



2019 WORK PLAN

1 November 2018




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SECTION 1.0 - INTRODUCTION

The following document presents the 2019 Work Plan for the Mary River Project as required under Section 6.1 of Commercial Lease No. Q13C301 (the Lease) agreed between Baffinland Iron Mines Corporation (Baffinland) and the Qikiqtani Inuit Association (QIA). Additionally, this document is a requirement under Amendment No. 1 of the Type 'A' Water Licence 2AM-MRY1325 for the purposes of an Annual Security Review (ASR). In the event the Project does not advance, the work items as described and constructed in the 2019 Work Plan will be subject to reclamation, as per the Mary River Project Interim Closure and Reclamation Plan (BAF-PH1-830-P16-0012, refer to Appendix C) and relevant regulatory and permit obligations.

The 2019 Work Plan has been prepared in accordance with the Lease Operations Guide for the "Annual Work Plan Submission" finalized in 2018. The Operations Guide is a set of procedures developed jointly by QIA and Baffinland to guide the on-going administration of the Lease.

Baffinland continues to expand the operation of the Mary River Project, both through the 6 million tonne per annum (Mtpa) increase sought in 2018 and the submission of the Phase 2 Environmental Impact Statement (EIS) in 2018. Activities outlined in this 2019 Work Plan represent planned works, improvements, infrastructure and equipment required to execute the currently approved phase of the project. Additionally, equipment and materials required for the Phase 2 expansion will be mobilized to the Mary River Project in 2018 in anticipation of the amended permits. For clarity, no earthworks or infrastructure construction associated with the Phase 2 expansion have been included in this 2019 Work Plan. It is anticipated that a 2019 Work Plan Addendum will be required to assess reclamation security and implement the construction of any Phase 2 works following successful receipt of the amended Project Certificate and amended Type 'A' Water Licence.

An overview of the on-going mining operations and works planned for 2019 is provided below, with further details presented in subsequent sections of the document.

1. Development and operation of the mine, ore crushing and land transportation, stockpiling and marine shipment of ore;
2. 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;
3. 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;
4. On-going operation and expansion of permitted quarry and borrow sources; additionally, four (4) new quarries have been identified along the Tote Road to support ongoing maintenance and construction;
5. 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 2019). Material, fuel and supplies required for operational and construction activities will be transported to the Mine Site year round via the Tote Road;
6. 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;

7. Continued environmental monitoring in accordance with the approved Project Certificate, licenses, authorizations, management plans and environmental effects monitoring plans;
8. On-going exploration activities including drilling, mapping, prospecting, sampling, and geophysics. Planning of the details of the summer drilling and/or trenching program is not yet finalized;
9. Tote Road improvements to address safety concerns, freshet runoff issues and poor road conditions during the spring and summer periods;
10. Continued construction of additional fuel storage at the project;
11. Continued construction of the 800-person hardwall camp at the Mine site to address retention issues and safety concerns with continued long-term use of the tent camp at the Mine;
12. Construction of the 380-person hardwall camp at Milne Port following approval of a Water Licence Modification;
13. Site grading and laydown construction for supplies and equipment to support future construction activities and remove ponding and permafrost degradation issues around current infrastructure.
14. Installation of a floating freight dock to improve efficiencies on offloading of sealift as well as provide an opportunity for shore based connection for fuel ships to potentially avoid future use of floating hose for fuel receipt.
15. Erection of additional maintenance facilities to safely service equipment.

SECTION 2.0 - LIST OF CURRENT PERMITS

The Work Plan is presented within the context of the applicable regulatory authorizations. The main regulatory instruments that allow for the 2019 Work Plan activities are presented in Table 2-1 below.

Table 2-1: Existing Environmental Permits

Permit Name	Permit Number	Regulatory Agency	Expiry
Project Certificate and Amended Project Certificate	005	Nunavut Impact Review Board	No Expiry
Inuit Impact Benefit Agreement	N/A	Qikiqtani Inuit Association	No Expiry
Commercial Lease	Q13C301	Qikiqtani Inuit Association	31-Dec-43
Amendment No.1 Type A Water Licence	2AM-MRY1325	Nunavut Water Board	10-Jun-25
Type B Water License – Exploration	2BE-MRY1421	Nunavut Water Board	16-Apr-21
Land Use Permit - Steensby and Milne	N2014C0013	Crown Indigenous Relations and Northern Affairs Canada (formerly INAC)	30-Jun-19
Land Use Permit - Milne Foreshore	N2014X0012	Crown Indigenous Relations and Northern Affairs Canada (formerly INAC)	30-Jun-19
Land Use and Quarrying Permit - Tote Road (Borrow P1 at Km 63)	N2014Q0016	Crown Indigenous Relations and Northern Affairs Canada (formerly INAC)	30-Jun-19
Land Use Permit - Bruce Head	N2014J0011	Crown Indigenous Relations and Northern Affairs Canada (formerly INAC)	30-Jun-19
Land Lease - Milne Foreshore	47H/16-1-2	Crown Indigenous Relations and Northern Affairs Canada (formerly INAC)	30-Jun-35
Permitted Quarries and Borrows on Inuit Owned Land: Quarries Q1, QMR2, Q7, Q11, Q19, Borrows KM104, Km 2, and Km 97	N/A	Qikiqtani Inuit Association	N/A
Fisheries Authorization - Ore Dock	14-HCAA-00525	Department of Fisheries and Oceans	31-Dec-20
Fisheries Authorization - Tote Road	NU-06-0084	Department of Fisheries and Oceans	No Expiry
Fisheries Authorization – Crossings	06-HCAA-CA7-00084	Department of Fisheries and Oceans	N/A
Fisheries Crossings along Tote Road and Quarries, culvert extensions and replacements	Various Letters of Advice	Department of Fisheries and Oceans	No Expiry
Licence to Fish for Scientific Purposes and Animal Use Protocol ¹	S-16/17-1016-NU, S-16/17-1019-NU, AUP 2016-027 FWI-ACC-2016-017	Department of Fisheries and Oceans	-
Navigable Waters - Crossings	8200-07-10273, 10267, 10269, 10268, 10274, 10272, 10266, 10271	Transport Canada	Until work completed
Marine Facility	4306-2-6- P/B	Transport Canada	24-June-20
Scientific Permit ²	02 008 15R-M	Government of Nunavut	-
Archaeology Permit ³	2016-29A	Government of Nunavut	-
Factory Licence ⁴	F76068	National Resources Canada	-

NOTE:

¹ Held by Minnow Environmental Inc. and North/South Consulting for Licence to Fish for Scientific Purposes associated with the Project

² Held by Knight Piésold for performance of IQ and Traditional Harvest Studies associated with the Project

³ Held by Claude Pinard for performance of archeology work associated with the Project

⁴ Held by Dyno Nobel, the explosives contractor on behalf of the Project

SECTION 3.0 - ANNUAL SCOPE OF OPERATIONS AND WORK

Table 3-1 below provides a description of Baffinland's proposed operation and work for 2019, with an emphasis on changes from the previous year, and the anticipated effects that this work would have on the Property and the infrastructure of the mine.

While the activities outlined in this 2019 Work Plan represent planned works, improvements, infrastructure and equipment required to execute the currently approved phase of the project, it is anticipated that additional approvals from the NWB, QIA, and DFO will be required for select activities, and may include;

- Modifications to the existing Type 'A' Water Licence 2AM-MRY1325;
- An Options Exercise Notice (OEN) to modify the boundaries of the Commercial Lease, or to reclassify lands in accordance the terms and conditions of the Commercial Lease;
- A Tote Road Adjustment Notice (TRAN) for changes to the alignment, grade or design of the Tote Road as described in the Lease Operations Guide for the Tote Road Adjustment Notice and in accordance with the terms and conditions of the Commercial Lease;
- Quarry Management Plans (QMPs) will be required for the newly proposed quarries in 2019. Additionally, existing plans may need to be revised to reflect changes in the quarry footprint proposed for 2019; and,
- Authorization or Letter of Advice from DFO for fish habitat.

