWB providing correspondence in October 2016 to all the parties providing a process outline and proposed timelines. BIMC then provided a Work Plan in November 2016 detailing the works and activities planned for the twelve-month period commencing in March 2017 to March 2018 (the 2017 Work Plan), coupled with an updated reclamation estimate that reflected any changes to the global financial security amount required to reclaim the undertaking if all on-going and new activities as identified in the 2017 Work Plan were to proceed.

The NWB then received comments on both the 2017 Work Plan and the updated reclamation estimate from the two land owners, Indigenous and Northern Affairs (INAC) in respect of security held for Crown Lands and in respect of the Water Licence and the Qikiqtani Inuit Association (QIA) in respect of the reclamation security held by the QIA under the commercial lease. The NWB hosted an ASR teleconference on December 9, 2016 with the parties to present their submissions to the Board and discuss any outstanding technical or process issues. Following the ASR teleconference, parties filed additional submissions. When all submissions have been received on January 6, 2017, the security issue was remitted to the 3-Member Panel duly appointed by the Board to make decisions in respect of Water Licence 2AM-MRY1325 (P4 or the Panel). On January 17, 2017, the Panel met to consider the submissions received during the 2017 ASR Process and as required by Part C and Schedule C of the Licence, and by Motions #2016-12-P4-03 and #2016-12-P4-04, provided the direction contained in this letter regarding the global security amount for the reclamation of the undertaking and also specified the amount of security that must be held under the Water Licence.

During recent ASR Processes and also in the 2017 ASR Process, INAC expressed the view that a change to the security to be held under the Water Licence is an amendment to a Type “A” Water Licence that would trigger various notice and comment requirements. The Board notes that the Water Licence, Part C, Item 1(a) and (b), clearly set out that changes to the amount of security that are the outcome of the ASR Process conducted under the Water Licence are to be dealt with as part of the on-going administration of the Licence and do not require an amendment to the Licence. On this basis, and has been the case with past adjustments to the security held under the Water Licence associated with previous ASR processes, the NWB does not consider an adjustment

³ *Mine Site Reclamation Policy for Nunavut*, 2002, Minister of Indian Affairs and Northern Development, (Ottawa: Minister of Public Works and Government Services Canada, 2002) available on-line: http://www.aadnc-aandc.gc.ca/DAM/DAM-INTER-HQ/STAGING/texte-text/recpolnuna_1100100036043_eng.pdf.

to the security required to be posted under the Water Licence resulting from the 2017 ASR Process to require an amendment to the Water Licence.

Summary of Submissions Received During the ASR Process Relating to The Global Security Amount and Security Held under Licence 2AM-MRY1325

Consistent with previous Annual Security Reviews, the NWB has received several submissions from the parties in support of the 2017 ASR process. The following sections provide an overview of some of the key submissions provided by the various parties during the 2017 ASR Process.

BAFFINLAND IRON MINES CORPORATION MAJOR SUBMISSIONS

Baffinland Iron Mines Corporation (BIMC or the Licensee) provided the following key submissions in support of the 2017 ASR Process:

- 2017 Work Plan
- 2017 Work Plan Addendum
- 2017 ASR Presentation
- BIMC Response to QIA's December 12, 2016 Correspondence

2017 Work Plan

As required under provisions of Part J in Licence No. 2AM-MRY1325 (the Water Licence), BIMC filed, on November 4, 2016, the 2017 Work Plan (2017 Work Plan) for the Mary River Project. The 2017 Work Plan, which is one of the key elements required for the Board's periodic review of security as mandated by Part C and Schedule C of the Water Licence, addresses the following components:

- Provide details regarding mining and associated work and activities that occurred or had been proposed but were not undertaken over the previous year in addition to information on works and activities proposed for the upcoming year.
- Assess the previous and upcoming years' activities, with the aim of identify any changes in environmental liabilities or risk associated with the Project that would affect the amount of reclamation security required for the Project to allow a third party contractor to perform reclamation under a worst case scenario, and identify any associated changes to the amount of reclamation security held under all instruments.
- Examine changes that the proposed works and activities have on other Project variables such as management plans, existing infrastructure, progressive reclamation and more.

Details contained in BIMC's 2017 Work Plan indicated that ongoing development of the mine will continue over the 2017 – 2018 period. Similar to the previous years' work plans, the 2017 Work Plan included details regarding new and ongoing works and activities as well as works and activities that had been proposed under the 2016 Work Plan but were not carried out as planned, will not be carried out at all in the future, or that were deferred in 2016 and carried over into the 2017 Work Plan.

The following summarizes the main activities, works, or undertakings expected to be carried out under the 2017 Work Plan:

- Continued development and operation of the mine, ore crushing and land transportation, stockpiling and marine shipment of ore;
- Continued development and construction of infrastructure required at Milne Port and the Mary River Mine Site and along the Tote Road for the Mary River Project;
- Mobilization of an additional 49-person camp at Milne Port and continued operation of the Mine Site and Milne Port Camps to support on-going operations and construction activities which will include the use of water and deposit of waste as authorized under existing licences;
- On-going operation of already permitted quarry and borrow sources; there are also additional planned quarries or borrow areas along the Tote Road that have been identified and will be used during 2017;
- Mobilization of supplies at Milne Port including vessels carrying fuel, equipment and supplies for use at the Mine Site and Milne Port during open water (approximately between mid-July and mid-October 2017). Materials, fuel and supplies required for operation and construction activities will be transported to the Mine Site year round via the Tote Road;
- Geotechnical drilling may be required to support engineering, design and construction activities of the Project;
- On-going environmental effects studies and baseline data collection will continue to support the construction and operation of the Project as well as for future engineering requirements;
- Continued environmental monitoring in accordance with the approved Project Certificate, licenses, authorizations, management plans and environmental effects monitoring plans;
- On-going exploration activities including mapping, prospecting, sampling and geophysics; and
- Potential drilling and/or trenching program; however, these items had not yet been finalized at the time the 2017 Work Plan was submitted.

Based on the scope of work proposed in the 2017 Work Plan and considering the works and activities not undertaken under the 2016 Work Plan as well as works and activities carried over from the 2016 to the 2017 Work Plan, BIMC proposed that the overall reclamation security for the Project be reduced from the **\$50,055,500** fixed by the Board as the global security amount under the 2016 Work Plan to **\$48,145,000** as the global security amount proposed by BIMC under the 2017 Work Plan.

BIMC indicated that the following main factors provided the rationale for changes to the global financial security estimate required to reclaim the undertaking:

- Adjustments to or removal of direct cost items to account for changes in Project planning and execution based on cost reconciliation;
- Removal of grade and re-contour costs allocated for areas that were identified in the 2016 Work Plan but that were not disturbed in 2016;
- Changes to the closure scenario assumption considered for the Project;
- New activities planned for the 2017 period;

- Refinements of the direct cost assumptions related to buildings and foundations, mechanical and mobile equipment, cabling, consumables, site works; and
- Refinement of indirect cost assumptions and cost pertaining to on-site fuel demobilization and reclamation-fuel mobilization, contract administration, engineering fees, and contingency and more.

2017 Marginal Closure and Reclamation Security Estimate – Revision (Addendum)

On November 24, 2016, BIMC submitted an addendum to its marginal closure and reclamation estimate included in its 2017 Work Plan. BIMC indicated that the Addendum was intended to address feedback received from interested parties as well as to update information to better reflect the 2017 Work Plan.

The Addendum identified modifications to the 2017 Work Plan associated with mobile and mechanical equipment capture that were re-categorized to address the comments of Interveners. In addition, clarifications were provided in respect of the additional 49 – person camp, and a truck wash building to be constructed in 2017. Based on those modifications, BIMC proposed an increase to the overall reclamation security for the Project for the 2017 – 2018 period, from **\$48,145,000**, as originally proposed under the 2017 Work Plan, to **\$49,271,000** under the 2017 Work Plan Addendum.

2017 Annual Security Review (ASR) Summary Presentation

On December 8, 2016, in advance of the ASR Teleconference, BIMC provided, a copy of its 2017 Annual Security Review (ASR) Summary Presentation, dated December 9, 2016.

The presentation included details regarding proposed work planned for the 2017 – 2018 period under the Water Licence and commercial lease and updates to the direct and indirect costs associated with these proposed works and activities, as well as changes or updates to the original BIMC cost estimates provided in the 2017 Work Plan as detailed in the 2017 Work Plan Addendum. The presentation also outlined BIMC’s key assumptions in developing the proposed reclamation estimate for the Project, direct and indirect cost reconciliation associated with the 2016 Work Plan, and issues raised by parties and the Board during the 2017 ASR Process. At the conclusion of the presentation, BIMC reiterated that its proposed reclamation security for the Project for the 2017 – 2018 period was estimated at **\$49,271,000**, a decrease of approximately **\$785,000** from the global security amount fixed by the Board after the 2016 ASR Process.

BIMC’s Response to QIA’s December 12, 2016 Correspondence

Following the ASR Teleconference, BIMC provided its response to correspondence from the QIA dated December 12, 2016 regarding *Financial Security Assessment, Inflation and Joint Submission*. BIMC indicated that while it disagreed with the QIA’s position that inflation should be applied to the updated estimate associated with the 2017 Work Plan and provided additional information to substantiate its position, BIMC remained committed to developing a joint submission with the QIA to be provided to the Board in January 2017.

QIA MAJOR SUBMISSIONS

Similar to BIMC, the QIA provided several submissions in support of the 2017 ASR Process. The following sections summarize the QIA’s key submissions, which include:

- QIA's 2017 Comprehensive Security Estimate
- QIA's 2017 Comprehensive Security Estimate Update
- 2017 ASR Teleconference Speaking Notes
- December 12, 2016 Correspondence

2017 Comprehensive Security Estimate Submission

On December 2, 2016 the QIA submitted a cover letter and accompanying 2017 Comprehensive Security Estimate for the Mary River Project to be considered by the Board in the 2017 ASR Process. Based on the QIA's detailed review and as outlined in the QIA's submission, the QIA determined that the global security amount that should be held under the commercial lease for the 2017 period was **\$56,317,000**.

The QIA indicated that its estimate was based on the QIA's *Abandonment and Reclamation Policy* for use with reclamation activities on Inuit Owned Land, previous project-specific reclamation estimates prepared by the QIA, and findings linked to the QIA's June and August 2016 Environmental Inspections and September 2016 Audit.

The QIA highlighted in its submission that there was a high degree of uncertainty in the 2017 Work Plan pertaining to the Tote Road. On this basis, the QIA indicated that they expected that once the plans for the Tote Road improvements, expected to be carried out in 2017, are finalized and presented, the QIA would anticipate that a further update to the financial security estimate may be required.

A comparison of the QIA and BIMC estimates suggests that some of the main factors contributing to the differences in the estimates were as follows:

- Higher marginal direct cost generally, as determined by the QIA, for:
 - Grading and re-contouring; and
 - Unidentified high priority disturbed areas along the Tote Road;
 - Mobile equipment owned by BIMC;
- Indirect cost differences;
- Higher marginal indirect associated with mobilization and demobilization of third Party; and
- Inclusion of cost adjustments to reflect inflation (1.0254).

December 5, 2016 Submission

On December 5, 2016, the QIA provided an update to its comprehensive Security Estimate of December 2, 2016. The QIA's December 5, 2016 updated estimate included changes of approximately \$144,000 in direct costs and \$83,000 in indirect cost to reconcile line items associated with a truck wash building that was not constructed in 2014. The reconciliation resulted in a reduction to the QIA's previous financial security estimate, reducing the total from **\$56,317,000** to **\$56,085,000**.

2017 ASR Teleconference Speaking Notes

Following the teleconference held in support of the 2017 ASR Process on December 9, 2016, the QIA submitted a copy of the QIA's speaking notes for the Board's consideration. The speaking notes restated that it was the QIA's position that the reclamation estimate as revised on December

5, 2016 of **\$56,085,000**, reflected the total reclamation amount associated with the Project on Inuit Owned Lands as proposed in the 2017 Work Plan and 2017 Work Plan Addendum. In addition, the speaking notes included information about the methodology used by the QIA to obtain its estimate as well as issues remaining outstanding. Further, the notes indicated that the QIA did not consider it necessary to take into account the reclamation security posted by BIMC for the Type “B” Water Licence. In addition, the QIA’s notes reiterated that the QIA plans to re-examine the financial security upon BIMC’s submission of details regarding the Tote Road Earthworks Execution Plan.

The QIA also highlighted that it had received additional information and clarification from BIMC regarding certain aspects of the 2017 Work Plan that could have a bearing on the QIA’s initial estimate, and that further discussions with BIMC on several topics in the 2017 Work Plan were planned for January that may also result in changes to the QIA’s initial estimate. The QIA stated that similar to previous years, differences remain between the QIA’s and BIMC’s estimates regarding the demobilization of third-party equipment from the site at the time of closure.

December 12, 2016 Submission

On December 12, 2016, the NWB received from the QIA, a copy of correspondence sent to BIMC regarding *Financial Security Assessment, Inflation, and Joint Submission* to the NWB. In its correspondence, the QIA indicated that while it may not be reasonable to have a discussion of alternatives in respect of including a factor for inflation at this stage in the 2017 ASR Process, the QIA indicated a willingness to engage with BIMC on this subject following the posting of security for the 2017-2018 period. In addition, the QIA mentioned in its submission that the NWB would be provided with additional correspondence on a subsequent date regarding whether or not a BIMC–QIA joint submission will be provided.

INAC MAJOR SUBMISSIONS

As one of the main stakeholder in the process, INAC provided the following key submissions, which are summarized in the following sections:

- Comprehensive Review
- December 16, 2016 Submission

December 2, 2016 Submission

INAC indicated in its comprehensive Security Review for the Project, which was received on December 2, 2016, that it considered several documents, including BIMC’s 2017 Work Plan and associated documents to update INAC’s global security amount for the Project. INAC estimated the security for reclamation on Crown Lands would be **\$1,298,555** and for Inuit-owned Land would be **\$48,633,568**. INAC mentioned in its submission that although the INAC updated reclamation security estimate for Crown Lands was higher than the amount of security currently held under the Water Licence (\$1,210,000), as it was INAC’s view that any change to this amount should trigger an amendment to the Water Licence, INAC was content for the security amount to be held for Crown Land to remain unchanged at **\$1,210,000**.

As with INAC’s submissions in previous ASR Processes, INAC also continued to raise concerns that the full amount of reclamation security necessary to ensure reclamation of water on both Crown Lands and Inuit Owned Lands was not held under the Water Licence. INAC’s concerns relate to the potential for differences in the way security is held and administered under the Water

Licence and under the commercial lease could result in INAC being required to assume responsibility for reclamation of the Project's impacts on water without access to the security held under the commercial lease by the QIA.

The differences between INAC's global financial security estimate and BIMC's global financial security estimate were mostly attributed to: a bonding factor (2%) included in INAC's estimate; and direct and indirect cost assignment in the method used to calculate the reclamation security. INAC used the most recent RECLAIM 7 model while BIMC used a method called the Estimate Breakdown Structure (EBS).

December 16, 2016 Submission

Following the ASR Teleconference held on December 9, 2016, on December 16, 2016, INAC submitted final recommendations regarding the 2017 ASR Process and updated reclamation cost estimate.

INAC's December 16, 2016 submission included comments on works or activities included in BIMC's 2017 Work Plan. In addition, INAC commented further on the issue of the total amount of reclamation security for water on both Crown Land and Inuit Owned Lands not being held by the Minister under the Water Licence, noting that this has been the case since the Licence was issued. Further, INAC changed the position stated in INAC's December 2, 2016 submission by stating that the security that BIMC should be required to post under the Water Licence for the 2017-2018 period should be increased to **\$1,298,555** rather than remain at the **\$1,210,000** currently held by the Minister under the Water Licence.