Where required, these additional approvals have been indicated in Table 3-1 for each activity. These additional approvals and authorizations are considered to be within the scope of the approved Project as described in the Final Environmental Impact Statement (FEIS) and FEIS Addendum for the Early Revenue Phase, and are reasonably anticipated to be required during the course of operation of the Project and therefore have been included in the scope of the 2019 Work Plan and the 2019 Marginal Closure and Reclamation Financial Security Estimate prior to approval. It is anticipated that a 2019 Work Plan Addendum will be required to assess reclamation security and implement the construction of any Phase 2 works following successful receipt of the amended Project Certificate and amended Type 'A' Water Licence.

Table 3-1: Scope of Work for 2019

Item No.	Property Section	Land Use Area	Approximate Location	Description	Description of Effect on Feature(s)	Anticipated Completion Year	Required Permit or QIA Applications	Other Information
	<i>e.g. Milne Inlet/Tote Road/Mine Site</i>	<i>e.g. Impact Area /Exploration Area</i>	<i>Approximate UTM (if known) (Zone 17W)</i>	<i>Provide a detailed description of the activity.</i>	<i>A description of how the feature(s) (topographical and/or manmade) will be affected</i>	<i>N/A</i>	<i>List any associated permit applications if applicable.</i>	<i>e.g. Issued for construction documentation</i>
Scope of Work for 2019								
1	Tote Road, Milne Port	Impact Area	Q1 N7975563 E504289 (222,000 m2 + 4,000 m2) Q5 N797200 E506000 (1,225,600 m2) PQ2a N7955289 E522130 (345,500 m2) PQ4a N7942972 E523552 (105,000 m2) PQ6a N7929733 E528240 (194,000 m2) PQ12a N7920935 E539158 (232,300 m2)	Development and expansion of quarries, consisting of; four (4) new quarries along the Tote Road with 8m wide access roads, expansion of previously proposed but not constructed quarry Q5, and expansion of the working limits of existing quarry Q1.	Leveling and grading within Potential Development Area and Tote Road	2019	Security Quarry Management Plans DFO Authorization (PQ6a) CIRNAC Lease (PQ6a)	IFCs
2	Tote Road	Impact Area	Laydown 2 N7972166 E505637 (55,800 m2) Laydown 4 N7960605 E518164 (66,300 m2) Laydown 7 N7940427 E524119 (28,900 m2) Laydown 9 N7929681 E527833 (92,500 m2) Laydown 10 N7921358 E540249 (34,500 m2) Laydown 13 N7915170 E557599 (7,000 m2)	Development of six (6) laydowns adjacent to the existing Tote Road for material stockpiling and storage. The laydowns will be constructed by filling directly over undisturbed ground and 31m away from the high water mark of local water bodies. The laydowns will be constructed of 500 mm thickness quarried rock with granular surfacing, free draining to appropriate ditches and water courses. All laydowns to cover approximately 2 ha, with one laydown at km 7 laydown covering approximately 7.5 ha	Leveling and grading within Potential Development Area	2019	Security OEN CIRNAC Lease (Laydown 9)	IFCs
3	Tote Road	Impact Area	KM8 N7971100 E506250 KM97 N7914750 E554750	Grade adjustments at KM8 and KM97 to improve safety and drainage. No new culvert installations required.	Leveling and grading within Potential Development Area.	2019	Security TRAN	IFCs
4	Tote Road	Impact Area	KM97 N7914719 E555762 KM80 N7922178 E542323 KM63 N7926858 E529302 KM17 N7965904 E513568	Maintenance on Tote Road bridges, including re-decking and adjustment of bridge abutments. Winter ice road bypasses constructed to allow truck traffic during work.	Optimization of existing infrastructure	2019	DFO Notification	N/A
5	Milne Port	Impact Area	LP1 N7976200 E504100 (-13,000 m2) LP2 N7975900 E503775 (30,000 m2)	Expansion of the LP2 laydown (included in 2018 Work Plan but not yet constructed). Combined with LP1 from 2018 Work Plan, which is removed here for clarity.	Leveling and grading within Potential Development Area	2019	Security	Layout Drawing(s)
6	Milne Port	Impact Area	N7975763 E502984 (155,000 m2)	Expansion of the Milne Port Ore Stockpile and water management facilities to optimize stockpiling and shiploading operations, resulting in additional 140,000 m2 of stockpile area and 15,000 m2 lined sedimentation pond.	Leveling and grading within Potential Development Area	2019	Security Water Licence Modification DFO Authorization	IFCs
7	Milne Port	Impact Area	N9775000 E503150 (6,000 m2)	Construction of berm and linear steel support structure on laydown LP3 for receipt and storage of stacker/reclaimer equipment. Berm dimensions are 200m x 30m x 2m, constructed on existing disturbed area.	No effect, will occur on developed laydown within Potential Development Area	2019	None - on existing disturbed area	Layout Drawing(s)
8	Milne Port	Impact Area	N7976033 E503590 (4,180 m2)	Construction of new polishing waste stabilization pond (PWSP) at 380 Person camp to manage off-spec effluent from the 380p camp waste water treatment plant	No effect, will occur on developed laydown within Potential Development Area	2019	Security OEN Water Licence Modification	IFCs

Item No.	Property Section	Land Use Area	Approximate Location	Description	Description of Effect on Feature(s)	Anticipated Completion Year	Required Permit or QIA Applications	Other Information
	<i>e.g. Milne Inlet/Tote Road/Mine Site</i>	<i>e.g. Impact Area /Exploration Area</i>	<i>Approximate UTM (if known) (Zone 17W)</i>	<i>Provide a detailed description of the activity.</i>	<i>A description of how the feature(s) (topographical and/or manmade) will be affected</i>	<i>N/A</i>	<i>List any associated permit applications if applicable.</i>	<i>e.g. Issued for construction documentation</i>
9	Milne Port	Impact Area	N7975481 E503779 (2700 m2)	New contaminated water/snow containment pond adjacent to existing pond at Milne Port	Leveling and grading within Potential Development Area	2019	Security OEN Water Licence Modification	IFCs
10	Milne Port	Impact Area	N 7976466 E 504128 (200 m2)	Desalination Plant (Seawater reverse Osmosis System) including utilidor located at beach head	No effect, will occur on developed laydown within Potential Development Area	2019	Security Water Licence Modification	IFCs
11	Milne Port Mine Site	Impact Area	N7914691 E558503 (360m2) N7976251 E503874 (360m2)	Construction of new hazardous waste berm at the Mine site and at Milne Port. Decommissioning of select existing berms to consolidate waste management.	Environmental optimization. Leveling and grading within Potential Development Area	2019	Security OEN Water Licence Modification	IFCs
12	Mine Site	Impact Area	N7914015 E564007 (91,000 m2)	Laydown area for parking and equipment storage at KM107.5	Leveling and grading within Potential Development Area	2019	Security	Layout drawing(s)
13	Mine Site	Impact Area	N7915590 E563181 (180,000 m2)	New KM110.5 Laydown for additional equipment storage and maintenance shop installation	Leveling and grading within Potential Development Area	2019	Security	Layout drawing(s)
14	Mine Site	Impact Area	N7915590 E563181 (1,500 m2)	Heated maintenance shop for pit equipment at KM110.5 Laydown. Tent structure with lined floor. Footprint is approximately 1,500 m2.	No effect, will occur on developed laydown within Potential Development Area	2019	Security	Layout drawing(s)
15	Mine Site	Impact Area	N7914500 E558150 (area m2)	Decommissioning and repurposing of Weatherhaven structures for storage and workspace.	No effect, will occur on developed laydown within Potential Development Area	2019	None - Movement of existing structures	Layout drawing(s)
16	Mine Site	Impact Area	N9713450 E560450 (12,000 m2)	Expansion of the 800 person camp pad to the north by approximately 12,000 m2 to accommodate additional support offices and buildings.	Leveling and grading within Potential Development Area	2019	Security	Layout drawing(s)
17	Mine Site	Impact Area	N9713450 E560450 (925 m2)	Addition of offices/trailers/buildings at the 800p Camp. Total footprint is 925 m2, including approximately 500 m2 for a new fire hall and emergency response building.	No effect, will occur on developed laydown within Potential Development Area	2019	Security	Layout drawing(s)
18	Mine Site	Impact Area	N7912328 E561111 (9,000 m2)	Construction of a landfarm at the Mine Site landfill facility, with an estimated footprint of 9,000 m2. Disturbed area included in 2018 Addendum, new lined area requires security allocation.	Leveling and grading within Potential Development Area. Area already allocated as disturbed.	2019	Water Licence Modification No. 10 (Approved) Security in place Notification to NWB	IFCs
19	Mine Site	Impact Area	N7913123 E0561560 (2000 m2)	Expansion of the crusher maintenance shop laydown area for seacan and rebuilt equipment storage.	Leveling and grading within Potential Development Area. Area already allocated as disturbed.	2019	None - existing disturbed area	Layout drawing(s)