BIMC – QIA JOINT SUBMISSION

On January 6, 2017, BIMC provided a joint submission developed by the QIA and BIMC in support of the 2017 ASR Process for the Mary River Project. The joint submission was the result of discussions that occurred between BIMC and the QIA following the December 9, 2016 ASR Teleconference.

The joint submission indicated that, subject to further discussion between the parties, the overall reclamation security proposed by both parties for the 2017-2018 period under the commercial lease is **\$51,384,000**. The joint submission did not address the security that should be held under the Water Licence.

SUMMARY OF RECLAMATION ESTIMATES PROVIDED BY ALL PARTIES

Table 1 that follows summarizes the proposed reclamation estimates provided by the various parties initially and finally during the 2017 ASR Process, for the 2017 – 2018 period, as detailed in the previous sections of this letter.

Table 1: Security Proposed in Various Parties Submission for the 2017 – 2018 Period

Party -Submission	Water Licence (\$)	Commercial Lease (\$)	Total(\$)
QIA – Initial	N/A	56,317,000	56,317,000
QIA – Final	N/A	56,085,000	56,085,000
BIMC – Initial	1,210,000	46,935,000	48,145,000
BIMC – Final	1,199,000	48,072,000	49,271,000
INAC – Initial	1,210,000	48,633,568	49,843,568
INAC – Final	1,298,555	48,633,568	49,932,123
BIMC – QIA (Jointly)	N/A	51,384,000	51,384,000

The Updated Global Security Amount for 2017-2018

The Board recognizes that there are still some differences of opinion with respect to assumptions underlying the development of the global security amount for reclamation of the undertaking. Issues such as the addition of a rider for inflation, the use of unit prices based on models versus actual contract prices, etc. However, after reviewing all submissions received, the 2017 Work Plan and the estimates as proposed and revised as part of the 2017 ASR Process, the Board is confident that the global security amount should be increased to **\$52,682,555**. This amount reflects security in the amount of **\$51,384,000** being held by the QIA under the commercial lease (as proposed jointly by BIMC and the QIA in the January 6, 2017 submission) and an increase of **\$88,555** to the security held under the Water Licence to **\$1,298,555**. The increase to the security under the Water Licence was stated by INAC to be required to reflect an increase in the liability associated with the Project components on Crown Land. In the Board's view the increased global security amount of **\$52,682,555**, is equal to the highest reclamation liability for land and water combined for the upcoming period of March 2017 to March 2018 and will be sufficient to cover previous activities and activities proposed for this period under the 2017 Work Plan and the 2017 Work Plan Addendum.

The Amount of Security Required by the NWB to be posted under Licence #2AM-MRY1325 for the 2017-2018 Period

As outlined in the preceding section, the Board has determined that there should be an increase in reclamation security held by the Minister under Part C, Item 1 from the amount currently held of **\$1,210,000 to \$1,298,555**. It is the Board's view that this increase is required to reflect the increased Project liability on Crown Lands. It should also be noted that BIMC did not address INAC's submissions on the slight increase requested for the upcoming year. The Board finds that the increase requested is reasonable in the circumstances, and should be granted to ensure that the reclamation security for the undertaking under all instruments is sufficient. As outlined in the

Water Licence, the security posted under the Water Licence must be held in the form required under the *Nunavut Waters Regulations* and acceptable to the Minister of INAC.

Summary of Total Security for the Project Pursuant to Part C & Schedule C of Licence 2AM-MRY1325 for 2013 -2018

The following graphs and figures shows the global security amount as determined by the Board for the Project for specific years over the period of the 2nd 2013 to the 1st quarter of 2018, inclusively.

Table 2: Global Security Associated with the Mary River Project, 2013 – 2018

Year	2 nd Qtr. 2013 - 1 st Qtr. 2017	1 st Qtr. 2014 – 1 st Qtr. 2015	1 st Qtr. 2015 – 1 st Qtr. 2016	1 st Qtr. 2016 – 1 st Qtr. 2017	1 st Qtr. 2017 – 1 st Qtr. 2018
	With Licence Issuance	(Based on 1 st ASR)	Based on 2 nd ASR	(Based on 3 rd ASR)	Based on 4 th ASR
Total (\$)	36 Million	39.959 Million	47.6835 Million	50.0555 Million	52.682555 Million

Figure 1: Graph Showing Reclamation Security Required to Be Posted Annually for the Mary River Project, 2013 – 2018

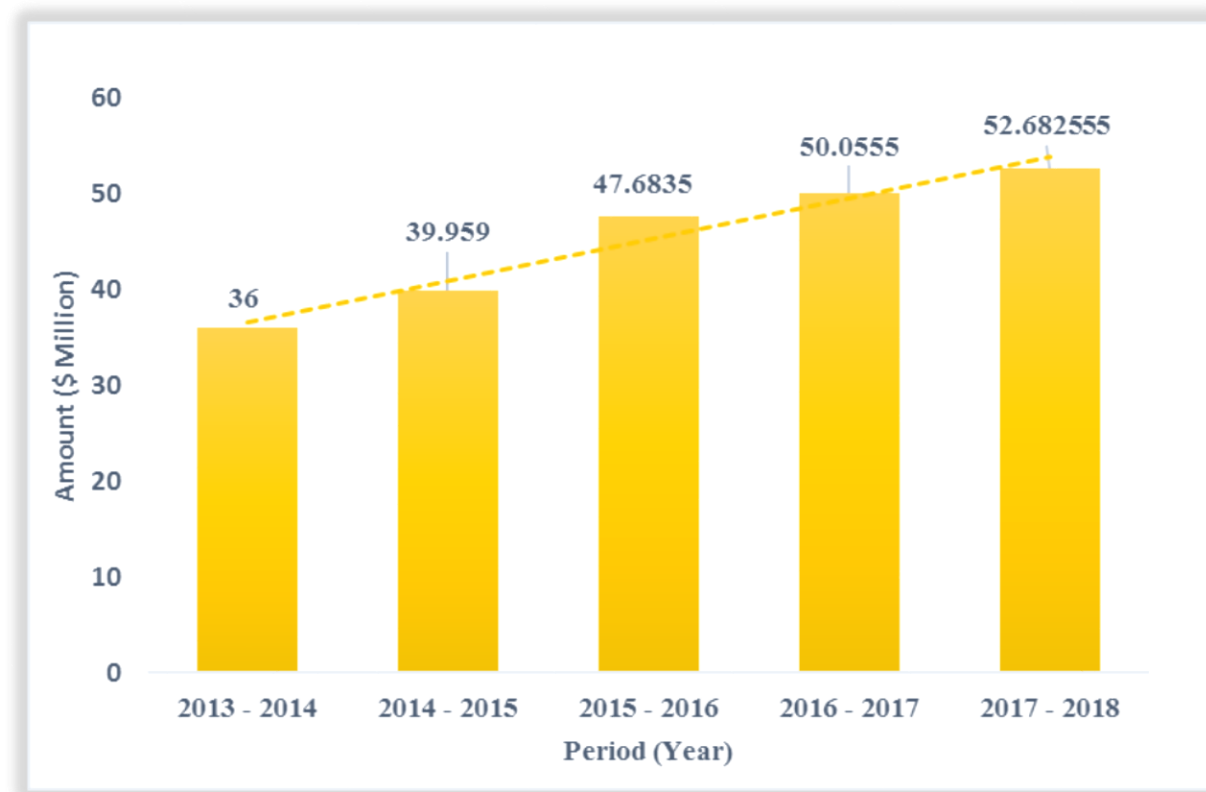
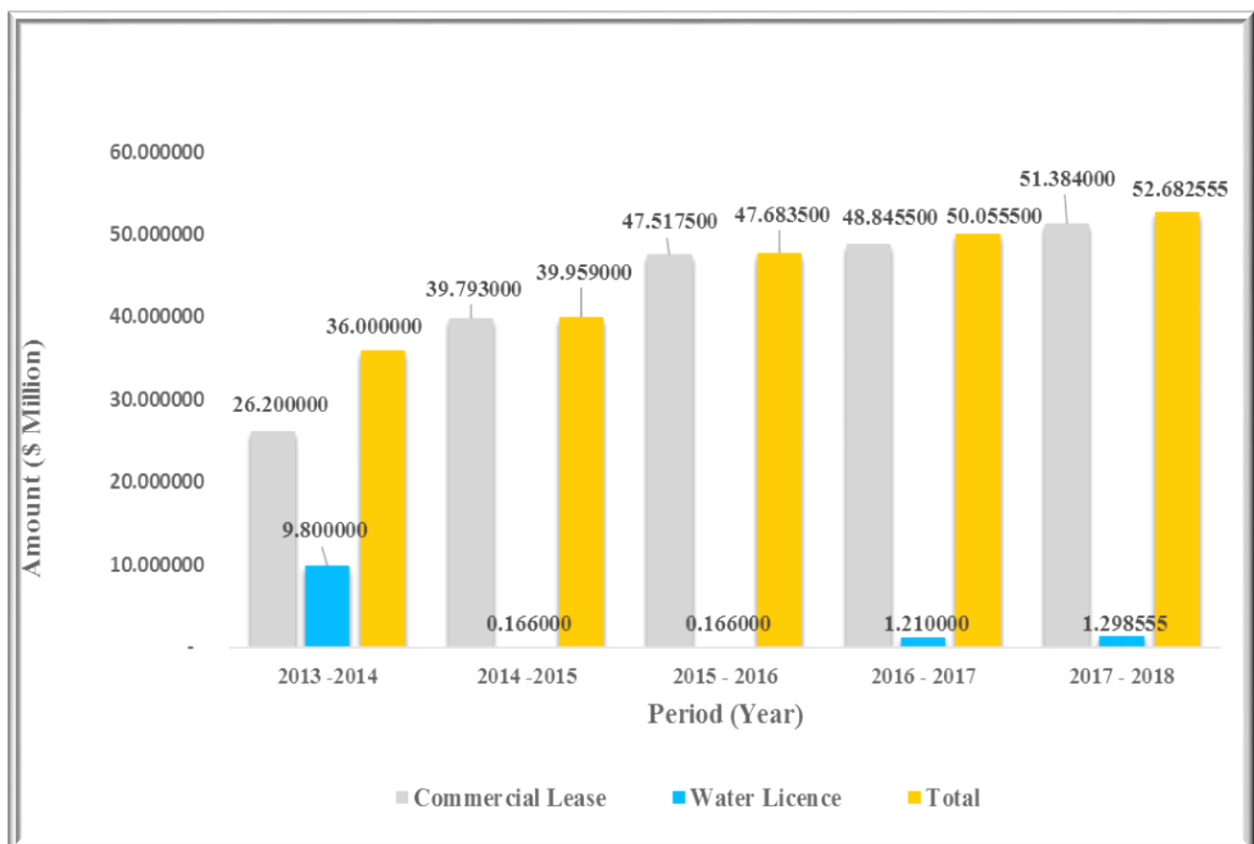


Table 3: Summary of the Apportionment of the Global Security Amount Held Under the Commercial Lease and the Water Licence for the Period 2013 – 2018

Instrument	2013 - 2014	2014 - 2015	2015 - 2016	2016 -2017	2017 - 2018
Commercial Lease	\$26,200,000	\$39,793,000	\$47,517,500	\$48,845,500	51,384,000
Water Licence	\$9,800,000	\$166,000	\$166,000	\$1,210,000	1,298,555
Total	\$36,000,000	\$39,959,000	\$47,683,500	\$50,055,500	52,682,555

Figure 2: Relative Proportion of Security Held under the Commercial Lease and Water Licence for the Period 2013 - 2018



Closure of the 2017 ASR Process

This concludes the Board's ASR determination with respect to the global security amount and the updated security required to be held under Part C, Item 1 and Schedule C of Licence No. 2AM-MRY1325 for the 2017-2018 season, as specified under the Licence, Schedule C, Item 4. During

the 2017 ASR Process, the Licensee agreed to furnish the financial security as set out in this determination within thirty (30) days from the date of receipt of this decision. The Board expects that confirmation of the additional security that has been filed with the QIA will be provided to the Board when that process is completed. All parties are advised that if confirmation of security being in force is not received by March 1, 2017 the Board may take further steps and issue further written direction under the ASR Process to ensure that adequate security is in place prior to the commencement of work under the 2017 Work Plan.

If you have any questions or require further direction with respect to this matter, please contact the Board's Executive Director, Stephanie Autut at (867) 360-6338, ext: 22 or via e-mail: stephanie.autut@nwb-oen.ca or Director of Technical Services, David Hohnstein at his direct line (780) 443-4406 or via e-mail: david.hohnstein@nwb-oen.ca.

Regards,

Thomas Kabloona
Chairperson
Nunavut Water Board

cc. Public Registry
Stephen Williamson Bathory (QIA)
Karen Costello (INAC)
Mary River Distribution List

TABLE 1:
List of Key Documentation and Activities in Support of the 2017 ASR

Date	Activity
October 5, 2016	NWB issued guidance regarding the process and schedule for the 2016 – 2017 ASR and invited comments from the parties
October 31, 2016	NWB received and distributed BIMC's correspondence indicating that there would be a delay in submission of the 2017 Work Plan (revised submission date November 4, 2016)
November 1, 2016	NWB issued correspondence that included a revised process schedule for the 2017 ASR Process to reflect the delay in BIMC's filing of the 2017 Work Plan and requested revisions from INAC and the QIA
November 3, 2016	NWB received and distributed a submission from INAC that included: • A cover letter, dated November 3, 2016, outlining the amount of reclamation security currently held by the Minister under the Water Licence and INAC's planned involvement in the upcoming ASR Process; and • A copy of INAC's Annual Geotechnical Site Inspection Report for the Mary River Project (2016), produced by SNC Lavalin Inc.
November 3, 2016	NWB received and distributed a submission from the QIA that included the following documents: • A cover letter regarding QIA's intended participation in the 2017 ASR Process; and • A copy of a standby letter of credit, in the amount of \$48.5455 million, issued June 17, 2016, by the Bank of Nova Scotia
November 4, 2016	NWB received and distributed BIMC's 2017 Work Plan
November 24, 2016	NWB received and distributed BIMC's submission regarding the 2017 Marginal Closure and Reclamation Security Estimate Revisions that reflected BIMC's response to interested parties' feedback
December 2, 2016	NWB received and distributed the QIA's submission reviewing the reclamation security proposed for the 2017 period that included: • A cover letter that addressed a number of topics including the reclamation security requirements under both the BIMC-QIA commercial lease and the Water Licence; and • A copy of QIA's Comprehensive Security Estimate, conducted by Arktis Solutions Inc., and dated November 30, 2016
December 2, 2016	NWB received and distributed INAC's submission reviewing the reclamation security proposed to be posted by BIMC for the 2017 period that included: • A cover letter regarding INAC's submission and other topics; and