Item No.	Property Section	Land Use Area	Approximate Location	Description	Description of Effect on Feature(s)	Anticipated Completion Year	Required Permit or QIA Applications	Other Information
	<i>e.g. Milne Inlet/Tote Road/Mine Site</i>	<i>e.g. Impact Area /Exploration Area</i>	<i>Approximate UTM (if known) (Zone 17W)</i>	<i>Provide a detailed description of the activity.</i>	<i>A description of how the feature(s) (topographical and/or manmade) will be affected</i>	<i>N/A</i>	<i>List any associated permit applications if applicable.</i>	<i>e.g. Issued for construction documentation</i>
20	Mine Site	Impact Area	N7913410 E561092	Installation of second 15 ML tank at Mine Site bulk fuel storage facility.	No effect, will occur on developed area within Potential Development Area	2019	Security Notification to NWB	IFCs
21	Mine Site	Impact Area	N7912819 E561635 (12,000 m2)	Upgrades to the mine site crusher facility, including expansion of the crusher pad (12,000 m2), new water diversion structures, and increase to sedimentation pond (MS-06) capacity (2,000 m2). Installation of one (1) culvert in northern perimeter ditching to allow for vehicle access to maintenance shop.	Leveling and grading within Potential Development Area	2019	Security Water Licence Modification	IFCs
22	Mine Site	Impact Area	N7916848 E563153 (3,500 m2)	Waste Rock Facility Water Treatment Plant parking and laydown. Expansion of the pad to allow for light vehicle parking, material laydown and better fuel tank access.	Expansion of existing pad in tundra.	2019	Security	Layout drawing(s)
Works Carried forward from 2018 - Security Not In Place								
23	Mine Site	Impact Area	N7913600 E564236 (133,400 m2)	Construction of a Run of Mine (ROM) Stockpile at KM 107 (90,000 m2) including an access road (31,900 m2) and sedimentation pond (11,500 m2 disturbed, 7,400 m2 lined)	Minor leveling and grading within Potential Development Area	2019	Notification to NWB Security	IFCs
24	Mine Site	Impact Area	N7913410 E561092 (21,620 m2)	Construction of the Mine Site fuel storage facility and one arctic diesel fuel tank with 15 ML capacity. The fuel storage facility will comprise a fuel containment berm with a welded geomembrane liner, perimeter access road and fuelling module. Lined footprint is approximately 12,000 m2.	No effect, will occur on developed laydown within Potential Development Area	2018/2019	Notification to NWB Security	IFCs
25	Milne Port	Impact Area	N7976389 E503422 (4,400 m2)	Installation of East Sedimentation Pond Expansion (2a) approved with Modification No. 9, but for which security has not been allocated.	Minor leveling and grading within Potential Development Area.	2019	Water Licence Modification No. 9 (Approved) Security	IFCs
Works Carried over from Prior Years - Security in Place								
2017-1	Milne Port	Impact Area	N7975200 E503350	Installation of 380-person temporary camp inclusive of potable water treatment, sewage treatment, incinerator, kitchen, dining, locker, recreational and washroom facilities.	No effect, will occur on developed laydown within Potential Development Area	2018/2019	Water Licence Modification No. 3b (Pending Approval)	IFCs
2018-1	Milne Port	Impact Area	LP1 N7976200 E504100 (13,000 m2) LP2 N7975900 E503775 (32,000 m2) LP3 N7975200 E503200 (131,000 m2) LP4 N7975175 E503500 (13,000 m2) LP5 N7974900 E503400 (65,000 m2) LP6 N7974700 E503500 (7,000 m2) LP7 N7974600 E503700 (21,000 m2)	Laydown LP7 completed in 2018, remainder carried over to 2019. Development of seven (7) laydowns in the Port area totaling 282,000 m2 to improve the efficiency of material storage and management. The laydowns will be constructed by filling directly over undisturbed ground including filling in low lying areas that collect water. The lay down will be constructed utilizing blasted rock with granular topping to a total minimum thickness of 1 m, free draining to appropriate ditches and water courses.	Minor leveling and grading within Potential Development Area	2019	None - Security in Place	Layout drawing(s)
2018-2	Milne Port	Impact Area	N976800 E504110	Upgrade existing barge offload area to improve safety and operational efficiencies by installing a floating freight dock, improving vessel turnaround time.	Spudding of barge in marine foreshore	2018	DFO Authorization	IFCs

Item No.	Property Section	Land Use Area	Approximate Location	Description	Description of Effect on Feature(s)	Anticipated Completion Year	Required Permit or QIA Applications	Other Information
	<i>e.g. Milne Inlet/Tote Road/Mine Site</i>	<i>e.g. Impact Area /Exploration Area</i>	<i>Approximate UTM (if known) (Zone 17W)</i>	<i>Provide a detailed description of the activity.</i>	<i>A description of how the feature(s) (topographical and/or manmade) will be affected</i>	<i>N/A</i>	<i>List any associated permit applications if applicable.</i>	<i>e.g. Issued for construction documentation</i>
2018-3	Milne Port	Impact Area	N7976100 E503500	Relocate existing facilities located in the general area of the fuel tank farm to improve the traffic management of the overall port area.	No effect, will be placed on developed laydown within Potential Development Area	2018	None - Security in Place	Layout drawing(s)
2018-4	Milne Port	Impact Area	N7975800 E503200	Realignment of existing shipload conveyor to improve stockpile laydown area management, including realignment of the stockpile laydown area resulting in additional 26,000 m ² disturbed land. Installation of West Sedimentation Pond Expansion (1a)	Minor leveling and grading within Potential Development Area.	2018	Water Licence Modification No. 9 (Approved)	Layout drawing(s)
2018-6	Milne Port	Impact Area	N7972669 E504899	Installation of garages, site offices and equipment storage containers on laydown R3 (laydown identified in 2017 work plan).	No effect, will occur on developed laydown within Potential Development Area	2018	None - Security in Place	Layout drawing(s)
2017-2	Milne Port	Impact Area	R1 N7974015 E504036 R2 N7973631 E504478 R3 N7972669 E504899	Laydowns R1 and R2 completed in 2018. R3 construction pending regulatory approval from DFO. Development of three laydown areas (R1, R2 and R3) for construction material laydown, equipment maintenance and welding workshops, site offices and containerized spares. The additional laydown space will optimize storage of materials and supplies and reduce traffic. The laydowns will be constructed by filling directly over undisturbed ground including filling in low lying areas that collect water. The lay down will be constructed utilizing blasted rock with granular topping to a total minimum thickness of 1 m, free draining to appropriate ditches and water courses.	Minor leveling and grading within Potential Development Area.	2018	DFO Authorization	Layout drawing(s)
2018-25	Milne Port	Impact Area	Various locations	Construction of up to 3 km of Port site access roads to improve port traffic management. Locations to be determined.	Leveling and grading within Potential Development Area	2018	Water License Modification	N/A
2018-26	Milne Port	Impact Area	Various locations	Implementation of the Port Site Water Management plan, including berms, ditches and culverts to manage surface water around Milne Port infrastructure.	Positive environmental effect, focus on improving water management by keeping water away from coming in contact with the port area.	2018	Water Licence Modification No. 7 (Approved)	IFCs
2018-27	Milne Port	Impact Area	N7976518 E504044	Relocation of effluent discharge point to barge offload area	Positive effect. Reduced environmental spill risk.	2018	Water Licence Modification No. 7 (Approved)	IFCs
2018-28	Milne Port	Impact Area	N7976800 E504110	Marine manifold building relocation - moving from current location north of fuel tank farm to upgraded freight dock location	Minor leveling and grading within Potential Development Area	2018	Water Licence Modification No. 7 (Approved)	Layout drawing(s)

Item No.	Property Section	Land Use Area	Approximate Location	Description	Description of Effect on Feature(s)	Anticipated Completion Year	Required Permit or QIA Applications	Other Information
	<i>e.g. Milne Inlet/Tote Road/Mine Site</i>	<i>e.g. Impact Area /Exploration Area</i>	<i>Approximate UTM (if known) (Zone 17W)</i>	<i>Provide a detailed description of the activity.</i>	<i>A description of how the feature(s) (topographical and/or manmade) will be affected</i>	<i>N/A</i>	<i>List any associated permit applications if applicable.</i>	<i>e.g. Issued for construction documentation</i>
2018-8	Milne Port Mine Site	Impact Area	N7913206 E561603	Continued construction of Mine Site truck shop and initiation of Milne Port truck shop	Minor leveling and grading within Potential Development Area	2019	Water Licence Modification No. 7 (Approved)	IFCs
2018-5	Mine Site	Impact Area	N917115 E562565	Continued upgrades and environmental improvements at the Waste Rock Facility, including the repair and expansion of the Waste Rock Facility pond and on-going operation of the water treatment system in 2019.	Positive effect. Reduced environmental spill risk.	2018	Water Licence Modification No. 7 (Approved) Water Licence Modification No. 8 (Approved)	IFCs
2018-9	Mine Site	Impact Area	N7913733 E560057	Contractor office, garage and workshop installation on existing laydown pad.	No effect, will be placed on developed laydown within Potential Development Area	2018	None - Security in Place	Layout drawing(s)
2018-10	Mine Site	Impact Area	N7911960 E561780	Additional garage at explosives plant facility	No effect, will be placed on developed laydown within Potential Development Area	2018	None - Security in Place	Layout drawing(s)
2017-3	Mine Site	Impact Area	N7914181 E560035	Continued installation of 800-person permanent camp inclusive of: potable water treatment, sewage treatment, incinerator, kitchen, dining, locker, recreational and washroom facilities.	No effect, will be placed on developed laydown within Potential Development Area	2018	Water Licence Modification No. 4 (Approved)	IFCs
2018A-1	Mine Site	Impact Area	N7913855 E563904	Construction of the Mine Haul Road Cross Cut, and widening of the existing Mine Haul Road for safety purposes and to permit larger truck traffic	Minor leveling and grading within Potential Development Area	2019	Water Licence Modification No. 7 (Approved) Submission of IFC Drawings	IFCs
2018A-3	Mine Site	Impact Area	N7912607 E560898	Expansion of the Mine Site Landfill beyond the initial cell. The expansion involves leveling, grading and placing non-hazardous waste and cover material within the ultimate landfill boundary. Cell 2 planned for construction in 2019.	Minor leveling and grading within Potential Development Area	2019	Water Licence Modification No. 10 (Approved)	IFCs
2018A-4	Mine Site	Impact Area	N7913236 E560891	Installation of an effluent discharge line from the sewage treatment plant servicing the 800-person camp to the existing effluent discharge line, to allow for direct discharge of treated sewage effluent to the approved discharge location near the Mary River. This activity involves laying sections of 3" insulated, HDPE pipe and installing four (4) utilities culverts along its alignment.	No effect, will be placed on developed area within Potential Development Area	2018 / 2019	Water Licence Modification No. 10 (Approved) Security for Culverts	IFCs
2015-1	Mine Site	General Area	N7915564 E557216 N7916885 E555697	Improvements to the aerodrome flight path (2015 Work Plan item); includes the leveling of knolls that are within the airstrip approach and the construction of temporary access roads to those areas for the purpose of completing this work and associated environmental monitoring.	Minor leveling and grading outside of Potential Development Area	2019	OEN (Approved by QIA) Security	Layout drawing(s)

Item No.	Property Section	Land Use Area	Approximate Location	Description	Description of Effect on Feature(s)	Anticipated Completion Year	Required Permit or QIA Applications	Other Information
	<i>e.g. Milne Inlet/Tote Road/Mine Site</i>	<i>e.g. Impact Area /Exploration Area</i>	<i>Approximate UTM (if known) (Zone 17W)</i>	<i>Provide a detailed description of the activity.</i>	<i>A description of how the feature(s) (topographical and/or manmade) will be affected</i>	<i>N/A</i>	<i>List any associated permit applications if applicable.</i>	<i>e.g. Issued for construction documentation</i>
Progressive Reclamation								
-	Milne Port	-	N7975568 E503745	Management of hydrocarbon impacted soils within the existing landfarm facility.	N/A	Ongoing	N/A	N/A
-	Milne Port	-	N/A	Demobilization of equipment and supplies not required for near term activities as well as current inventory of hazardous waste and other materials by means of sealift from Milne Port	N/A	2018	N/A	N/A
-	Milne Port and Mine Site	-	N/A	Discharge and treatment of residual treated sewage effluent stored in PWSP at Mary River Exploration Camp and Milne Port Site.	N/A	Ongoing	N/A	N/A
-	Tote Road	-	N/A	Continue the development and implementation of a long term multi-year plan to address localized areas of permafrost degradation associated with the current borrow areas including KM97, and the area	N/A	Ongoing	N/A	N/A
-	Tote Road	-	N/A	Reclamation of sections of the exploration phase Tote Road no longer in use by means of scarifying and culvert removals.	N/A	Ongoing	N/A	N/A
-	Mine Site	-	N7912845 E560922	Continued development of the Mine Site landfill and deposition of non-hazardous waste in accordance with the Landfill Maintenance and Operations Manual	N/A	Ongoing	N/A	N/A
-	Site Wide	-	N/A	Ongoing removal from site, or safe disposal on-site of infrastructure, equipment and supplies no longer required for ongoing construction and operations.	N/A	Ongoing	N/A	N/A
-	Site Wide	-	N/A	Unless otherwise identified within the approved interim Closure and Reclamation Plan, where roads are no longer in use - removal of culvert and open/restore the natural drainage channel. Measures will be taken to minimize erosion and sedimentation	N/A	Ongoing	N/A	N/A
-	Site Wide	-	N/A	Areas that have been contaminated by hydrocarbons from normal fuel transfer, handling and storage activities will be reclaimed to meet objectives as outlined in the Government of Nunavut's Environmental Guideline for Site Remediation 2010. Use of reclamation soils for purpose of back fill or general site grading may be carried out with approval of applicable inspectors and agencies.	N/A	Ongoing	N/A	N/A

NOTES:

1. Two (2) of the seven (7) laydowns for the Milne Port area will require a Water Licence Modification. Based on direction from NWB, these have been included as Category 1 activities such that securities can be assessed. Work on these two (2) laydowns will not commence until the applicable regulatory approval is granted.
2. Modification of the Waste Rock Sedimentation Pond (MS-08) is required to address uncontrolled discharge of non-compliant water. An action plan and revised mitigation design has not been finalized at this time, however this work item has been included such that a security estimate for reclamation can be prepared, and will be revised and reconciled following implementation of any revised structures or mitigation measures.
3. An Options Exercise Notice is required to revise the boundaries of the lease area. Work on the select locations requiring an OEN will not commence until approval from QIA is granted.

3.1 INFRASTRUCTURE LAYOUT AT END OF 2019

Site layouts for Milne Port, Tote Road, and Mary River Mine Site can be found in Appendix A of this document.

The survey drawings and calculated areas as defined in the 2015 Montieth and Sutherland Survey Plans remain valid for 2019, however may need to be updated following approval of the Tote Road OEN (Appendix F) and any subsequent OENs submitted in 2019 in relation to the current project or the Phase 2 expansion.

SECTION 4.0 - MINING AND EXPLORATION ACTIVITIES

4.1 EXPLORATION ACTIVITIES AND DRILLING PLANS

The scope of Baffinland's Type 'B' Licence (2BE-MRY1421) and Commercial Lease with QIA allows for Baffinland to continue/undertake the exploration activities and drilling programs on its mineral leases in the Qikiqtani Region of Nunavut. This includes the exploration land use areas as defined in Section 2.2 of Commercial Lease. The types of exploration activities planned for 2019 are included within the scope of the Type 'B' Water Licence, with the exception of the proposed Ege Bay exploration program which will be seeking a new and separate Type 'B' Water Licence for the operation of the exploration camp and activities.

At this time when the Work Plan is required to be submitted, the exploration and drilling programs for 2019 have not yet been finalized. However, as a minimum, activities will include:

- Drilling
- Mapping
- Sampling
- Geophysical and geochemical surveys.