Date	Activity
	• A copy of INAC's review conducted by SNC Lavalin Inc., and dated December 1, 2016
December 5, 2016	NWB received correspondence from the QIA regarding the Draft Agenda for the December 9, 2016 ASR Teleconference and confirmation of the QIA's intention to participate in the teleconference
December 5, 2016	NWB received and distributed QIA's comprehensive security estimate addendum, dated December 5, 2016
December 6, 2017	NWB received and distributed BIMC's response to the QIA and INAC's December 2, 2016 submissions
December 6, 2017	NWB received correspondence from INAC regarding the Draft Agenda for the December 9, 2016 ASR teleconference and confirmation of INAC's intention to participate
December 7, 2016	NWB Distributed the finalized Agenda and details regarding confirmed participants, BIMC, QIA, and INAC, for the ASR Teleconference scheduled for December 9, 2016
December 8, 2016	NWB received and distributed a copy of BIMC's ASR presentation
December 9, 2016	NWB hosted the 2016 – 2017 ASR Teleconference, representatives from BIMC, INAC and the QIA participated
December 9, 2016	NWB received the QIA's Speaking notes related to the ASR teleconference
December 12, 2016	NWB received and distributed ECCC Fisheries Act direction and INAC Letter of Non-Compliance dated September 2016
December 12, 2016	NWB received and distributed a submission from the QIA regarding the QIA's financial security assessment, inflation, and a joint submission to the NWB
December 12, 2016	NWB received and distributed the following Documents: • BIMC Construction Summary Report Addendum: Milne Port Stockpile Settling Ponds dated September 27, 2016; and • Mine Haul Road Drainage improvement Project, Phase 1 Construction As-Built Report dated August 29, 2016
December 14, 2016	NWB received and distributed correspondence from BIMC providing a response to the QIA's December 12, 2016 correspondence
December 16 2016	NWB received and distributed correspondence from INAC regarding INAC's final recommendations for the 2017 ASR Process
December 19, 2016	NWB received an email notification from BIMC indicating that the QIA and BIMC were continuing to work together with a view to providing a joint submission to the NWB for consideration during the ASR Process and identifying that BIMC would follow up with the Board by December 23 to indicate whether a joint submission would be provided by QIA and BIMC during the ASR Process
December 23, 2016	NWB received correspondence from BIMC confirming that BIMC and the QIA would be providing a joint submission by January 2, 2017
January 2, 2017	NWB received correspondence from BIMC indicating that the joint submission with the QIA would be delayed due to BIMC's internal approval process

Date	Activity
January 2, 2017	NWB distributed post-teleconference follow-up correspondence from BIMC, dated December 23, 2016 (received after the NWB office closed on December 23, 2016).
January 6, 2017	NWB received a joint submission from BIMC and the QIA

2017 Marginal Closure and Reclamation Financial Security Estimate

Table of Contents

1.	Introduction	1
1.1	Purpose.....	1
1.2	Regulatory Context	1
1.3	Applied Rates.....	2
1.4	Document Structure	2
2.	2016/17 ASR Reconciliation	3
2.1	Direct Cost Items Removed from Estimate	3
2.1.1	Grade and Re-Contour	3
3.	2017 Work Plan	4
3.1	Introduction	4
3.1.1	Closure Scenario	4
3.2	2017 Planned Activities	4
3.3	2017 Work Plan Security Estimate Assumptions	5
3.3.1	Direct Cost Assumptions	5
3.3.2	Indirect Cost Assumptions	9
3.3.3	Exclusions.....	11
4.	2017 Marginal Reclamation and Closure Security Cost Summary	12
5.	Supporting Documents	15

List of Tables

Table 2-1: Disturbed Areas Removed from the EBS	3
Table 3-1: Summary of Marginal Increase of Buildings and Foundation Areas with Associated Unit Rates	6
Table 3-2: Summary of Marginal Increase of Mechanical and Mobile Equipment with Associated Unit Rates	6
Table 3-3: Summary of Marginal Increase of Site Works with Associated Unit Rates	7
Table 3-4: Summary of Marginal Increase of Consumables with Associated Unit Rates	8
Table 3-5: Summary of Marginal Increase of Site Works with Associated Unit Rates	8
Table 4-1: Mary River Project Total Closure and Reclamation Security Summary ¹	13
Table 4-2: 2017 Estimated Closure and Reclamation Security Detailed Summary ¹	14

List of Appendices

Appendix A - 2017/18 ASR Estimate Breakdown Structure (EBS)

Appendix B - 2017 Work Plan Layouts

Appendix C - Supporting Documentation

1. Introduction

1.1 Purpose

The purpose of the 2017 Marginal Closure and Reclamation Financial Security Estimate ('2017/18 ASR Estimate') is to provide a summary of the closure and reclamation security estimated to be required for the Mary River Project (the Project) to meet reclamation objectives as outlined in the Interim Mine Closure and Reclamation Plan (BAF-PH1-830-P16-0012). The total 'global' closure and reclamation security estimated to be required takes into consideration planned work in 2017/18 being conducted under Type "A" Water Licence 2AM-MRY1325, Amendment No. 1 and the Qikiqtani Inuit Association's (QIA) Commercial Lease No. Q13C301 in addition to previous Project closure and reclamation security.

The 2017/18 ASR Estimate 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 2017 Work Plan. For the purpose of this document, the material changes associated to security from the 2017 Work Plan are termed, '2017 Work Plan Security Estimate'.

In order for the 2017/18 ASR Estimate to accurately reflect the total 'global' closure and reclamation security estimated to be required for the Project in 2017/18, this document also provides a summary of the identified Project components and activities that have materially changed from the position presented by Baffinland Iron Mines Corporation (Baffinland) during the 2016/17 Annual Security Review (ASR)¹. Based on these identified material changes, the resulting associated security impacts (+/- \$) are also presented for incorporation into the 2017/18 ASR Estimate to ensure accurate representation of the Project based on current planning. For the purpose of this document, this process was termed the '2016/17 ASR Reconciliation'. The combination of the 2016/17 ASR Reconciliation and 2017 Work Plan Security Estimate form the 2017/18 ASR Estimate.

1.2 Regulatory Context

An annual adjustment to reclamation security is required under Section 9.2 of the Commercial Lease, No. Q13C301, agreed to between Baffinland and the QIA, as well as a requirement under the Type 'A' Water Licence 2AM-MRY1325, Amendment No. 1 (Part J, Item 3). The 2017/18 ASR Estimate therefore represents Baffinland's proposed annual adjustment to reclamation security to account for work conducted on site to date and planned work to be completed as described in the 2017 Work Plan.

¹ As described in 2016 Marginal Closure and Reclamation Financial Security Estimate (H349001-1000-07-126-0002, Rev 0) and NWB Letter on February 5, 2016 Re: Licence No. 2AM-MRY1325, Baffinland Iron Mines Corporation Type "A" Water Licence, Mary River Mine Project: Direction from Nunavut Water Board Under the Annual Security Review Process Established Under Part C and Schedule C of the Water Licence.

The 2017/18 ASR 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, Amendment No. 1, 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 estimated to be required is based on an estimate of the highest reclamation liability in the upcoming year² or ‘worst case’ scenario.

1.3 Applied Rates

The 2017/18 ASR Estimate was developed by applying the direct cost unit rates established in the 2014 Complete Project Financial Security Assessment³ to quantities of functional units of each activity or project component proposed/changed under the 2017/18 ASR Estimate unless indicated otherwise. Based on the direct cost estimate, indirect costs required to support direct cost work were accounted for proportional to 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 2017/18 ASR Estimate was then differentiated based on 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 the results of this process for all activities or project components proposed under the 2017/18 ASR Estimate and all previous project financial security liabilities as described in previous ASR submissions.

All costs in Canadian Dollars (CAD). All monetary totals rounded to nearest '000.

1.4 Document Structure

The following outlines the structure of the 2017/18 ASR Estimate document:

- Section 1 presents the purpose, regulatory context, applied rates used, and document structure applicable to the 2017/18 ASR Estimate;
- Section 2 describes the ‘2016/17 ASR Reconciliation’ process, and its resulting impacts to the 2017/18 ASR Estimate;
- Section **Error! Reference source not found.** provides a summary of the financial security estimated to be required for marginal closure and reclamation liability increase associated with the Mary River Project 2017 Work Plan (‘2017 Work Plan Security Estimate’);
- Section 4 summarizes net impacts to the 2017/18 ASR Estimate associated with 2016/17 ASR Reconciliation and 2017 Work Plan Security Estimate; and
- Section 5 lists supporting documentation that was used to determine costs and quantities for the purpose of the 2017/18 ASR Estimate.

² As per Type ‘A’ Water Licence 2AM-MRY1325, Amendment No. 1, Schedule C, Part 6, Item c.

³ As described in 2014 Complete Project Financial Security Assessment, H349000-1000-07-126-0018, Rev.1. Hatch. Submitted to parties October 31, 2014.

2. 2016/17 ASR Reconciliation

In order for the 2017/18 ASR Estimate to accurately reflect the total 'global' closure and reclamation security estimated to be required for the Project in 2017/18, a 2016 Annual Security Audit of the Project sites was conducted September 14 to 21, 2016 by Baffinland and QIA representatives. The purpose of the 2016 Annual Security Audit was to identify Project components and activities that have materially changed from the position presented by Baffinland during the 2016/17 ASR. Based on these identified material changes, the resulting associated security impacts (+/- \$) were determined, which are presented below for proposed incorporation into the 2017/18 ASR Estimate to ensure accurate representation of the Project based on current planning.

The nature of the changes found during the 2016/17 ASR Reconciliation process primarily relate the removal of the direct and indirect cost allocations captured in the position presented by Baffinland during the 2016/17 ASR related to components or activities that, due to changes in project planning, have not occurred to-date and are not anticipated to occur in 2017/18 or have been superseded by a more current/accurate allocation. The items to be removed from the 2017/18 ASR Estimate due to the 2016/17 ASR Reconciliation process primarily relate to borrow and quarry areas.

An itemized list of the of cost allocations that were removed, added and/or modified is presented in sub-section 2.1.

2.1 Direct Cost Items Removed from Estimate

This sub-section describes the changes to direct cost assumptions/quantities proposed to be captured by the 2017/18 ASR Estimate based on the results of the 2016/17 ASR Reconciliation.

Identified changes resulted in credit or removal of direct costs items allocated in previous ASR estimates that due to changes in project planning, have not occurred to-date and are not anticipated to occur in 2017/18.

2.1.1 Grade and Re-Contour

The position presented by Baffinland during the 2016/17 ASR allocated a total of \$185,000 in direct costs to account for grading and re-contouring of disturbed areas that have not been disturbed and are not anticipated to be disturbed related to the Mary River Project. An itemized list of this reduction is presented in Table 2-1. For the purpose the 2017/18 ASR Estimate, these areas are no longer envisioned as requiring grading and re-contouring or have been superseded by a more current/accurate allocation.

Table 2-1. Disturbed Areas Removed from the EBS

Description	Unit Rate (\$)	Quantity (m ²)	Total Cost (\$)¹
Grade and Contour			
Q9 Quarry	1.81	15,166	27,450
Q14 Quarry	1.81	13,440	24,326
Q15 Quarry	1.81	10,680	19,331
P5 Borrow Source	1.81	4,600	8,326
P6 Borrow Source	1.81	7,500	13,575
P7 Borrow Source	1.81	8,100	14,661
P8 Borrow Source	1.81	8,385	15,177

Description	Unit Rate (\$)	Quantity (m ²)	Total Cost (\$)¹
P10 Borrow Source	1.81	19,344	35,013
P13 Borrow Source	1.81	8,456	15,305
P14 Borrow Source	1.81	3,160	5,720
P15 Borrow Source	1.81	3,300	5,973
TOTAL		102,131	185,000

NOTES:

1) Grand total rounded to nearest '000

3. 2017 Work Plan

3.1 Introduction

The purpose of this section of the document is to provide a summary of the additional financial security estimated to be required for work items described in the Mary River Project 2017 Work Plan (November 4, 2016). The estimated marginal closure and reclamation financial security required to account for 2017 planned work (aka. The '2017 Work Plan Security Estimate') is intended to be aggregated with the results of the 2016/17 ASR Reconciliation process (described in Section 2) and previous Project closure and reclamation security bonding. The combination of the 2016/17 ASR Reconciliation results and the 2017 Work Plan Security Estimate form the basis of the 2017/18 ASR Estimate. The result of this approach, the estimated project-wide or 'global' closure and reclamation security bonding totals for the Mary River Project to-date, are presented in Section 4.

A detailed description of the work activities captured in the 2017 Work Plan Security Estimate are described in the Baffinland 2017 Work Plan and are summarized in Section 3.2 below.

3.1.1 Closure Scenario

The 2017 Work Plan Security Estimate is based on a scenario that assumes all planned activities for 2017 Work Plan have taken place on site and all material/consumables (excluding fuel) that are mobilized to site in 2016 are in full inventory. All other assumptions relating to the estimation of direct and indirect, including fuel, associated with the 2017 Work Plan Security Estimate are consistent with rates and assumptions established in the 2014 Complete Project Financial Security Assessment and previous ASR documentation unless noted otherwise.

3.2 2017 Planned Activities

As described in the 2017 Work Plan, planned work in 2017/18 is being conducted under the amended Project Certificate No.005, QIA Commercial Lease No. Q13C301, Type 'A' Water Licence 2AM-MRY1325, Amendment No. 1 and Type 'B' Water Licence 8BC-MRY1416.

Planned work includes:

- Development and operation of the mine, ore crushing and land transportation, stockpiling and marine shipment of ore.
- The continued development and construction of infrastructure required at Milne Port and the Mary River Mine Site (Mine Site) and along the Tote Road for the Mary River Project.
- Mobilization of additional 49 person soft-wall camp at Milne Port and continued operation of Mine Site and Milne Port Camps to support ongoing operations and construction

activities which will include the use of water and deposition of waste as authorized under existing permits.

- On-going operation of permitted quarry and borrow sources; there are also additional planned quarries or borrow areas along the Tote Road that are identified and are to be utilized during 2017.
- At Milne Port, vessels carrying fuel, equipment and supplies for use at the Mine Site and Milne Port will arrive during open water (approximately between mid-July and mid-October 2017). Material, fuel and supplies required for operational and construction activities will be transported to the Mine Site year round via the Tote Road.
- Geotechnical drilling may be required to support engineering, design and construction activities of Project.
- Ongoing environmental effects studies and baseline data collection will continue to support the construction and operation of the Project as well as for future engineering requirements.
- Continued environmental monitoring in accordance with the approved Project Certificate, licenses, authorizations, management plans and environmental effects monitoring plans.
- On-going exploration activities including mapping, prospecting, sampling, and geophysics. There is the potential for a drilling and/or trenching program but these items are not yet finalized.

A detailed description of these work activities, which are captured in the 2017 Work Plan Security Estimate, are described in the Baffinland 2017 Work Plan.

3.3 2017 Work Plan Security Estimate Assumptions

3.3.1 Direct Cost Assumptions

The following sections describe the assumptions used to establish the direct costs allocated in the 2017 Work Plan Security Estimate based on the 2017 Work Plan. Please refer to Appendix A for details of this cost allocation based on the EBS Breakdown Structure, Appendix B for locations of below noted facilities, and Appendix C for supporting documentation relating to estimated unit quantities (where available). Direct cost allocations were applied to quantities as indicated in the 2017 Work Plan and consistent with the direct cost assumptions described in the 2014 Complete Project Financial Security Assessment.

3.3.1.1 *Buildings and Foundations*

The 2017 Work Plan Security Estimate allocates \$331,000, plus proportional cover material application costs, in direct costs to account for a marginal increase of buildings and foundations associated with the 2017 Work Plan. This marginal increase of buildings and foundations is itemized in the EBS as presented in Appendix A. This additional cost allocation is based on:

- Mobilization and deployment of 49-person soft-wall camp at Milne Port at an assumed footprint of 950 m².

- Assembly of a tire shop at the Mine Site using sea can construction at the assume dimensions of 25m x 20m.
- Development of an additional Truck Wash Building at the Mine Site using fold away type construction (contaminated), precast foundations with gravel base, and an assumed footprint of 1500 m².