Operation of the Steensby Inlet Camp and Mid Rail Camp are not at this time anticipated to be required during 2019. A new exploration camp at the Ege Bay location is being evaluated, and Baffinland has engaged QIA in a new land lease for this camp.

It is anticipated that exploration activities will continue in 2019 with a drilling program on Deposits 1, 2, and 3. Once proposed drilling locations are finalized, this information will be provided to QIA, NWB, CIRNAC, and others.

4.2 AMOUNT AND TYPE OF ORE AND WASTE TO BE MINED

An estimate of the breakdown of ore vs. waste mined from Deposit No. 1 by month during 2018 is provided in Table 4-1 below:

Table 4-1: Mine Forecast 2019

Month	Ore Mined (wmt)	Waste Mined (wmt)	Total Mined (wmt)
January	771,123	139,490	910,614
February	772,713	150,034	922,747
March	604,491	501,769	1,106,259
April	730,699	451,726	1,182,425
May	610,065	696,718	1,306,783
June	950,675	253,886	1,204,560
July	587,515	870,835	1,458,349
August	523,383	723,345	1,246,728
September	550,226	742,396	1,292,622
October	819,837	348,347	1,168,184
November	889,212	132,430	1,021,641

Month	Ore Mined (wmt)	Waste Mined (wmt)	Total Mined (wmt)
December	599,097	454,952	1,054,049
Total	8,409,034	5,465,927	13,874,961

4.3 AMOUNT AND TYPE OF ORE TO BE SHIPPED EACH MONTH

Ore shipping during 2019 will occur during the open water season from end of July to approximately mid-October. The expected total shipping quantities for 2019 are shown in Table 4-2 below.

Table 4-2: Ore Shipping Forecast 2019

Month	Lump Ore Shipped (wmt)		Fines Shipped (wmt)		Total Shipped (wmt)	
	Milne Inlet	Steensby Inlet	Milne Inlet	Steensby Inlet	Milne Inlet	Steensby Inlet
January	-	-	-	-	-	-
February	-	-	-	-	-	-
March	-	-	-	-	-	-
April	-	-	-	-	-	-
May	-	-	-	-	-	-
June	-	-	-	-	-	-
July	572,530	-	294,940	-	867,470	-
August	1,335,903	-	688,193	-	2,024,096	-
September	1,288,193	-	663,614	-	1,951,807	-
October	763,373	-	393,253	-	1,156,626	-
November	-	-	-	-	-	-
December	-	-	-	-	-	-
TOTAL	3,959,999	-	2,040,000	-	5,999,999	-

4.4 SPECIFIED SUBSTANCES TO BE QUARRIED AND EXPECTED USES

A summary of the expected quantities of quarried and borrow materials to be extracted during 2019 are provided in Table 4-3, below. The expected quarterly quantities of each specified substance per quarry site and borrow location is provided also in Table 4-3, below.

Table 4-3: 2018 Quarry and Borrow Pit Quantities

Quarry Summary	Km Location	Permitted	Q1	Q2	Q3	Q4	Total	Estimated Surface Area Increase	Estimated Breakdown Of Specified Substances
UNITS			m ³	m ³	m ³	m ³	m ³	m ²	
Q1	1	Permitted	0	45,000	20,000	20,000	85,000	226 000	Rock
Q5	4	<i>Proposed²</i>	0	188,333	188,333	188,333	564,999	1,225,600	Rock
Q7	7	Permitted	0	0	0	0	0	0	Rock
Q11	21	Permitted	0	0	0	0	0	0	Rock
PQ2a	28.9	<i>Proposed²</i>	0	0	30,000	0	30,000	345,500	Rock
PQ4a	41.6	<i>Proposed²</i>	0	0	30,000	0	30,000	105,000	Rock
PQ6a	56.4	<i>Proposed²</i>	0	0	0	30,000	30,000	194,000	Rock
PQ12a	76	<i>Proposed²</i>	0	0	0	30,000	30,000	235,500	Rock
Q19	93.5	Permitted	0	0	0	0	0	0	Rock
QMR2	102	Permitted	0	10,000	45,000	15,000	70,000	32,670	Rock
Km 2	2	Permitted	0	0	0	0	0	0	Granular
Km 97	97	Permitted	750	750	750	750	3,000	1,500	Granular
Total			750	244,083	314,083	284,083	842,999	1,564,170	

Notes:

1. The quantities from each source are approximate values and may vary based on minor changes to the schedule and scope, however, the aggregate volume to be extracted is expected to remain constant.
2. The final schedule for the issuance of Quarry and Borrow Source Management Plans for proposed new quarry and borrow areas is not finalized at the time the Work Plan was prepared.
3. It is noted D1Q1 and D1Q2 will also be used as a source of aggregate in 2018 to support Mine Haul Road maintenance but is not considered a formal quarry as it is located in the Mining Lease and is anticipated to be within the LOM pit extent.

SECTION 5.0 - ANNUAL QUANTITIES OF SOLID WASTE**5.1 SOLID WASTE DISPOSAL**

The expected annual quantity of solid wastes to be deposited during 2019 is established from survey volumes measured in 2015 through 2018, as well as an analysis of proposed activities. Estimated quantities of solid waste to be deposited in approved waste storage areas are shown in the Table 5-1 below.

Table 5-1: Annual Volume of Solid Waste to be Deposited in Waste Storage Areas in 2019

Property Section	Waste Storage Area	Volume of Solid Waste to be disposed of (m ³)
<i>e.g. Milne Port/Tote Road/Mine Site</i>	-	
Mine Site	Landfill	5,000
TOTAL		5,000

SECTION 6.0 - EXPECTED USES OF WATER

6.1 WATER USE

The Amended No.1 Type 'A' Water Licence 2AM-MRY1325, and the construction Type 'B' Water Licence, 8BC-MRY1416, permits the maximum water use for domestic and industrial purposes during construction phase of the Project as shown in Table 6-1 below. As per Clause 22 of the QIA-Baffinland Water Compensation Agreement, Baffinland will pay a Consumptive Payment for Water Use, in connection with the Project for the maximum water volume permitted to be used or withdrawn annually as defined in the water licences issued to Baffinland by NWB.

Table 6-1: Approved Water Use for Domestic and Industrial Purposes during Construction Phase

Property Section	Water Source Name	Water Source Location	Annual Volume to be used (m ³)
Milne Port (Milne Inlet)	Phillips Creek (Summer)	71° 52' 53.3" N 80° 56' 04.0" W	134,130 m ³ /year
	Km 32 (Winter)	71° 30' 39.5" N80° 14' 54.4" W	
Mine Site (Mary River)	Camp Lake	71° 19' 38.6" N 79° 22' 57" W	240,000 m ³ /year
Steensby Port (Steensby Inlet)	ST 347 km Lake	N/A	0 m ³ /year
	3 km Lake	N/A	
TOTAL			371,130 m³/year

Source: Amendment No.1 Type 'A' Water Licence (2AM-MRY1325)

The Amendment No.1 of the Type 'A' Water Licence authorizes Baffinland to withdraw up to 1,500 m³/day to a maximum of 547,500 m³ annually of water specifically for use in dust suppression or control along the Tote Road of the Project. Water for dust suppression or control shall be obtained from the sources in accordance with thresholds established and shown in Table 6-2 below:

Table 6-2: Water Use for Dust Suppression

Property Section	Water Source Name	Water Source Location		Daily Water Take Proposed for Dust Suppression(m ³ /day)	Restrictions
		Latitude	Longitude		
Milne Port	Phillip's Creek	71° 52' 53.3" N	80° 56' 04.0" W	212	None
Milne Port	Km 32 Lake	71° 30' 39.5" N	80° 14' 54.4" W	364	
Tote Road	CV128	71° 47' 35.1" N	80° 36' 41.7" W	579.5	None
Tote Road	CV099	71° 38' 21.7" N	80° 22' 46.6" W	110	June-July only during low flow (<mean flow) years
Tote Road	CV087	71° 34' 10.0" N	80° 19' 41.6" W	90	June-July only during low flow

Property Section	Water Source Name	Water Source Location		Daily Water Take Proposed for Dust Suppression(m ³ /day)	Restrictions
		Latitude	Longitude		
					(<mean flow) years
Tote Road	CV078	71° 31' 51.9" N	80° 16' 07.8" W	75	June-July only during low flow (<mean flow) years
Tote Road	Katiktok Lake	71° 23' 45.7" N	79° 48' 22.0" W	318	None
Tote Road	BG50	71° 26' 29.6" N	80° 10' 27.1" W	150	None
Tote Road	BG32	71° 23' 35.1" N	79° 51' 24.9" W	120	June-July only during low flow (<mean flow) years
Tote Road	CV217	71° 23' 51.4" N	79° 48' 50.9" W	130	None
Tote Road	Muriel Lake	71° 22' 18.5" N	79° 39' 24.3" W	212	None
Tote Road	David Lake	71° 19' 38.6" N	79° 22' 57.0" W	132	June-July only during low flow (<mean flow) years
Tote Road	BG17	71° 21' 19.8" N	79° 34' 44.0" W	75	June-July only during low flow (<mean flow) years
Tote Road	CV223 (Tom River)	71° 19' 40.5" N	79° 26' 15.8" W	135	None
Mine Site	Camp Lake	71° 19' 38.6" N	79° 22' 57" W	86	None

Source: Amendment No.1 Type 'A' Water Licence (2AM-MRY1325)

SECTION 7.0 - MATERIALS TO BE SHIPPED OFF THE PROPERTY

7.1 MATERIALS SHIPPED OUT

As required by the Lease, the expected quantities of materials planned to be shipped off site in 2019 are detailed in Table 7-1 below.

Table 7-1: Materials to be shipped out in 2019

Property Section	Equipment/ Material Item	Owner	Estimated Annual Amount of Equipment and Material (tonne)	Estimated Annual Revenue Tonnes
e.g. Milne Port/Mine Site	Description of the equipment or the material*	e.g. BIM/Third Party	Estimated total annual amount of equipment and material (tonne)	Estimated amount of revenue tonnes assigned to the shipping of equipment or material
Milne Port	Batteries	BIMC	89	-
Milne Port	Hydro Carbon Contaminated Material	BIMC	205	-
Milne Port	Waste Oil	BIMC	1,238	-
Milne Port	Waste Fuels	BIMC	91	-
Milne Port	Waste Grease	BIMC	32	-
Milne Port	Waste Hazardous Liquids	BIMC	401	-
Milne Port	Waste Aerosol Canisters	BIMC	2.5	-
Milne Port	Contaminated Containers/Solids	BIMC	319	-
Milne Port	Misc Hazardous Materials	BIMC	250	-

Note: For hazardous waste assumptions used in the calculation of the quantity of generated hazardous waste for the Project, please refer to the Waste Management Plan (BAF-PH1-830-P16-0028).

SECTION 8.0 - MATERIALS TO BE SHIPPED TO THE PROPERTY

8.1 DELIVERY OF FUEL

At least two bulk fuel deliveries will occur during the 2019 sealift. At the onset of the shipping season, arctic diesel and Jet A fuel will be delivered to fill the tanks at the Milne Port tank farm. The anticipated fuel delivery provided in the below Table 8-1.

Table 8-1: Anticipated Fuel Delivery During 2019

	Diesel	Jet A
Total Bulk Fuel Delivery	78 ML	3 ML

8.2 MATERIALS SHIPPED TO THE PROPERTY

Materials, equipment, supplies, buildings and machinery to support construction and operations through 2019 will arrive on the 2019 sea lift include:

Table 8-2: Mobile and Mechanical Equipment to be received during 2019

Property Section	Material Item	Owner	Quantity	Revenue Tonne
<i>e.g. Milne Port or Mine Site</i>	<i>Description of the material*</i>		<i>Quantity of the material to be shipped to and stored on the Property (including unit of measurement)</i>	<i>Estimated amount of revenue tonnes (mt) assigned to the shipping of material</i>
Mine Site	793 Trucks	Baffinland	3	375
Mine Site	854 Wheel Dozer	Baffinland	1	30
Mine Site	D10 Dozer	Baffinland	1	70
Mine Site	374 Excavator	Baffinland	1	80
Mine Site	Ejector Box for 740	Baffinland	1	2
Mine Site	4 x 4 hotseating bus	Baffinland	1	20
Mine Site	F350 truck	Baffinland	11	10
Mine Site	Light Plants	Baffinland	21	5
Mine Site	Pumps	Baffinland	2	2
Mine Site	Washcar	Baffinland	1	36
Mine Site	Lunch Trailer	Baffinland	1	36
Milne Port	pumper fire truck	Baffinland	1	20
Mine Site	off road tracked rescue vehicle	Baffinland	1	10
Mine Site	Light ERT utility vehicle	Baffinland	1	8
Milne Port	office trailers	Baffinland	2	72
Mine Site	washroom facility for tote road	Baffinland	2	72
Milne Port	generator	Baffinland	1	1

Property Section	Material Item	Owner	Quantity	Revenue Tonne
<i>e.g. Milne Port or Mine Site</i>	<i>Description of the material*</i>		<i>Quantity of the material to be shipped to and stored on the Property (including unit of measurement)</i>	<i>Estimated amount of revenue tonnes (mt) assigned to the shipping of material</i>
Mine Site	office trailers	Baffinland	2	72
Milne Port	conveyor feeder	Baffinland	1	8
Milne Port	jump conveyor	Baffinland	2	15
Milne Port	heavy duty shunt truck	Baffinland	1	14
Milne Port	950 loader	Baffinland	1	240
Milne Port	feeder dolly	Baffinland	1	6
Tote Road	740 B water truck body	Baffinland	1	15
Mine Site	2 Spare Jaw Feeder Assemblies	Baffinland	1	4
Mine Site	New or Used 349 excavator	Baffinland	1	80
Mine Site	2 FS353 Screen Decks	Baffinland	2	80
Mine Site	Boom truck	Baffinland	1	20
Mine Site	Pressure washing truck	Baffinland	1	15
Mine Site	Telehandler	Baffinland	1	20
Mine Site	247B or 257D skid steer	Baffinland	1	6
Mine Site	Frost Fighters	Baffinland	7	2
Mine Site	Generators/compressors	Baffinland	2	4
Mine Site	Jet A truck	Baffinland	1	10
Mine Site	Fuel Tanker & Tractor	Baffinland	1	15
Milne Port	Desalination Plant for Fresh Water	Baffinland	1	70
Milne Port	Bucket Wheel Stacker Reclaimer	Baffinland	2	210
Milne Port	Fines Mobile Stacker	Baffinland	1	170
Milne Port	Genset modules	Baffinland	4	180
Milne Port	E-house	Baffinland	1	50
Mine Site	Mobile Primary Crusher Unit	Baffinland	1	231
Mine Site	Passenger bus	Baffinland	2	15
Mine Site	Telehandler	Baffinland	1	20
Mine Site	Front End Loader	Baffinland	1	15
Mine Site	Fuel/Lube Truck	Baffinland	1	15
Mine Site	Mobile Fleet- 745C Rock Truck - TFK00727	Baffinland	2	40
Milne Port	Crusher Services office	Baffinland	1	36
Milne Port	Site Construction Office	Baffinland	1	36
Milne Port	Manlift Z-60	Baffinland	2	16
Milne Port	Manlift S135X	Baffinland	3	16