A summary of security costs associated with the marginal increase of buildings and foundations associated with the 2017 Work Plan is shown in Table 3-1.

Table 3-1: Summary of Marginal Increase of Buildings and Foundation Areas with Associated Unit Rates

Description	Unit Rate Type	Unit Rate (\$)	Quantity (m ²)	Cost (\$)¹
49 Person Camp at Milne Port	Soft Walled Building (tent) Not Contaminated	47.51	950	45,135
Assembly of a tire shop at Mine Site	ISO Container	29.69	500	14,845
Additional Truck Wash Building at Mine Site	Fold-Away Building (Contaminated)	142.41	1,500	213,615
Additional Truck Wash Building at Mine Site	Pre-cast Foundations	38.47	1,500	57,705
TOTAL			4,450	331,000

NOTES:

1) Grand total rounded to nearest '000

3.3.1.2 Mechanical and Mobile Equipment

The 2017 Work Plan Security Estimate allocates \$475,000, plus cover material application costs, in direct costs to account for a marginal increase of mechanical and mobile equipment as itemized in the 2017 Work Plan. This cost allocation is based on an additional 105 pieces of mechanical or mobile equipment mobilized to site in 2017 and the addition to three (3) pieces of 'Heavy Mobile Equipment', owned by 3rd Party, to align with the 'Typical' 3rd Party equipment fleet recommended to be adopted by Hatch and Arktis in Mary River Financial Security Estimate – Preliminary Path Forward on Items with High Uncertainty, H349000-1000-07-220-0005, Revision 2.

It is noted detailed design for the additional 'cross-conveyor' being constructed in 2017 at Milne Port has yet to be completed. Therefore for the purpose of the 2017 Work Plan Security Estimate, it was assumed the cross-conveyor is one sixth the length of the existing reclaim ship loader conveyor at Milne Port at the prorated version of the same unit rate.

A summary of the marginal increase of costs associated with mechanical or mobile equipment and associated unit rates is shown in Table 3-2.

Table 3-2: Summary of Marginal Increase of Mechanical and Mobile Equipment with Associated Unit Rates

Description	Unit Rate Type	Unit Rate (\$/pcs)	Quantity (pcs)	Cost (\$)¹
Truck Wash System for New Truck Wash Building	Medium Mechanical Equipment	4,261.34	1	4,261
Grader	Heavy Mobile Equipment	2,618.87	1	2,619
777 Haul Truck	Heavy Mobile Equipment	2,618.87	1	2,619
D10 Dozer	Heavy Mobile Equipment	2,618.87	1	2,619

Description	Unit Rate Type	Unit Rate (\$/pcs)	Quantity (pcs)	Cost (\$)¹
Ore Haul Trucks	Heavy Mobile Equipment	2,618.87	8	20,951
Ore Haul Truck B-Train Trailer	Medium Mobile Equipment	1,494.13	8	11,953
Fuel/Lube Truck	Heavy Mobile Equipment	2,618.87	1	2,619
Forklift	Medium Mobile Equipment	1,494.13	2	2,988
Telehandler	Heavy Mobile Equipment	2,618.87	1	2,619
Mechanics Truck (with crane and compressor)	Medium Mobile Equipment	1,494.13	1	1,494
Passenger Bus	Medium Mobile Equipment	1,494.13	1	1,494
Feeder (small)	Medium Mechanical Equipment	4,261.34	3	12,784
Jump Conveyor	Medium Mechanical Equipment	4,261.34	12	51,136
Cross Conveyor	Reclaim Conveyor	1,329,441.31	0.17 (1 psc)	221,574
Screener	Medium Mechanical Equipment	4,261.34	1	4,261
992 Loader	Heavy Mobile Equipment	2,618.87	4	10,475
Cone Crusher	Medium Mechanical Equipment	4,261.34	1	4,261
Zoom Boom	Heavy Mobile Equipment	2,618.87	1	2,619
Excavators	Heavy Mobile Equipment	2,618.87	2	5,238
Chain Conveyor	Medium Mechanical Equipment	4,261.34	2	8,523
Pick Up Truck	Light Mobile Equipment	941.09	12	11,293
Frost Fighter	Light Mechanical Equipment	1,980.80	20	39,616
Light Plant	Light Mechanical Equipment	1,980.80	20	39,616
3rd Party Heavy Mobile Equipment (make up for 'typical' fleet)	Light Mechanical Equipment	2,618.87	3	7,857
		TOTAL	108	475,000

NOTES:

1) Grand total rounded to nearest '000

Refer to Appendix A for an item by item breakdown of the allocation of direct cost relating to mechanical or mobile equipment reclamation.

3.3.1.3 Cabling

The 2017 Work Plan Security Estimate allocates \$185,000 to account for additional cabling and lighting being constructed in 2017 at Milne Port and the Mine Site. This cost allocation is based on the assumption 3.5 km of cabling/lighting will be installed at Milne Port and 3.5 km of cabling/lighting will be installed at Mine Site for safety purposes. A summary of the marginal increase of cabling in the 2017 Work Plan Security Estimate is shown in Table 3-3.

Table 3-3: Summary of Marginal Increase of Site Works with Associated Unit Rates

Description	Unit Rate Type	Unit Rate (\$/m)	Quantity (m)	Cost (\$)¹
Lighting and Cabling at Mine Site	Cable	\$26.49	3,500	92,715
Lighting and Cabling at Milne Port	Cable	\$26.49	3,500	92,715
		TOTAL	7000	185,000

NOTES:

1) Grand total rounded to nearest '000

3.3.1.4 Consumables

The position presented by Baffinland during the 2016/17 ASR directly assigned costs for reclamation activities associated with disposal of consumables stored on-site in relation to the Project. Although by definition consumables are a commodity that is intended to be used up relatively quickly, for the purpose of accounting for the 'worst case' scenario for the Project it was determined that a total of \$700.80 per bed space available on site be allocated to account for consumable removal and reclamation during closure activities. This cost is inclusive of:

- Disassembly (if required), load, transport of consumables – \$577.99/bed space;
- Fill application for additional compacted volume of material requiring disposal on-site – \$67.20/bed space;
- Mobilization/demobilization of workers required for the task – \$14.87/bed space; and
- Worker accommodation and camp operation – \$40.74/bed space.

Allocation also includes Mobilization and Demobilization of Equipment and Materials by Sealift (+10%), Contingency (+12.5%) and Supervision, Project Management & Contract Administration (+9.4%) as these are applied as part of the multiplier application to total direct costs. A summary of the marginal increase of consumables in the 2017 Work Plan Security Estimate is shown in Table 3-4.

Table 3-4: Summary of Marginal Increase of Consumables with Associated Unit Rates

Description	Unit Rate Type	Unit Rate (\$/ea)	Quantity (ea)	Cost (\$)¹
Additional 49 Bed Spaces	Consumables	\$700.80	49	34,339.20
TOTAL			49	34,000

3.3.1.5 Site Works

The 2017 Work Plan Security Estimate allocates \$280,000 to account for application of cover material due to the marginal increase of demolition materials to be disposed of on-site and reclamation of additional disturbed areas. A summary of the marginal increase of these "Site Works" in the 2017 Work Plan Security Estimate is shown in Table 3-5.

Table 3-5: Summary of Marginal Increase of Site Works with Associated Unit Rates

Description	Unit Rate Type	Unit Rate (\$/m²)	Quantity (m²)	Cost (\$)¹
2017 Work Plan Demolition Materials	Fill Application	44.37	1,095	48,585
Q1 Quarry (marginal increase to existing)	Grade and Re-Contour	1.81	6,000	10,860
Q7 Quarry	Grade and Re-Contour	1.81	2,000	3,620
Q11 Quarry	Grade and Re-Contour	1.81	2,000	3,620
Q18 Quarry	Grade and Re-Contour	1.81	2,000	3,620
QMR2 (marginal increase to existing)	Grade and Re-Contour	1.81	6,000	10,860
Km 2 Borrow Source (marginal increase to existing)	Grade and Re-Contour	1.81	1,000	1,810
Km 97 Borrow Source (marginal increase to existing)	Grade and Re-Contour	1.81	1,000	1,810
Expansion of Crusher Pad Storage Area - Phase 1	Grade and Re-Contour	1.81	8,200	14,842
Expansion of Crusher Pad Storage Area - Phase 2	Grade and Re-Contour	1.81	17,500	31,675
Expansion of Ore Stockpile Storage Area - Phase 1	Grade and Re-Contour	1.81	36,900	66,789
Expansion of Ore Stockpile Storage Area - Phase 2	Grade and Re-Contour	1.81	45,100	81,631
TOTAL			280,000	

NOTES:

1) Grand total rounded to nearest '000

3.3.2 Indirect Cost Assumptions

The following section describes the assumptions used to establish the indirect costs allocated for the purpose of the 2017 Work Plan Security Estimate. Unless noted otherwise, see the 2014 Complete Project Financial Security Assessment (H349000-1000-07-126-0018, Rev. 1) for further supporting information on the specific indirect unit rates and multipliers used below.

3.3.2.1 *On-Site Fuel Demobilization and Reclamation Fuel Mobilization*

The 2017 Work Plan Security Estimate allocates an additional \$28,000 to account for the mobilization of fuel required for the marginal increase in reclamation activities captured in the 2015 Work Plan Addendum.

The additional \$28,000 allocation for fuel mobilization is based on 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 86,136L of Type-1 fuel (see Appendix A). Marginal increases in camp operation during reclamation is estimated to require an additional 481 person-days on-site. 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.

See Appendix A for itemized person-day and fuel consumption quantities per 2017 Work Plan item.

3.3.2.2 *Mobilization of Workers Required for Reclamation*

The 2017 Work Plan Security Estimate allocates an additional \$40,000 for worker mobilization. Detailed assumptions for mobilization of workers required for marginal closure and reclamation activities are:

Person-hours required to complete direct cost related on-site marginal reclamation activities is estimated to be 4,806 hrs or 481 person-days (based on 10hr/day productivity). See Appendix A for itemized person-day allocations per 2017 Work Plan item.

- Assume 70% of hires (337 person-days) are from southern communities and 30% (145 person-days) are from northern communities.
- Cost per person-day on site for worker mobilization from southern communities is \$85.45/person-day on-site.
- Cost per person-day on site for worker mobilization from northern communities is \$75.00/person-day on-site

3.3.2.3 *Worker Accommodation & Camp Operation*

The 2017 Work Plan Security Estimate allocates an additional \$108,000 for worker accommodation and camp operation during marginal reclamation activities associated with the 2017 Work Plan. Assumptions for worker accommodation and camp operation are:

- Person-hours required to complete direct cost related on-site marginal reclamation activities is estimated to be 4,806 hrs or 481 person-days (based on 10hr/day productivity). See Appendix A for itemized person-day allocations.

- Cost for accommodation and camp operation is assumed to be \$225.50/person-day and includes camp maintenance, catering, housekeeping, and fuel costs.

3.3.2.4 *Contaminated Soil*

The 2017 Work Plan Security Estimate allocates an additional \$63,000 to account for on-site treatment of the marginal increase of known contaminated soil on-site. This cost is based on contaminated soil treatment unit rate of \$14.78/m³ and an assumption of an increase of 4,232 m³ of additional contaminated soil being present at the conclusion of the 2017 Work Plan. This 4,232 m³ of additional known contaminated soil is attributed to a Type-1 fuel release within the existing secondary containment at the Milne Port Bulk Fuel Steel Tank Farm in 2016 (Spill 16-283) and the assumption that half of the soil within the berm was contaminated to a depth of 1/3 of a meter.

3.3.2.5 *Mobilization and Demobilization of Equipment and Materials*

The 2017 Work Plan Security Estimate allocates an additional \$117,000 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 the assumption that mobilization and demobilization cost are estimated as 10% of total direct costs.

3.3.2.6 *Supervision, Project Management and Contract Administration*

The 2017 Work Plan Security Estimate includes a project supervision, management and contract administration indirect cost allowance of \$116,000 or 9.4% of total direct costs, contaminated soil treatment costs, care and maintenance costs, and closure monitoring/reporting costs. 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.

3.3.2.7 *Engineering Fees*

The 2017 Work Plan Security Estimate includes an engineering, design and execution planning indirect cost allowance of \$46,000 or 3.9% of the total direct costs.

3.3.2.8 *Contingency*

The 2017 Work Plan Security Estimate includes an additional contingency of \$188,000 or 12.5% of the total of direct costs, mobilization and demobilization of equipment and materials

costs, worker accommodation and camp operation costs, mobilization of workers costs, care and maintenance costs, and closure monitoring/reporting costs.

3.3.3 Exclusions

The listed activities are recognized by Baffinland as being required to be conducted in an unforeseen closure and reclamation scenario but additional costs have not been included in the 2017 Work Plan Security Estimate on the basis that it is Baffinland's position that the 2017 Work Plan Security Estimate activities do not warrant additional cost allocations for these activities. Excluded activities from the 2017 Work Plan Security Estimate are:

- Off-Site Disposal of Hazardous and Non-Hazardous Waste (including Ammonium Nitrate and explosives).
- Short-Term Care and Maintenance, Closure and Post Closure Monitoring and Reporting.

4. 2017 Marginal Reclamation and Closure Security Cost Summary

The 2017/18 ASR Estimate is 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 2017 Work Plan including legacy exploration phase liabilities.

Table 4-1 presents the total closure and reclamation security determined to-date (Column D) compared to the proposed adjustments to be posted as a result of the 2017/18 ASR Estimate (Column G).

Table 4-2 presents a summary of the 2017/18 ASR Estimate to support the 2017 Work Plan in a categorized breakdown format that was estimated in accordance to principles, methodology, and closure objectives defined within the Mary River Project Interim Closure and Reclamation Plan (BAF-PH1-830-P16-0012).

Table 4-1: Mary River Project 'Global' Closure and Reclamation Security Summary¹

	A	B	C	D	E	F	G
	Authorization	Liability	Global Estimate from 2016/17 ASR (\$)	2017/18 ASR Marginal Estimate (\$)	Total 'Global' Estimated Security for 2017/18 (\$)	Total Posted (\$)	Adjustment to be Posted (\$)
					C + D		E - F
1	Type A 2AM-MRY1325	IOL ²	45,055,000	1,880,000	46,935,000	48,846,000	(1,911,000)
2		Crown	1,210,000	-	1,210,000	1,210,000	-
3		Water	1,342,000	-	1,342,000	-	-
4		Land	44,923,000	1,880,000	46,803,000	-	-
5	<i>Subtotal Type A</i>		46,265,000	1,880,000	48,145,000	50,056,000	(1,911,000)
6	Type B Construction 2BC-MRY1416	IOL ²	-	-	-	-	-
7		Crown	-	-	-	147,000	(147,000)
8		Water	-	-	-	-	-
9		Land	-	-	-	-	-
10	<i>Subtotal Type B Construction</i>		-	-	-	-	(147,000)
11	Type B Exploration 2BE-MRY1421 ³	IOL	165,000	-	165,000	-	165,000
12		Crown	1,082,000	-	1,082,000	1,250,000	(168,000)
13		Water	18,000	-	18,000	-	-
14		Land	1,229,000	-	1,229,000	-	-
15	<i>Subtotal Type B Exploration</i>		1,247,000	-	1,247,000	1,247,000	(3,000)
16	DFO Security Associated with Ore Dock	IOL ²	-	-	-	-	-
17		Crown	563,000	-	563,000	563,000	-
18		Water	563,000	-	563,000	563,000	-
19		Land	-	-	-	-	-
20	<i>Subtotal DFO</i>		563,000	-	563,000	563,000	-
21	AANDC Land Lease 47H/16-1-2 ^{4,5}	IOL ²	-	-	-	-	-
22		Crown	4,975,000	-	4,975,000	4,975,000	-
23		Water	-	-	-	-	-
24		Land	4,975,000	-	4,975,000	4,975,000	-
25	<i>Subtotal AANDC Land Lease</i>		4,975,000	-	4,975,000	4,975,000	-
27	GRAND TOTAL		53,050,000	1,880,000	54,930,000	58,721,000	(2,061,000)

NOTES:

1) Totals rounded to nearest '000 in CAD

2) Security relating to IOL held by Qikiqtani Inuit Association (QIA) under Commercial Lease No. Q13C301

3) As per Mary River Exploration Project Closure and Reclamation Plan (BAF-PH1-830-P16-0038, Rev 1)

4) Posting process for security relating to AANDC Land Lease 47H/16-1-2 phased into a 2-step approach. Phase 1 to be posted November 2016.

5) As per Closure and Reclamation Strategy and Financial Security Estimate for Nunavut Lease #47H/16-1-2 (H349001-2000-07-126-0001, Rev.0)

Table 4-2: 2017 Estimated Closure and Reclamation Security Detailed Summary¹

Cost	Global Estimate from 2016/17 ASR (\$)	2017/18 ASR Marginal Estimate (\$)	Total 'Global' Estimated Security for 2017/18 (\$)
Direct Costs			
Project Wide	1,395,000	83,000	1,478,000
Milne Port	5,670,000	591,000	6,261,000
Construction Facilities & Services	2,102,000	45,000	2,147,000
Mine Site	8,205,000	621,000	8,826,000
Tote Road	4,695,000	(166,000)	4,529,000
Mary River Exploration Activities	1,022,000	-	1,022,000
<i>Subtotal</i>	<i>23,089,000</i>	<i>1,174,000</i>	<i>24,263,000</i>
Indirect Costs			
Off-Site Disposal of Waste & Material	1,969,000	-	1,969,000
Fuel Mobilization and Demobilization	3,152,000	28,000	3,180,000
Ammonium Nitrate (explosive material)	2,537,000	-	2,537,000
Contaminated Soil Treatment	239,000	63,000	302,000
Mobilization of Workers Required for Reclamation	988,000	40,000	1,028,000
Worker Accommodation & Camp Operation	2,560,000	108,000	2,668,000
Mob/Demob of Equipment and Materials by Sealift	2,206,000	117,000	2,323,000
Short Term C&M, Closure Monitoring & Reporting	3,766,000	-	3,766,000
Supervision, PM & Contract Administration	2,256,000	116,000	2,372,000
Engineering Fees	861,000	46,000	907,000
Contingency	3,663,000	188,000	3,851,000
Mary River Exploration Activities	225,000	-	225,000
DFO Financial Security for Ore Dock	563,000	-	563,000
AANDC Land Lease	4,975,000	-	4,975,000
<i>Subtotal</i>	<i>29,960,000</i>	<i>706,000</i>	<i>30,666,000</i>
TOTAL	53,049,000	1,880,000	54,929,000

IOL	Crown Land	Water Liability	Land Liability
Direct Costs			
1,254,000	224,000	-	1,478,000
6,261,000	-	227,000	6,034,000
2,147,000	-	-	2,147,000
8,826,000	-	1,115,000	7,711,000
4,056,000	473,000	-	4,529,000
135,000	887,000	15,000	1,007,000
<i>22,679,000</i>	<i>1,584,000</i>	<i>1,357,000</i>	<i>22,906,000</i>
Indirect Costs			
1,969,000	-	-	1,969,000
3,180,000	-	-	3,180,000
2,537,000	-	-	2,537,000
302,000	-	-	302,000
996,000	32,000	-	1,028,000
2,585,000	83,000	-	2,668,000
2,253,000	70,000	-	2,323,000
3,647,000	119,000	-	3,766,000
2,304,000	68,000	-	2,372,000
880,000	27,000	-	907,000
3,738,000	113,000	-	3,851,000
30,000	195,000	3,000	222,000
-	563,000	563,000	-
-	4,975,000	-	4,975,000
<i>24,421,000</i>	<i>6,245,000</i>	<i>566,000</i>	<i>30,100,000</i>
47,100,000	7,829,000	1,923,000	53,006,000

NOTES:

1) All totals rounded to nearest '000 in CAD

5. Supporting Documents

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

- Refer to Appendix A for the 2017/18 ASR Estimate Breakdown Structure (EBS).
- Refer to Appendix B for updated 2017 Work Plan Layouts.
- Refer to Appendix C for supporting documentation for estimated quantities including:
 - ◆ C.1 Milne Port Ore Stockpile Pad extension sketch
 - ◆ C.2 Mine Site Crusher Pad extension sketch

Appendix A:

2017/18 ASR Estimate Breakdown Structure (EBS)

Hatch Confidential

Hatch Confidential

Hatch Confidential

Hatch Confidential

Hatch Confidential

Hatch Confidential

Hatch Confidential

Hatch Confidential

Hatch Confidential

Hatch Confidential

Hatch Confidential

Hatch Confidential

Hatch Confidential

Hatch Confidential

Hatch Confidential

Hatch Confidential

Hatch Confidential

Level 0 - Site Location	Level 0 - Description	Level 1 - Area	Level 1 - Description	Level 2 - Facility / System	Level 2 - Description	Level 3 - Sub Facility / Sub System	Level 3 - Description	ID CODE	Equipment Type	Price Code	Price Code Description	QTY Code	Area - QTY Code	QTY Code Description	Type	Description	Tag Number	QTY	Unit	Manhours Per Unit	Unit Fuel Consumption	Unit Labour	Unit Equipment	Unit Rate	Total Manhours	Total Fuel Consumption	Total Labour	Total Equipment	Total Cost (\$)	Unit M3	Total Vol (m3)	LOL (%)	Crown Land (%)	Water Liability (%)	Land Liability (%)	LOL Cost (\$)	Crown Land Cost (\$)	Water Liability Cost (\$)	Land Liability Cost (\$)	License	Adjustment Tag	Associated Work Plan	Type of Costs	CAM		Closure			Post Closure				CAM		Closure			Post Closure			
																																												Year 0 - %	Year 0+1 - %	Year 1 - %	Year 2 - %	Year 3 - %	Year 4 - %	Year 5 - %	Year 6 - %	Year 7 - %	Year 8 - %	Year 0 - Cost (\$)	Year 0+1 - Cost (\$)	Year 1 - Cost (\$)	Year 2 - Cost (\$)	Year 3 - Cost (\$)	Year 4 - Cost (\$)	Year 5 - Cost (\$)	Year 6 - Cost (\$)
4000	Mine Site	4700	Site Utilities	4730	Sewage System	4731	Sewage Treatment Systems	1160	TK-	MT2	Medium Tanks	MT2		Mechanical Equipment	Medium Tanks	TANK - TREATED EFFLUENT TANK	4731-TK-002	1	Ea	31.0	390.0	3,097.3	3,900.0	7,387.3	31	390	3,097	3,900	7,387	2	2	100%	0%	0%	100%	7,387	0	0	7,387	Type A 2AM-MRY1325	2014	Direct		33%	33%	33%	0	2,462	2,462	2,462	0	0	0	0	0	0					
4000	Mine Site	4700	Site Utilities	4730	Sewage System	4731	Sewage Treatment Systems	1161	VP-	VP3	VENDOR PKG - Sewage Treatment Plant	VP3		Packaged Facilities	Sewage Treatment Plant	SEWAGE TREATMENT PLANT VENDOR PACKAGE	4731-VP-005	1	Ea	510.0	540.0	5,095.6	5,400.0	11,035.6	51	540	5,096	5,400	11,036	329	329	100%	0%	100%	0%	11,036	0	11,036	0	Type A 2AM-MRY1325		2014	Direct		50%	50%		0	5,518	5,518	0	0	0	0	0	0	0				
4000	Mine Site	4700	Site Utilities	4730	Sewage System	4731	Sewage Treatment Systems	1163	In Meters	piping	Piping	Piping		Bulks	Piping	Sewage Treatment Piping - Piping Installation - Sewage truck bldg to STP	4731-2-P	247	m	0.3	3.8	25.0	37.5	66.2	62	926	6,170	9,263	16,358	0	2	100%	0%	100%	0%	16,358	0	16,358	0	Type A 2AM-MRY1325		2014	Direct		50%	50%		0	8,179	8,179	0	0	0	0	0	0	0				
4000	Mine Site	4700	Site Utilities	4730	Sewage System	4732	Sewage Truck Building	1165	BLD	FF2-C	Fold Away Building Contaminated (480 I2)	FFL-C		Buildings (Contaminated)	Fold Away Building	Sewage Truck Building - Demolish and Decontaminate Building - Fold-away Building (Steel)	4732-BLD-001	56	m2	0.6	2.4	56.0	84.1	142.4	31	131	3,122	4,688	7,941	1	56	100%	0%	0%	100%	7,941	0	0	7,941	Type A 2AM-MRY1325		2014	Direct		50%	50%		0	3,971	3,971	0	0	0	0	0	0	0				
4000	Mine Site	4700	Site Utilities	4730	Sewage System	4732	Sewage Truck Building	1166	BLD	CP	Precast Concrete Foundations - (480 I2)	CP		Flooring / Foundations	Precast Foundations	Sewage Truck Building - Demolish and foundations - Precast Footing (Piermaster Beam)	4732-BLD-001	56	m2	0.1	2.2	14.5	21.8	38.5	8	121	809	1,215	2,145	1	42	100%	0%	0%	100%	2,145	0	0	2,145	Type A 2AM-MRY1325		2014	Direct		50%	50%		0	1,073	1,073	0	0	0	0	0	0	0				
4000	Mine Site	4700	Site Utilities	4730	Sewage System	4732	Sewage Truck Building	1172	TK-	MT1-d	Light Diesel (Day tanks 10,000 LIT. to 20,000L)	MT1-d		Mechanical Equipment	Light Diesel Tanks	TANK - MINE SEWAGE TRUCK BUILDING DIESEL FUEL TANK - DTE ULC601-07	4732-TK-003	1	Ea	15.5	195.0	1,548.7	1,950.0	3,693.7	16	195	1,549	1,950	3,694	20	20	100%	0%	0%	100%	3,694	0	0	3,694	Type A 2AM-MRY1325		2014	Direct		50%	50%		0	1,847	1,847	0	0	0	0	0	0	0				
4000	Mine Site	4700	Site Utilities	4730	Sewage System	4734	Treated Effluent Discharge	1178	In Meters	piping	Piping	Piping		Bulks	Piping	Treated Effluent Piping - Piping Installation - STP to connection with Stockpile Drain Pipe	4734-1-P	2,125	m	0.3	3.8	25.0	37.5	66.2	531	7,969	53,079	79,688	140,735	0	21	100%	0%	100%	0%	140,735	0	140,735	0	Type A 2AM-MRY1325		2014	Direct		33%	33%	33%		0	46,912	46,912	46,912	0	0	0	0	0	0			
4000	Mine Site	4700	Site Utilities	4740	Additional Tanks	4740	Additional Tanks		TK-	MT2	Medium Tanks	MT2		Mechanical Equipment	Medium Tanks	Additional Medium Size tanks		3	Ea	31.0	390.0	3,097.3	3,900.0	7,387.3	93	1,170	9,262	11,700	22,162	2	6	100%	0%	0%	100%	22,162	0	0	22,162	Type B Construction 2BC-MRY1416	Confirmed	2015	A	Direct		50%	50%		0	11,081	11,081	0	0	0	0	0	0	0			
4000	Mine Site	4700	Site Utilities	4750	Power Distribution System	4750	Power Distribution System	1180	BLD	FF1	Modular Building Not Contaminated (480 I2)	FS		Buildings (Not Contaminated)	Prefabricated Special Modular	Accommodation Area E-House #1 - Demolish and Decontaminate Building - Special Modular / Prefabricated	4750-BLD-001	59	m2	0.2	3.4	22.4	33.6	59.4	13	200	1,332	2,000	3,532	1	59	100%	0%	0%	100%	3,532	0	0	3,532	Type A 2AM-MRY1325		2014	Direct		33%	33%	33%		0	1,177	1,177	1,177	0	0	0	0	0	0			
4000	Mine Site	4700	Site Utilities	4750	Power Distribution System	4750	Power Distribution System	1183	BLD	FF1	Modular Building Not Contaminated (480 I2)	FS		Buildings (Not Contaminated)	Prefabricated Special Modular	Accommodation Area E-House #2 - Demolish and Decontaminate Building - Special Modular / Prefabricated	4750-BLD-002	37	m2	0.2	3.4	22.4	33.6	59.4	8	125	833	1,250	2,208	1	37	100%	0%	0%	100%	2,208	0	0	2,208	Type A 2AM-MRY1325		2014	Direct		33%	33%	33%		0	736	736	736	0	0	0	0	0	0			
4000	Mine Site	4700	Site Utilities	4750	Power Distribution System	4750	Power Distribution System	1186	BLD	FF1	Modular Building Not Contaminated (480 I2)	FS		Buildings (Not Contaminated)	Prefabricated Special Modular	Services Area E-House #1 - Demolish and Decontaminate Building - Special Modular / Prefabricated	4750-BLD-003	37	m2	0.2	3.4	22.4	33.6	59.4	8	125	833	1,250	2,208	1	37	100%	0%	0%	100%	2,208	0	0	2,208	Type A 2AM-MRY1325		2014	Direct		33%	33%	33%		0	736	736	736	0	0	0	0	0	0			
4000	Mine Site	4700	Site Utilities	4750	Power Distribution System	4750	Power Distribution System	1189	BLD	FF1	Modular Building Not Contaminated (480 I2)	FS		Buildings (Not Contaminated)	Prefabricated Special Modular	Services Area E-House #2 - Demolish and Decontaminate Building - Special Modular / Prefabricated	4750-BLD-004	37	m2	0.2	3.4	22.4	33.6	59.4	8	125	833	1,250	2,208	1	37	100%	0%	0%	100%	2,208	0	0	2,208	Type A 2AM-MRY1325		2014	Direct		33%	33%	33%		0	736	736	736	0	0	0	0	0	0			
4000	Mine Site	4700	Site Utilities	4750	Power Distribution System	4750	Power Distribution System	1192	BLD	FF1	Modular Building Not Contaminated (480 I2)	FS		Buildings (Not Contaminated)	Prefabricated Special Modular	Fuel Tank Farm E-House - Demolish and Decontaminate Building - Special Modular / Prefabricated	4750-BLD-005	37	m2	0.2	3.4	22.4	33.6	59.4	8	125	833	1,250	2,208	1	37	100%	0%	0%	100%	2,208	0	0	2,208	Type A 2AM-MRY1325		2014	Direct		50%	50%		0	1,104	1,104	0	0	0	0	0	0	0				
4000	Mine Site	4700	Site Utilities	4750	Power Distribution System	4750	Power Distribution System	1195	BLD	FF1	Modular Building Not Contaminated (480 I2)	FS		Buildings (Not Contaminated)	Prefabricated Special Modular	Aerobics Area E-House - Demolish and Decontaminate Building - Special Modular / Prefabricated	4750-BLD-006	37	m2	0.2	3.4	22.4	33.6	59.4	8	125	833	1,250	2,208	1	37	100%	0%	0%	100%	2,208	0	0	2,208	Type A 2AM-MRY1325		2014	Direct		33%	33%	33%		0	736	736	736	0	0	0	0	0	0			
4000	Mine Site	4700	Site Utilities	4750	Power Distribution System	4750	Power Distribution System	1198	BLD	FF1	Modular Building Not Contaminated (480 I2)	FS		Buildings (Not Contaminated)	Prefabricated Special Modular	Raw Water Supply E-House - Demolish and Decontaminate Building - Special Modular / Prefabricated	4750-BLD-007	37	m2	0.2	3.4	22.4	33.6	59.4	8	125	833	1,250	2,208	1	37	100%	0%	0%	100%	2,208	0	0	2,208	Type A 2AM-MRY1325		2014	Direct		33%	33%	33%		0	736	736	736	0	0	0	0	0	0			
4000	Mine Site	4700	Site Utilities	4750	Power Distribution System	4750	Power Distribution System	1201	BLD	FF1	Modular Building Not Contaminated (480 I2)	FS		Buildings (Not Contaminated)	Prefabricated Special Modular	Cruising & Screening E-House - Demolish and Decontaminate Building - Special Modular / Prefabricated	4750-BLD-008	59	m2	0.2	3.4	22.4	33.6	59.4	13	200	1,332	2,000	3,532	1	59	100%	0%	0%	100%	3,532	0	0	3,532	Type A 2AM-MRY1325		2014	Direct		33%	33%	33%		0	1,177	1,177	1,177	0	0	0	0	0	0			
4000	Mine Site	4700	Site Utilities	4750	Power Distribution System	4750	Power Distribution System	1204	In Meters	cable	Cable	Bulks		Bulks	Cable	Power Distribution System - Electrical Cable Installation 5kV & Ground Wire - Electrical distribution system from power plant to e-house	4750-2-E	11,000	m	0.1	1.5	10.0	15.0	26.5	1,100	16,500	109,905	165,000	291,405	0	110	100%	0%	0%	100%	291,405	0	0	291,405	Type A 2AM-MRY1325		2014	Direct		33%	33%	33%		0	97,135	97,135	97,135	0	0	0	0	0	0			
4000	Mine Site	4700	Site Utilities	4750	Power Distribution System	4750	Power Distribution System	1205	In Meters	cable	Cable	Cable		Bulks	Cable	Power Distribution System - Electrical Cable Installation 600V - Connections from e-house to facilities	4750-3-E	5,200	m	0.1	1.5	10.0	15.0	26.5	520	7,800	51,955	78,000	137,755	0	52	100%	0%	0%	100%	137,755	0	0	137,755	Type A 2AM-MRY1325		2014	Direct		33%	33%	33%		0	45,918	45,918	45,918	0	0	0	0	0	0			
4000	Mine Site	4700	Site Utilities	4750	Power Distribution System	4750	Power Distribution System	1205	In Meters	cable	Cable	Cable		Bulks	Cable	Additional outdoor lighting for safety (with cables) at Mine Site		3,500	m	0.1	1.5	10.0	15.0	26.5	350	5,250	34,970	52,500	92,720	0	35	100%	0%	0%	100%	92,720	0	0	92,720	Type A 2AM-MRY1325	Added	2017	Direct		33%	33%	33%		0	30,907	30,907	30,907	0	0	0	0	0	0			
4000	Mine Site	4700	Site Utilities	4750	Power Distribution System	4750	Power Distribution System	012	BLD	FF1	Modular Building Not Contaminated (480 I2)	FS		Buildings (Not Contaminated)	Prefabricated Special Modular	Services Area E-House #3 - Demolish and Decontaminate Building - Special Modular / Prefabricated	4750-BLD-012	37	m2	0.2	3.4	22.4	33.6	59.4	8	125	832	1,250	2,207	1	37	100%	0%	0%	100%	2,207	0	0	2,207	Type A 2AM-MRY1325		2015	A	Direct		33%	33%	33%		0	736	736	736	0	0	0	0	0	0		