Property Section	Material Item	Owner	Quantity	Revenue Tonne
<i>e.g. Milne Port or Mine Site</i>	<i>Description of the material*</i>		<i>Quantity of the material to be shipped to and stored on the Property (including unit of measurement)</i>	<i>Estimated amount of revenue tonnes (mt) assigned to the shipping of material</i>
Milne Port	Zoom Boom 12,000lb	Baffinland	4	20
Milne Port	150T Crane	Baffinland	2	40
Milne Port	Freight Liner Highway Truck	Baffinland	1	20
Milne Port	Tri- Trombone Flat Trailer - 53' to 90'	Baffinland	1	18
Milne Port	Diesel F250 or F350 Pick-up Truck	Baffinland	4	10
Milne Port	Diesel F250 15 passenger Van	Baffinland	1	12
Milne Port	12' x 60' c/w 2 offices, open area in middle, and office furniture,	Baffinland	2	36
Milne Port	12' x 60' lunch room complete 8' tables, chairs and equipment	Baffinland	3	36
Milne Port	12' x 34' Self-contained washcar on skids	Baffinland	4	36
Milne Port	30,000 L Fuel Tanker Trucks	Baffinland	12	180
Mine Site	Winch Tractor	Nuna	1	13.2
Mine Site	Scissor Deck Trailer	Nuna	1	6.37
Mine Site	Skid steer	Nuna	1	7.633
Mine Site	Manlift	Nuna	1	7.5
Mine Site	Light Plants	Nuna	2	1.92
Mine Site	Frost Fighters	Nuna	4	0.8
Mine Site	Hot Box	Nuna	1	1.55
Mine Site	Cat 988 Loader	Nuna	1	51.4
Mine Site	Mech Truck	Nuna	1	16.4
Mine Site	RO/RO Truck	Nuna	1	16.4
Mine Site	Bins for RO/RO	Nuna	3	21
Mine Site	Vac Trailer or Vac Truck	Nuna	1	16.4
Mine Site	Skid steer	Nuna	1	7.633
Mine Site	Light Plants	Nuna	2	1.92
Mine Site	Frost Fighters	Nuna	4	0.8
Mine Site	Hot Box	Nuna	1	1.55
Mine Site	Cat 930 Loader	Nuna	1	17
Mine Site	Bus	Nuna	2	16.4
Mine Site	Crewcab	Nuna	1	3.8
Mine Site	Flat Deck	Nuna	2	9.98
Mine Site	Fuel Truck	Nuna	1	16.4
Mine Site	Raw Water Truck	Nuna	1	16.4

Property Section	Material Item	Owner	Quantity	Revenue Tonne
<i>e.g. Milne Port or Mine Site</i>	<i>Description of the material*</i>		<i>Quantity of the material to be shipped to and stored on the Property (including unit of measurement)</i>	<i>Estimated amount of revenue tonnes (mt) assigned to the shipping of material</i>
Mine Site	Effluent Water Truck	Nuna	1	16.4
Mine Site	RO/RO Truck	Nuna	1	16.4
Mine Site	Bins for RO/RO	Nuna	3	21
Mine Site	Grocery Truck	Nuna	1	16.4
Mine Site	Skid steer	Nuna	2	15.266
Mine Site	Light Plants	Nuna	2	1.92
Mine Site	Frost Fighters	Nuna	2	0.4
Mine Site	Bear Proof Garbage Bins	Nuna	2	2
Mine Site	RO/RO Truck + VAC for RO/RO - UNIT 1374	Nuna	1	15.876
Mine Site	Bins for RO/RO (2 x GARBAGE BINS)	Nuna	2	4.5
Mine Site	Bins for RO/RO (2 x GARBAGE BINS)	Nuna	2	4.5
Mine Site	Busses 42 passenger	Nuna	3	24.6
Mine Site	Lighting plants	Nuna	10	11.3
Mine Site	D6 Dozer - Caterpillar D6 R II	Besix Vanpile JV	1	24.3
Mine Site	966G Wheel loader - Caterpillar 966G - 4m"	Besix Vanpile JV	1	22.75
Mine Site	Trucks - Articulated dumper 38T/23 m3 - Type Terex TA40	Besix Vanpile JV	5	153.8
Mine Site	Compactor - 9.2T Articulated tandem roller w/ 2 vibratory drums - Type Hamm HD 90	Besix Vanpile JV	1	8.3
Mine Site	85T Track excavator w/ long stick	Besix Vanpile JV	2	172.6
Mine Site	20T 6x4 Tipper Truck	Besix Vanpile JV	1	26
Mine Site	Conveyor belt	Besix Vanpile JV	1	25
Mine Site	Ripper	Besix Vanpile JV	2	5
Mine Site	Diesel Hammer D180	Besix Vanpile JV	3	112.41
Mine Site	Vibrohammer - Type 5.9T, 50KNm, Hydraulic hammer IHC S50/90	Besix Vanpile JV	3	28.95
Mine Site	71KW Power pack for EMV300 vibro hammer	Besix Vanpile JV	2	4
Mine Site	Crawler crane 350 ton - Type Liebherr LR1400-2	Besix Vanpile JV	2	622
Mine Site	Clamshell	Besix Vanpile JV	1	15
Mine Site	250T Lifting crawler crane	Besix Vanpile JV	1	210

Property Section	Material Item	Owner	Quantity	Revenue Tonne
<i>e.g. Milne Port or Mine Site</i>	<i>Description of the material*</i>		<i>Quantity of the material to be shipped to and stored on the Property (including unit of measurement)</i>	<i>Estimated amount of revenue tonnes (mt) assigned to the shipping of material</i>
Mine Site	Mobile crane 32T	Besix Vanpile JV	1	24
Mine Site	Mixer Truck 6/9 m3	Besix Vanpile JV	1	12.2
Mine Site	Bucket 0.5/1 m3	Besix Vanpile JV	1	0.4
Mine Site	80T extensible semi-trailer	Besix Vanpile JV	2	45.4
Mine Site	125 KW/170 HP tractor for 80T semi-trailer	Besix Vanpile JV	2	19
Mine Site	20T Flatbed truck w/ truck mounted crane	Besix Vanpile JV	1	11.6
Mine Site	20' x CONTAINER - Oxy fuel cutting systems, induction heating system, 400A welding generators, welding sets, 7m3/min / 250cft/min mobile compressors	Besix Vanpile JV	1	22
Mine Site	20' x CONTAINER - Mobile Compressor + 50mm PVC Perforated tubes	Besix Vanpile JV	5	110
Mine Site	40' x CONTAINER - Generator 150 kVA, Generator 250 kVA, Generator 30 kVA, Generator 100 Kva	Besix Vanpile JV	3	66
Mine Site	Maintenance truck (water/fuel/maintenance)	Besix Vanpile JV	1	4.8
Mine Site	Piling Frame	Besix Vanpile JV	2	12
Mine Site	Sheetpiles AZ26 - 700	Besix Vanpile JV	72	459.36
Mine Site	Sheetpiles AZ26 - 700	Besix Vanpile JV	14	47.6
Mine Site	Tie-rod dia 800 mm	Besix Vanpile JV	55	386.1
Mine Site	Tie-rod dia 800 mm	Besix Vanpile JV	14	91.84
Mine Site	40' x OPEN TOP - Temporary structural steel access platform	Besix Vanpile JV	1	22
Mine Site	40' x OPEN TOP - Temporary structural steel quay	Besix Vanpile JV	1	22
Mine Site	40' x OPEN TOP - Steel trolley	Besix Vanpile JV	1	22
Mine Site	40' x OPEN TOP - Engine system for mobile trolley movement	Besix Vanpile JV	1	22
Mine Site	40' x OPEN TOP - Walkway	Besix Vanpile JV	1	22
Mine Site	Concrete mattresses scour protection	Besix Vanpile JV	337	674
Mine Site	40' x CONTAINER - workshop materials and spare parts	Besix Vanpile JV	10	220

Property Section	Material Item	Owner	Quantity	Revenue Tonne
<i>e.g. Milne Port or Mine Site</i>	<i>Description of the material*</i>		<i>Quantity of the material to be shipped to and stored on the Property (including unit of measurement)</i>	<i>Estimated amount of revenue tonnes (mt) assigned to the shipping of material</i>
Mine Site	40' x CONTAINER - material for offices, site small facility tools	Besix Vanpile JV	10	220
Mine Site	Container office	Besix Vanpile JV	4	12
Mine Site	Container with lunch room	Besix Vanpile JV	2	6
Mine Site	Precast pile caps	Besix Vanpile JV	1	25
Mine Site	40' x CONTAINER - Fenders SCN 2000, bollards, handrail, guardrail	Besix Vanpile JV	4	88
Mine Site	10'x44' wheeled lunchtrailer	Contractor	1	14
Mine Site	Herman Nelson 6700	Contractor	6	7.2
Mine Site	Bear Proof Garbage Bin	Contractor	4	2.4
Mine Site	20' Container	Contractor	6	130.02
Mine Site	55KW Generator	Contractor	4	4.4
Mine Site	Generator enclosure	Contractor	3	0.66
Mine Site	40' Container	Contractor	6	158.88
Mine Site	Mark IV Tamper	Contractor	2	63.525
Mine Site	Knox Kershaw KBR 940 Regulator	Contractor	2	29.4
Mine Site	Pettibone 445F w/ high rail	Contractor	2	32.77785
Mine Site	Rail car mover	Contractor	2	48.52
Mine Site	Ballast Car	Contractor	15	379.5
Mine Site	CAT 950 loader	Contractor	2	31
Mine Site	CAT 988 loader	Contractor	1	60
Mine Site	Telehandler	Contractor	3	42
Mine Site	Skidsteer	Contractor	1	7
Mine Site	Clipping Machine	Contractor	4	1
Mine Site	Diesel Rail Heater Drapeau 2	Contractor	1	16
Mine Site	Herman Nelson 6700 all in one	Contractor	2	2.4
Mine Site	Herman Nelson extreme cold BT400NEX-D4A	Contractor	6	2.0475
Mine Site	Herman Nelson Flagro-1000 trailer mount	Contractor	1	2.1
Mine Site	light plants	Contractor	15	16.95
Mine Site	light system for office (in C-Can)	Contractor	1	4
Mine Site	F-350 crew cab 4x4 Diesel	Contractor	6	28.68
Mine Site	F-350 crew cab w/ fuel tank	Contractor	6	25.5
Mine Site	Crew Van 4x4 15 passenger	Contractor	5	21