Hatch Confidential

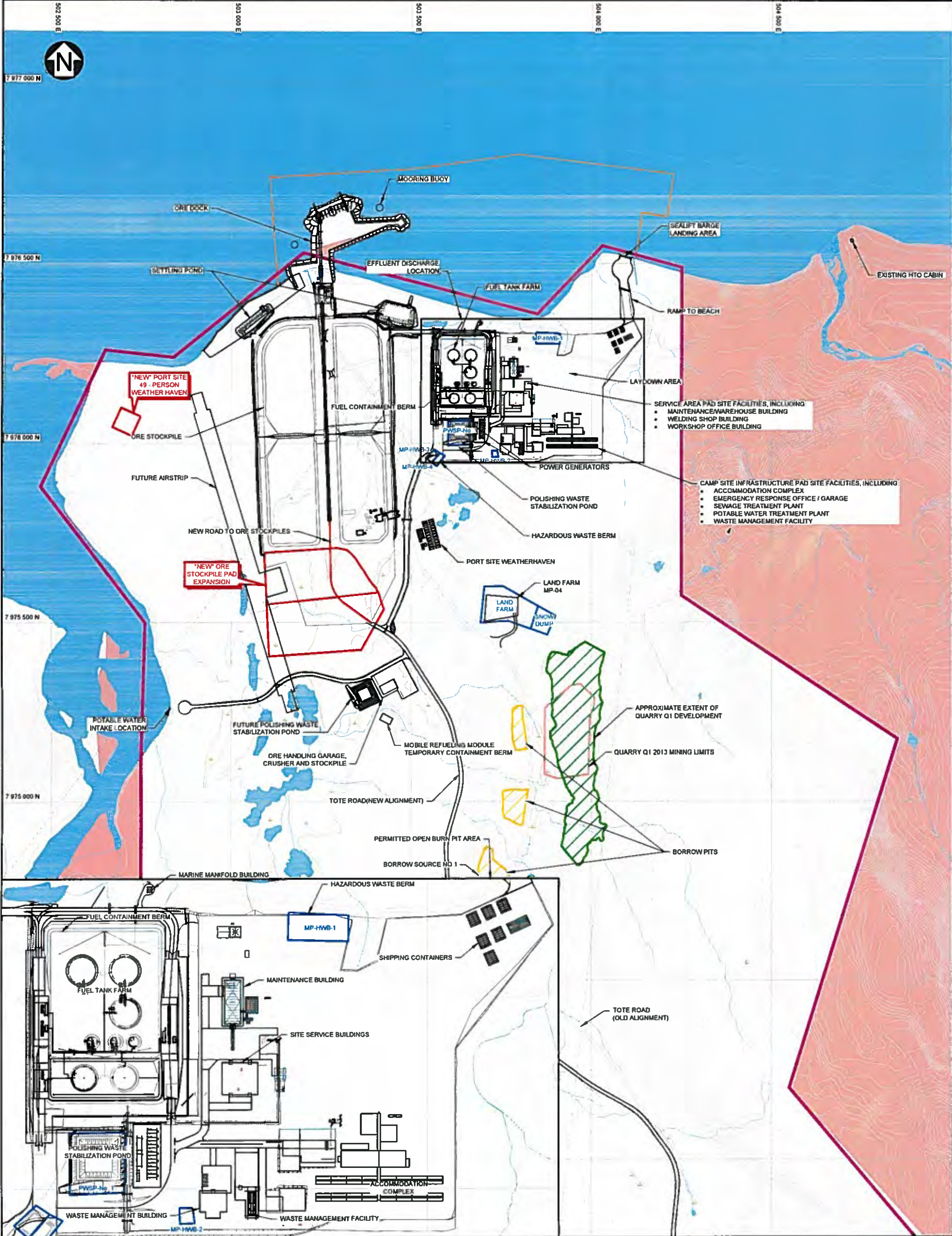
Hatch Confidential

Appendix B

Updated Site Layouts

2017 Work Plan - Mine Site Layout

2017 Work Plan – Milne Port Layout



LEGEND:

- WATER
- BORROW AREAS (2013 UNDER Q10C3001)
- QUARRY AREA (EXISTING UNDER Q13C301)
- INUIT OWNED LAND - SURFACE ONLY EXCLUDING MINERALS
- WASTE STORAGE AREA
- RIVER/STREAM/DRAINAGE
- ROAD
- QIA SURFACE COMMERCIAL LEASE IMPACT BOUNDARY
- 'NEW' FEATURE

NOTES:

- COORDINATE GRID IS UTM NAD83 ZONE 17N.
- TOPOGRAPHY PROVIDED BY EAGLE MAPPING (2005)
- PLAN/SECTION BASED ON INFORMATION PROVIDED BY HATCH, DATED (JAN 31, 2014).
- CONTOUR INTERVAL IS 2.5 METRES
- ALL SAMPLE ID'S SHOWN IN BRACKETS REPRESENT THE TYPE B WATER LICENCE(S) MONITORING POINTS. ALL OTHERS ARE MONITORING POINTS AS PER THE TYPE A WATER LICENCE (2AM-MRY1325)

0 02NOV'16 ISSUED WITH TRANSMITTAL

REV	DATE	DESCRIPTION	DESIGNED	DRAWN	REVIEWED
0	02NOV'16	ISSUED WITH TRANSMITTAL	AG	AS	RAC

100 50 0 100 200 300 400 500 m

SCALE A

BAFFINLAND IRON MINES CORPORATION

MARY RIVER PROJECT

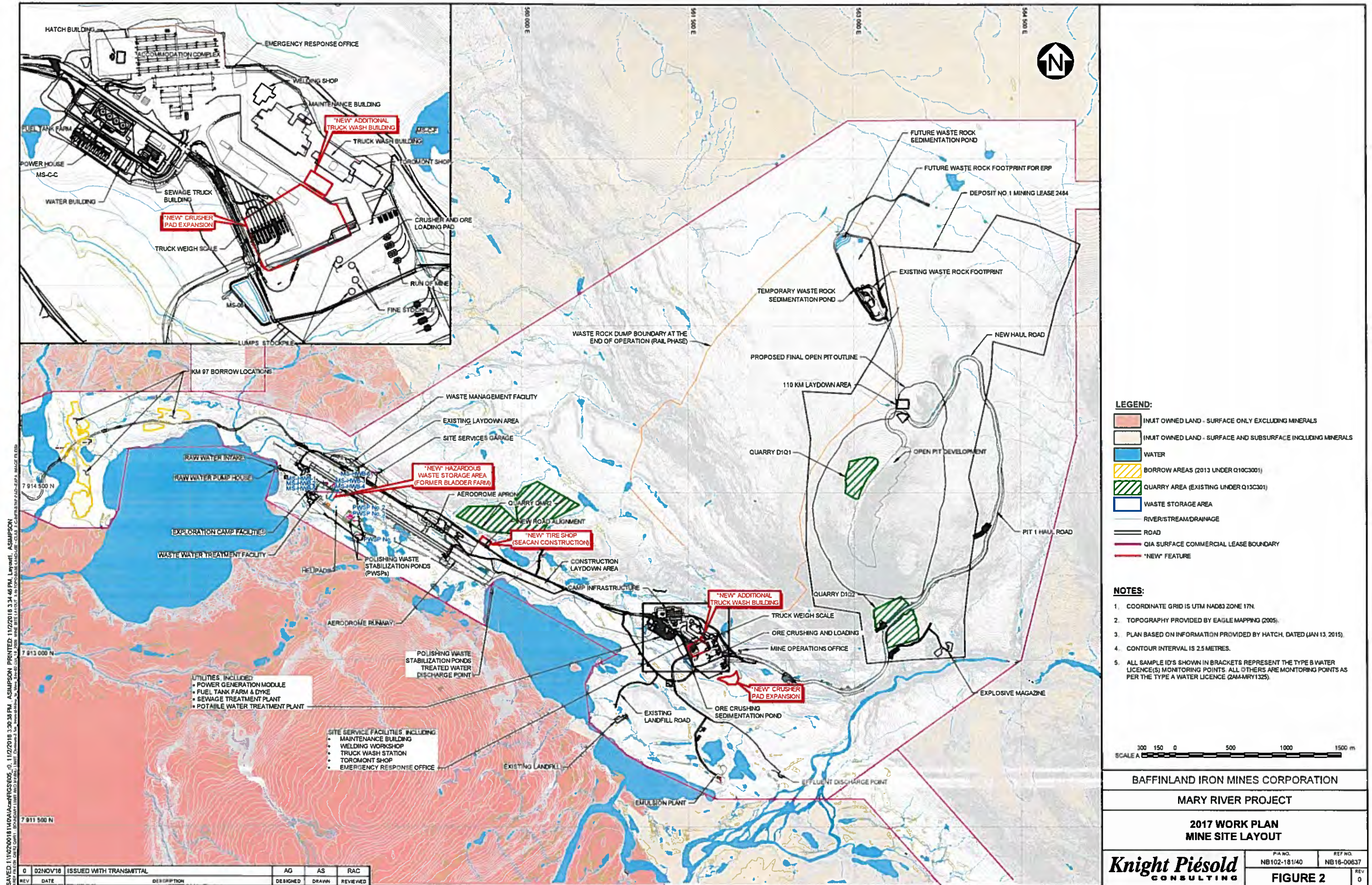
2017 WORK PLAN

MILNE PORT LAYOUT

Knight Piesold CONSULTING

PIA NO	REF NO	REV
NB102-181/40	NB16-00637	0

FIGURE 1

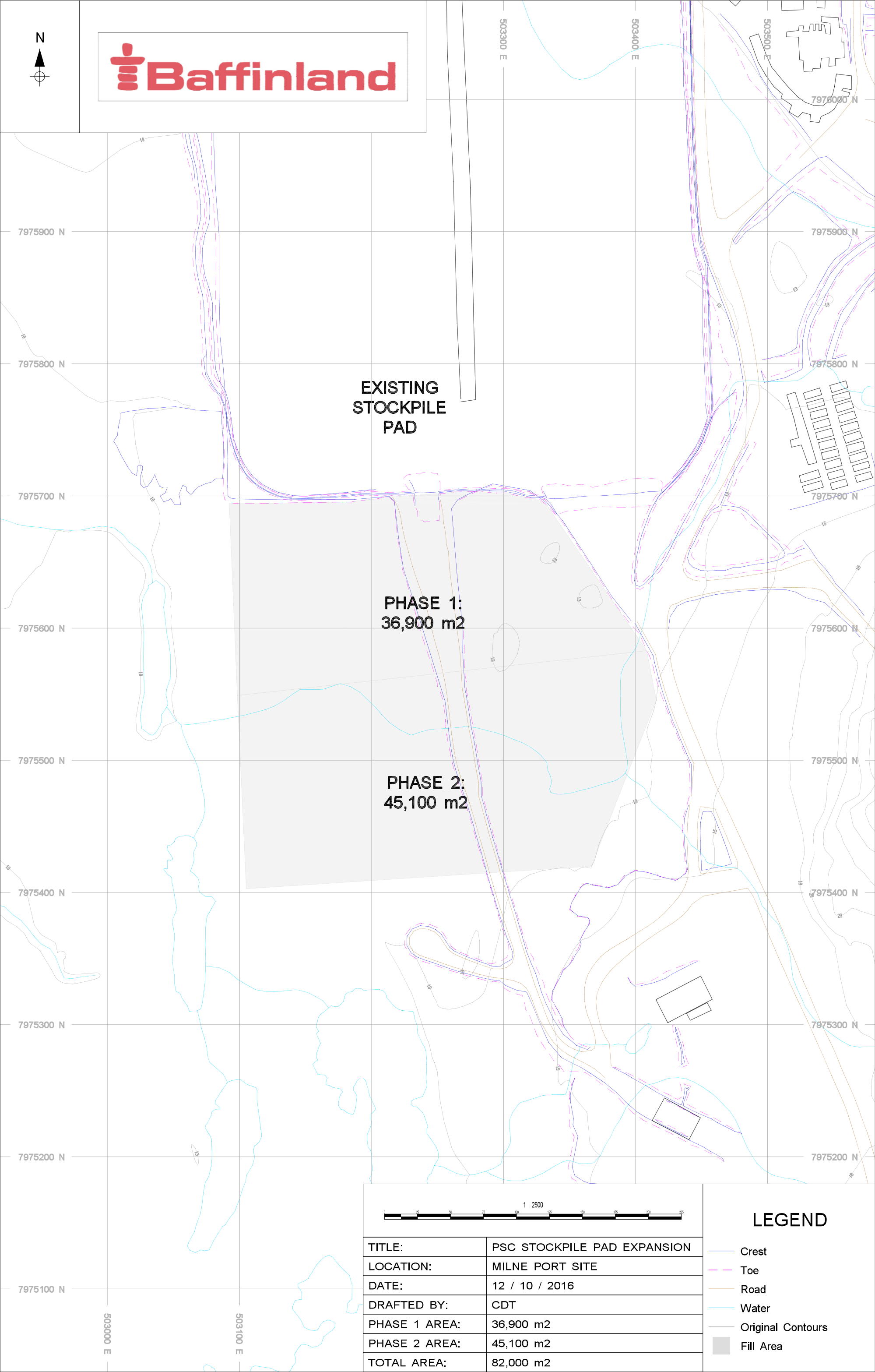


Appendix C

Supporting Documentation

C.1 Milne Port Ore Stockpile Pad extension sketch

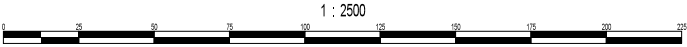
C.2 Mine Site Crusher Pad extension sketch



EXISTING
STOCKPILE
PAD

PHASE 1:
36,900 m2

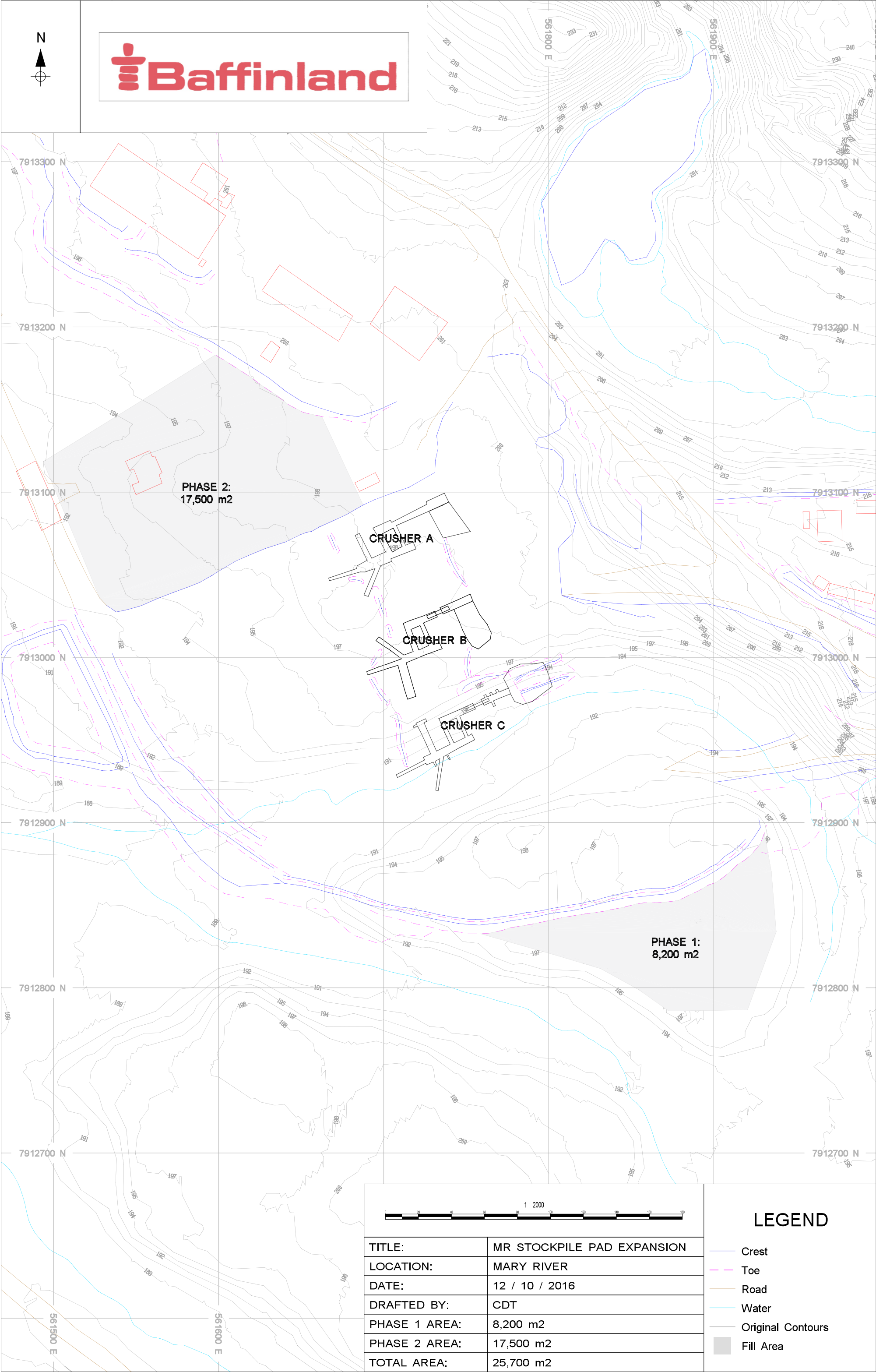
PHASE 2:
45,100 m2



TITLE:	PSC STOCKPILE PAD EXPANSION
LOCATION:	MILNE PORT SITE
DATE:	12 / 10 / 2016
DRAFTED BY:	CDT
PHASE 1 AREA:	36,900 m2
PHASE 2 AREA:	45,100 m2
TOTAL AREA:	82,000 m2

LEGEND

- Crest
- Toe
- Road
- Water
- Original Contours
- Fill Area



1 : 2000	
TITLE:	MR STOCKPILE PAD EXPANSION
LOCATION:	MARY RIVER
DATE:	12 / 10 / 2016
DRAFTED BY:	CDT
PHASE 1 AREA:	8,200 m2
PHASE 2 AREA:	17,500 m2
TOTAL AREA:	25,700 m2

LEGEND

- Crest
- Toe
- Road
- Water
- Original Contours
- Fill Area

2017 Marginal Closure and Reclamation Security Estimate – Revisions to Reflect Interested Parties Feedback

Date: November 24, 2016
**Subject: Revisions to reflect stakeholder feedback on 2017
Marginal Closure and Reclamation Financial
Security Estimate**

1. Purpose

The purpose of this memo is to provide a summary of revisions identified to be required to the 2017 Marginal Closure and Reclamation Financial Security Estimate based on feedback received from interested parties and modifications made to better reflect planned 2017 work based on updated information.

The marginal increase proposed in this report is in addition to the marginal increase already proposed in the 2017 Marginal Closure and Reclamation Financial Security Estimate that was developed to consider the 2017 Work Plan dated November 2, 2016 and submitted to the Nunavut Water Board (NWB), the Qikiqtani Inuit Association (QIA), Indigenous and Northern Affairs Canada (INAC) and other stakeholders on November 4, 2016.

2. Modifications Identified

Revisions identified to the 2017 Marginal Closure and Reclamation Financial Security Estimate, based on feedback received from interested parties and modifications made to more accurately reflect planned 2017 work, are:

- a) Mobile and mechanical equipment captured in the comprehensive global estimate, including the 2017 Marginal Closure and Reclamation Financial Security Estimate, were re-categorized (e.g. light equipment, medium equipment, and heavy equipment) to better align with category thresholds discussed with the QIA in order to reduce inconsistencies in the QIA and Baffinland security estimates. Category thresholds that were applied generally follow thresholds indicated in Table 1. This issue was addressed based on feedback received from the QIA.

Table 1: Mobile and Mechanical Equipment Classifications

Equipment Classification	Equipment Example
Light Mechanical Equipment	Pumps, fuel dispenser, laboratory equipment, and sample bins
Medium Mechanical Equipment	Aerodrome equipment, generators, shop / maintenance equipment, screens, and chutes.
Heavy Mechanical Equipment	Crusher, feeder, power plant generators, large screens, conveyors, and stackers
Light Mobile Equipment	Forklifts, picks up, vehicles around five (5) tonnes and under, scissor lift, man lifts, and small bin trucks. NOTE: Weight thresholds not always determining factor. Examples of Light Mobile Equipment includes: Skid Steer P10000, and Ford F-350 Pick-Up Truck.
Medium Mobile Equipment	Vehicles around 10 tonnes, trailers, buses, tow trucks, large garbage bins and water trucks. NOTE: Weight thresholds not always determining factor. Examples of Medium Mobile Equipment include: D6 Dozer, Kenworth T800 Fuel/Lube Truck, CAT P20000, Passenger Buses, Secondary Drills, Rock Drills, D6 Wheel Dozer, and Dump Trailers.
Heavy Mobile Equipment	Vehicles over 10 tonnes, boom trucks, large front end loaders, dump trucks, graders and cranes. NOTE: Weight thresholds not always determining factor. Examples of Heavy Mobile Equipment include: D9 Dozer, CAT 740 EFLT Fuel/Lube Truck, CAT 824H Wheel Dozer, and Production Drills.

- b) The 49-person camp previously included in the original 2017 Marginal Closure and Reclamation Financial Security Estimate submission was classified as a soft wall modular building (non-contaminated) for the purpose of the submission. Based on updated information, this camp is expected to be a hard wall trailer camp. Therefore the unit rate was modified to apply the 'Modular Building (non-contaminated)' rate instead of the previous 'Soft Wall (non-contaminated)' unit rate. Estimated camp size has not changed. This issue was addressed based on feedback received from INAC.
- c) An additional Truck Wash Building is proposed to be constructed in 2017 at the Mine Site. As part of this development, a commercial grade haul truck washing station will be installed within the building. This commercial grade haul truck washing station was accounted for in the 2017 Marginal Closure and Reclamation Financial Security Estimate submission as a piece of 'Medium Mechanical Equipment'. Based on feedback received from the QIA, the unit rate was modified to apply the 'Large Mechanical Equipment' instead.

3. Updated Marginal Reclamation and Closure Security Cost Summary

Table 2 presents the total closure and reclamation security posted to-date and proposed adjustments to be posted as a result of the modifications described in Section 2.

The totals presented 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 2017 Work Plan including legacy exploration phase liabilities.

Costs estimated are in accordance with principles, methodology, and closure objectives defined within the Mary River Project Interim Closure and Reclamation Plan (BAF-PH1-830-P16-0012).

Table 2: Revised Mary River Project 'Global' Closure and Reclamation Security Summary¹

	A	B	C	D	E	F	G	H	I	J	K
	Authorization	Liability	Original Global Estimate from 2016/17 ASR (\$)	Revised Global Estimate from 2016/17 ASR (\$)	Difference of Original vs. Revised from 2016/17 ASR (\$)	Original 2017/18 ASR Marginal Estimate (\$)	Revised 2017/18 ASR Marginal Estimate (\$)	Difference of Original vs. Revised 2017/18 ASR Marginal Estimate (\$)	Revised Total 'Global' Estimated Security for 2017/18 (\$)	Total Posted (\$)	Adjustment to be Posted (\$)
					D-C			G-F	D+G		I-J
1	Type A 2AM-MRY1325	IOL ²	45,055,000	46,053,000	998,000	1,880,000	2,019,000	139,000	48,072,000	48,846,000	(774,000)
2		Crown	1,210,000	1,199,000	(11,000)	-	-	-	1,199,000	1,210,000	(11,000)
3		Water	1,342,000	1,342,000	-	-	-	-	1,342,000	-	-
4		Land	44,923,000	45,910,000	987,000	1,880,000	2,019,000	139,000	47,929,000	-	-
5	Subtotal Type A		46,265,000	47,252,000	987,000	1,880,000	2,019,000	139,000	49,271,000	50,056,000	(785,000)
6	Type B Construction 2BC-MRY1416	IOL ²	-	-	-	-	-	-	-	-	-
7		Crown	-	-	-	-	-	-	-	147,000	(147,000)
8		Water	-	-	-	-	-	-	-	-	-
9		Land	-	-	-	-	-	-	-	-	-
10	Subtotal Type B Construction		-	-	-	-	-	-	-	-	(147,000)
11	Type B Exploration 2BE-MRY1421 ³	IOL	165,000	165,000	-	-	-	-	165,000	-	165,000
12		Crown	1,082,000	1,082,000	-	-	-	-	1,082,000	1,250,000	(168,000)
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	1,250,000	(3,000)
16	DFO Security Associated with Ore Dock	IOL ²	-	-	-	-	-	-	-	-	-
17		Crown	563,000	563,000	-	-	-	-	563,000	563,000	-
18		Water	563,000	563,000	-	-	-	-	563,000	563,000	-
19		Land	-	-	-	-	-	-	-	-	-
20	Subtotal DFO		563,000	563,000	-	-	-	-	563,000	563,000	-
21	AANDC Land Lease 47H/16-1-2 ^{4,5}	IOL ²	-	-	-	-	-	-	-	-	-
22		Crown	4,975,000	4,975,000	-	-	-	-	4,975,000	4,975,000	-
23		Water	-	-	-	-	-	-	-	-	-
24		Land	4,975,000	4,975,000	-	-	-	-	4,975,000	4,975,000	-
25	Subtotal AANDC Land Lease		4,975,000	4,975,000	-	-	-	-	4,975,000	4,975,000	-
27	GRAND TOTAL		53,050,000	54,037,000	987,000	1,880,000	2,019,000	139,000	1,880,000	58,721,000	(935,000)

- NOTES:
- 1) Totals rounded to nearest '000 in CAD
 - 2) Security relating to IOL held by Qikiqtani Inuit Association (QIA) under Commercial Lease No. Q13C301
 - 3) As per Mary River Exploration Project Closure and Reclamation Plan (BAF-PH1-830-P16-0038, Rev 1)
 - 4) Posting process for security relating to AANDC Land Lease 47H/16-1-2 phased into a 2-step approach. Phase 1 to be posted November 2016.
 - 5) As per Closure and Reclamation Strategy and Financial Security Estimate for Nunavut Lease #47H/16-1-2 (H349001-2000-07-126-0001, Rev.0)

4. Supporting Documents

In addition to information presented within this document, please refer to Attachment A for Updated 2017/18 ASR Estimate Breakdown Structure (EBS).

Attachment A:
Updated 2017/18 ASR Estimate Breakdown Structure

2016-11-24

2016-11-24

[illegible]

2016-11-24

2016-11-24

2016-11-24

2016-11-24

4000	Mine Site	4100	General	4140	Mobile Equipment	4141	Mine Mobile Equipment	MO-	O3	Heavy Mobile Equipment	O3	Mobile Equipment	Heavy Mobile Equipment	ORE HAUL LEAD TRAILER	OHT1032	1	Ea	13.0	120.0	1,298.9	1,200.0	2,618.9	13	120	1,299	1,200	2,619	96	96	100%	0%	0%	100%	2,619	0	0	2,619	Type A 2AM-MRY1325	Added	2015 R	Direct	CAM		Closure		Post Closure		CAM		Closure		Post Closure		Post Closure			
																																										Year 0 - %	Year 0+1 - %	Year 1 - %	Year 2 - %	Year 3 - %	Year 4 - %	Year 5 - %	Year 6 - %	Year 7 - %	Year 8 - %	Year 0 - Cost (\$)	Year 0+1 - Cost (\$)	Year 1 - Cost (\$)	Year 2 - Cost (\$)	Year 3 - Cost (\$)	Year 4 - Cost (\$)
4000	Mine Site	4100	General	4140	Mobile Equipment	4141	Mine Mobile Equipment	MO-	O3	Heavy Mobile Equipment	O3	Mobile Equipment	Heavy Mobile Equipment	ORE HAUL LEAD TRAILER	OHT1033	1	Ea	13.0	120.0	1,298.9	1,200.0	2,618.9	13	120	1,299	1,200	2,619	96	96	100%	0%	0%	100%	2,619	0	0	2,619	Type A 2AM-MRY1325	Added	2015 R	Direct			33%	33%			33%	0	873	0	873	0	0	0	0	873
4000	Mine Site	4100	General	4140	Mobile Equipment	4141	Mine Mobile Equipment	MO-	O3	Heavy Mobile Equipment	O3	Mobile Equipment	Heavy Mobile Equipment	ORE HAUL LEAD TRAILER	OHT1033	1	Ea	13.0	120.0	1,298.9	1,200.0	2,618.9	13	120	1,299	1,200	2,619	96	96	100%	0%	0%	100%	2,619	0	0	2,619	Type A 2AM-MRY1325	Added	2015 R	Direct			33%	33%			33%	0	873	0	873	0	0	0	0	873
4000	Mine Site	4100	General	4140	Mobile Equipment	4141	Mine Mobile Equipment	MO-	O3	Heavy Mobile Equipment	O3	Mobile Equipment	Heavy Mobile Equipment	ORE HAUL LEAD TRAILER	OHT1034	1	Ea	13.0	120.0	1,298.9	1,200.0	2,618.9	13	120	1,299	1,200	2,619	96	96	100%	0%	0%	100%	2,619	0	0	2,619	Type A 2AM-MRY1325	Added	2015 R	Direct			33%	33%			33%	0	873	0	873	0	0	0	0	873
4000	Mine Site	4100	General	4140	Mobile Equipment	4141	Mine Mobile Equipment	MO-	O3	Heavy Mobile Equipment	O3	Mobile Equipment	Heavy Mobile Equipment	ORE HAUL LEAD TRAILER	OHT1035	1	Ea	13.0	120.0	1,298.9	1,200.0	2,618.9	13	120	1,299	1,200	2,619	96	96	100%	0%	0%	100%	2,619	0	0	2,619	Type A 2AM-MRY1325	Added	2015 R	Direct			33%	33%			33%	0	873	0	873	0	0	0	0	873
4000	Mine Site	4100	General	4140	Mobile Equipment	4141	Mine Mobile Equipment	MO-	O3	Heavy Mobile Equipment	O3	Mobile Equipment	Heavy Mobile Equipment	ORE HAUL LEAD TRAILER	OHT1036	1	Ea	13.0	120.0	1,298.9	1,200.0	2,618.9	13	120	1,299	1,200	2,619	96	96	100%	0%	0%	100%	2,619	0	0	2,619	Type A 2AM-MRY1325	Added	2015 R	Direct			33%	33%			33%	0	873	0	873	0	0	0	0	873
4000	Mine Site	4100	General	4140	Mobile Equipment	4141	Mine Mobile Equipment	MO-	O3	Heavy Mobile Equipment	O3	Mobile Equipment	Heavy Mobile Equipment	ORE HAUL LEAD TRAILER	OHT1037	1	Ea	13.0	120.0	1,298.9	1,200.0	2,618.9	13	120	1,299	1,200	2,619	96	96	100%	0%	0%	100%	2,619	0	0	2,619	Type A 2AM-MRY1325	Added	2015 R	Direct			33%	33%			33%	0	873	0	873	0	0	0	0	873
4000	Mine Site	4100	General	4140	Mobile Equipment	4141	Mine Mobile Equipment	MO-	O3	Heavy Mobile Equipment	O3	Mobile Equipment	Heavy Mobile Equipment	ORE HAUL LEAD TRAILER	OHT1038	1	Ea	13.0	120.0	1,298.9	1,200.0	2,618.9	13	120	1,299	1,200	2,619	96	96	100%	0%	0%	100%	2,619	0	0	2,619	Type A 2AM-MRY1325	Added	2015 R	Direct			33%	33%			33%	0	873	0	873	0	0	0	0	873
4000	Mine Site	4100	General	4140	Mobile Equipment	4141	Mine Mobile Equipment	MO-	O3	Heavy Mobile Equipment	O3	Mobile Equipment	Heavy Mobile Equipment	ORE HAUL LEAD TRAILER	OHT1039	1	Ea	13.0	120.0	1,298.9	1,200.0	2,618.9	13	120	1,299	1,200	2,619	96	96	100%	0%	0%	100%	2,619	0	0	2,619	Type A 2AM-MRY1325	Added	2015 R	Direct			33%	33%			33%	0	873	0	873	0	0	0	0	873
4000	Mine Site	4100	General	4140	Mobile Equipment	4141	Mine Mobile Equipment	MO-	O2	Medium Mobile Equipment	O2	Mobile Equipment	Medium Mobile Equipment	ORE HAUL PUP TRAILER	OHT2001	1	Ea	10.0	45.0	999.1	450.0	1,494.1	10	45	999	450	1,494	24	24	100%	0%	0%	100%	1,494	0	0	1,494	Type A 2AM-MRY1325	Modified (2017A)	2015 R	Direct			33%	33%			33%	0	498	0	498	0	0	0	0	498
4000	Mine Site	4100	General	4140	Mobile Equipment	4141	Mine Mobile Equipment	MO-	O2	Medium Mobile Equipment	O2	Mobile Equipment	Medium Mobile Equipment	ORE HAUL PUP TRAILER	OHT2002	1	Ea	10.0	45.0	999.1	450.0	1,494.1	10	45	999	450	1,494	24	24	100%	0%	0%	100%	1,494	0	0	1,494	Type A 2AM-MRY1325	Modified (2017A)	2015 R	Direct			33%	33%			33%	0	498	0	498	0	0	0	0	498
4000	Mine Site	4100	General	4140	Mobile Equipment	4141	Mine Mobile Equipment	MO-	O2	Medium Mobile Equipment	O2	Mobile Equipment	Medium Mobile Equipment	ORE HAUL PUP TRAILER	OHT2003	1	Ea	10.0	45.0	999.1	450.0	1,494.1	10	45	999	450	1,494	24	24	100%	0%	0%	100%	1,494	0	0	1,494	Type A 2AM-MRY1325	Modified (2017A)	2015 R	Direct			33%	33%			33%	0	498	0	498	0	0	0	0	498
4000	Mine Site	4100	General	4140	Mobile Equipment	4141	Mine Mobile Equipment	MO-	O2	Medium Mobile Equipment	O2	Mobile Equipment	Medium Mobile Equipment	ORE HAUL PUP TRAILER	OHT2004	1	Ea	10.0	45.0	999.1	450.0	1,494.1	10	45	999	450	1,494	24	24	100%	0%	0%	100%	1,494	0	0	1,494	Type A 2AM-MRY1325	Modified (2017A)	2015 R	Direct			33%	33%			33%	0	498	0	498	0	0	0	0	498
4000	Mine Site	4100	General	4140	Mobile Equipment	4141	Mine Mobile Equipment	MO-	O2	Medium Mobile Equipment	O2	Mobile Equipment	Medium Mobile Equipment	ORE HAUL PUP TRAILER	OHT2005	1	Ea	10.0	45.0	999.1	450.0	1,494.1	10	45	999	450	1,494	24	24	100%	0%	0%	100%	1,494	0	0	1,494	Type A 2AM-MRY1325	Modified (2017A)	2015 R	Direct			33%	33%			33%	0	498	0	498	0	0	0	0	498
4000	Mine Site	4100	General	4140	Mobile Equipment	4141	Mine Mobile Equipment	MO-	O2	Medium Mobile Equipment	O2	Mobile Equipment	Medium Mobile Equipment	ORE HAUL PUP TRAILER	OHT2006	1	Ea	10.0	45.0	999.1	450.0	1,494.1	10	45	999	450	1,494	24	24	100%	0%	0%	100%	1,494	0	0	1,494	Type A 2AM-MRY1325	Modified (2017A)	2015 R	Direct			33%	33%			33%	0	498	0	498	0	0	0	0	498
4000	Mine Site	4100	General	4140	Mobile Equipment	4141	Mine Mobile Equipment	MO-	O2	Medium Mobile Equipment	O2	Mobile Equipment	Medium Mobile Equipment	ORE HAUL PUP TRAILER	OHT2007	1	Ea	10.0	45.0	999.1	450.0	1,494.1	10	45	999	450	1,494	24	24	100%	0%	0%	100%	1,494	0	0	1,494	Type A 2AM-MRY1325	Modified (2017A)	2015 R	Direct			33%	33%			33%	0	498	0	498	0	0	0	0	498
4000	Mine Site	4100	General	4140	Mobile Equipment	4141	Mine Mobile Equipment	MO-	O2	Medium Mobile Equipment	O2	Mobile Equipment	Medium Mobile Equipment	ORE HAUL PUP TRAILER	OHT2008	1	Ea	10.0	45.0	999.1	450.0	1,494.1	10	45	999	450	1,494	24	24	100%	0%	0%	100%	1,494	0	0	1,494	Type A 2AM-MRY1325	Modified (2017A)	2015 R	Direct			33%	33%			33%	0	498	0	498	0	0	0	0	498
4000	Mine Site	4100	General	4140	Mobile Equipment	4141	Mine Mobile Equipment	MO-	O2	Medium Mobile Equipment	O2	Mobile Equipment	Medium Mobile Equipment	ORE HAUL PUP TRAILER	OHT2009	1	Ea	10.0	45.0	999.1	450.0	1,494.1	10	45	999	450	1,494	24	24	100%	0%	0%	100%	1,494	0	0	1,494	Type A 2AM-MRY1325	Modified (2017A)	2015 R	Direct			33%	33%			33%	0	498	0	498	0	0	0	0	498
4000	Mine Site	4100	General	4140	Mobile Equipment	4141	Mine Mobile Equipment	MO-	O2	Medium Mobile Equipment	O2	Mobile Equipment	Medium Mobile Equipment	ORE HAUL PUP TRAILER	OHT2010	1	Ea	10.0	45.0	999.1	450.0	1,494.1	10	45	999	450	1,494	24	24	100%	0%	0%	100%	1,494	0	0	1,494	Type A 2AM-MRY1325	Modified (2017A)	2015 R	Direct			33%	33%			33%	0	498	0	498	0	0	0	0	498
4000	Mine Site	4100	General	4140	Mobile Equipment	4141	Mine Mobile Equipment	MO-	O2	Medium Mobile Equipment	O2	Mobile Equipment	Medium Mobile Equipment	ORE HAUL PUP TRAILER	OHT2011	1	Ea	10.0	45.0	999.1	450.0	1,494.1	10	45	999	450	1,494	24	24	100%	0%	0%	100%	1,494	0	0	1,494	Type A 2AM-MRY1325	Modified (2017A)	2015 R	Direct			33%	33%			33%	0	498	0	498	0	0	0	0	498
4000	Mine Site	4100	General	4140	Mobile Equipment	4141	Mine Mobile Equipment	MO-	O2	Medium Mobile Equipment	O2	Mobile Equipment	Medium Mobile Equipment	ORE HAUL PUP TRAILER	OHT2012	1	Ea	10.0	45.0	999.1	450.0	1,494.1	10	45	999	450	1,494	24	24	100%	0%	0%	100%	1,494	0	0	1,494	Type A 2AM-MRY1325	Modified (2017A)	2015 R	Direct			33%	33%			33%	0	498	0	498	0	0	0	0	498
4000	Mine Site	4100	General	4140	Mobile Equipment	4141	Mine Mobile Equipment	MO-	O2	Medium Mobile Equipment	O2	Mobile Equipment	Medium Mobile Equipment	ORE HAUL PUP TRAILER	OHT2013	1	Ea	10.0	45.0	999.1	450.0	1,494.1	10	45	999	450	1,494	24	24	100%	0%	0%	100%	1,494	0	0	1,494	Type A 2AM-MRY1325	Modified (2017A)	2015 R	Direct			33%	33%			33%	0	498	0	498	0	0	0	0	498
4000	Mine Site	4100	General	4140	Mobile Equipment	4141	Mine Mobile Equipment	MO-	O2	Medium Mobile Equipment	O2	Mobile Equipment	Medium Mobile Equipment	ORE HAUL PUP TRAILER	OHT2014	1	Ea	10.0	45.0	999.1	450.0	1,494.1	10	45	999	450	1,494	24	24	100%	0%	0%	100%	1,494	0	0	1,494	Type A 2AM-MRY1325	Modified (2017A)	2015 R	Direct			33%	33%			33%	0	498	0	498	0	0	0	0	498
4000	Mine Site	4100	General	4140	Mobile Equipment	4141	Mine Mobile Equipment	MO-	O2	Medium Mobile Equipment	O2	Mobile Equipment	Medium Mobile Equipment	ORE HAUL PUP TRAILER	OHT2015	1	Ea	10.0	45.0	999.1	450.0	1,494.1	10	45	999	450	1,494	24	24	100%	0%	0%	100%	1,494	0	0	1,494	Type A 2AM-MRY1325	Modified (2017A)	2015 R	Direct			33%	33%			33%	0	498	0	498	0	0	0	0	498
4000	Mine Site	4100	General	4140	Mobile Equipment	4141	Mine Mobile Equipment	MO-	O2	Medium Mobile Equipment	O2	Mobile Equipment	Medium Mobile Equipment	ORE HAUL PUP TRAILER	OHT2016	1	Ea	10.0	45.0	999.1	450.0	1,494.1	10	45	999	450	1,494	24	24	100%	0%	0%	100%	1,494	0	0	1,494	Type A 2AM-MRY1325	Modified (2017A)	2015 R	Direct			33%	33%			33%	0	498	0	498	0	0	0	0	498
4000	Mine Site	4100	General	4140	Mobile Equipment	4141	Mine Mobile Equipment	MO-	O2	Medium Mobile Equipment	O2	Mobile Equipment	Medium Mobile Equipment	ORE HAUL PUP TRAILER	OHT2017	1	Ea	10.0	45.0	999.1	450.0	1,494.1	10	45	999	450	1,494	24	24	100%	0%	0%	100%	1,494	0	0	1,494	Type A 2AM-MRY1325	Modified (2017A)	2015 R	Direct			33%	33%			33%	0	498	0	498	0	0	0	0	498
4000	Mine Site	4100	General	4140	Mobile Equipment	4141	Mine Mobile Equipment	MO-	O2	Medium Mobile Equipment	O2	Mobile Equipment	Medium Mobile Equipment	ORE HAUL PUP TRAILER	OHT2018	1	Ea	10.0	45.0	999.1	450.0	1,494.1	10	45	999	450	1,494	24	24	100%	0%	0%	100%	1,494	0	0	1,494	Type A 2AM-MRY1325	Modified (2017A)	2015 R	Direct			33%	33%												

[illegible]

2016-11-24

2016-11-24

2016-11-24

Hatch Confidential 2016-11-24

2016-11-24

2016-11-24

2016-11-24