Property Section	Material Item	Owner	Quantity	Revenue Tonne
<i>e.g. Milne Port or Mine Site</i>	<i>Description of the material*</i>		<i>Quantity of the material to be shipped to and stored on the Property (including unit of measurement)</i>	<i>Estimated amount of revenue tonnes (mt) assigned to the shipping of material</i>
Mine Site	F-550 Mechanic Truck	Contractor	2	18
Mine Site	F-450 CSV trucks	Contractor	3	25
Mine Site	power pack 5/10 gallon per minute	Contractor	6	1
Mine Site	Kennworth 880 w/ winch	Contractor	1	24
Mine Site	Kennworth 880 w/ grapple	Contractor	1	17
Mine Site	highway trailer 48 foot	Contractor	1	11
Mine Site	highway trailer 40 foot lowbed	Contractor	1	10.5
Mine Site	trailer w/ rail	Contractor	1	14
Mine Site	Kennworth 880 w/hirail & crane	Contractor	1	32
Mine Site	Kennworth 370 fuel & lube truck (filled)	Contractor	1	54
Mine Site	Kennworth 880 Dump Truck w/ hirail	Contractor	1	23
Mine Site	Geismar Power Jack Model RV100	Contractor	2	3
Mine Site	Air Compressor	Contractor	1	3
Mine Site	Excavator	Contractor	2	74
Mine Site	20' Container w/ 3 Rail Puller, Threader, misc. small tools	Contractor	1	22
Mine Site	Track Welding Truck	Contractor	2	81.9
Mine Site	12'x60' Office Trailer w/ furniture	Contractor	1	12
Mine Site	trailers for 24'x60' office w/ furniture	Contractor	1	12
Mine Site	trailers for 60'x60' office w/ furniture	Contractor	3	36
Mine Site	Rail Operations Concrete	Contractor	158	316
Mine Site	Crane Mats	Contractor	74	111
Mine Site	Quonset Hut	Contractor	1	5
Mine Site	Portable Washroom	Contractor	2	3
Mine Site	10,000 gallon fuel tank (diesel empty)	Contractor	1	5
Mine Site	10,000 gallon fuel tank (gasoline full)	Contractor	1	45
Mine Site	Outdoor vehicle plug station	Contractor	1	1
Mine Site	20' Container Hose Crimping	Contractor	1	21.67
Mine Site	Rolling Stock Workshop	Nahanni	1	340
Mine Site	Rolling Stock Workshop Crane	Nahanni	1	12
Mine Site	Rail Operations Offices	Nahanni	1	35
Mine Site	Rail Operations Concrete	Nahanni	1	50
Mine Site	Pick up trucks	Allnorth	2	6.488
Mine Site	Screener power screen	Contractor	1	40

Property Section	Material Item	Owner	Quantity	Revenue Tonne
<i>e.g. Milne Port or Mine Site</i>	<i>Description of the material*</i>		<i>Quantity of the material to be shipped to and stored on the Property (including unit of measurement)</i>	<i>Estimated amount of revenue tonnes (mt) assigned to the shipping of material</i>
Mine Site	Inclined screen	Contractor	1	46
Mine Site	Screeners	Contractor	1	40
Mine Site	Conveyors	Contractor	4	47
Mine Site	Gen-set trailers	Contractor	1	28
Mine Site	Electrical sub-station	Contractor	3	8
Mine Site	Fuel truck 10,000 liters	Contractor	1	14
Mine Site	Crane 80T	Contractor	1	43
Mine Site	Crane 200T crawler	Contractor	2	100
Mine Site	Mobile concrete plant	Contractor	1	15
Mine Site	Concrete truck	Contractor	2	52
Mine Site	Drill Rig T40R driller	Contractor	1	35
Mine Site	Loader C-988	Contractor	1	50
Mine Site	Dynamite truck	Contractor	2	20
Mine Site	Dynamite truck	Contractor	1	10
Mine Site	Drilling Rig LB 36-410 (rented)	Contractor	1	82
Mine Site	Piling and drilling Rig LRB 355 (rented)	Contractor	1	76
Mine Site	Oscillator VRM KL (rented)	Contractor	1	17
Mine Site	Loader C-980	Contractor	1	50
Mine Site	Loader C-980	Contractor	1	50
Mine Site	Dynamite truck	Contractor	1	10
Mine Site	Semi-trailer	Contractor	1	15
Mine Site	Crane 130T	Contractor	1	50
Mine Site	Basket crane	Contractor	1	2
Mine Site	Generator 35 kW	Contractor	2	6
Mine Site	Air compressor	Contractor	1	22
Mine Site	Air compressor	Contractor	1	22
Mine Site	Tower light 4 000 W	Contractor	6	4
Mine Site	Pick-up 4x4 diesel	Contractor	12	38
Mine Site	Dynamite pick up	Contractor	2	9
Mine Site	Skid Steer CAT 236B	Contractor	1	3
Mine Site	Bucket Lift	Contractor	1	15
Mine Site	Pick-up 4x4 diesel	Contractor	2	6
Mine Site	Dynamite pick up	Contractor	2	9

Property Section	Material Item	Owner	Quantity	Revenue Tonne
<i>e.g. Milne Port or Mine Site</i>	<i>Description of the material*</i>		<i>Quantity of the material to be shipped to and stored on the Property (including unit of measurement)</i>	<i>Estimated amount of revenue tonnes (mt) assigned to the shipping of material</i>
Mine Site	Tower light 4 000 W	Contractor	4	3
Mine Site	Scissors lift	Contractor	2	6
Mine Site	Bucket Lift	Contractor	1	15
Mine Site	Tower light	Contractor	3	3
Mine Site	Tower light	Contractor	1	1
Mine Site	Pick-up 4x4 diesel	Contractor	2	6
Mine Site	Light tower	Contractor	6	5
Mine Site	Pick-up 4x4 diesel	Contractor	6	19
Mine Site	Scissor lift	Contractor	1	4
Mine Site	Generator 35 kW	Contractor	3	5
Mine Site	Welding machine	Contractor	3	3
Mine Site	Generator 114 kW	Contractor	1	3
Mine Site	Diesel tank 22 500 li	Contractor	1	3
Mine Site	Diesel tank 10 000 li	Contractor	2	2
Mine Site	Gaz tank 50 000 li	Contractor	2	2
Mine Site	Diesel tank 10 000 li	Contractor	2	2
Mine Site	Gaz tank 50 000 li	Contractor	1	1
Mine Site	Gaz tank 50 000 li	Contractor	1	1
Mine Site	Gaz tank 10 000 li	Contractor	1	1
Mine Site	Low boy 100T	Contractor	1	13
Mine Site	Tool truck	Contractor	1	14
Mine Site	Bus ford transit	Contractor	1	3
Mine Site	Bucket Lift 100'	Contractor	1	15
Mine Site	Platform truck	Contractor	1	15
Mine Site	Boom truck	Contractor	1	14
Mine Site	Bus 48 passengers	Contractor	1	8
Mine Site	Water tank 50 000 li	Contractor	1	3
Mine Site	Water tank 15 000 li	Contractor	1	3
Mine Site	Water tank 1 000 li	Contractor	2	2
Mine Site	Water tank 50 000 li	Contractor	1	3
Mine Site	Water tank 10 000 li	Contractor	1	3
Mine Site	Office room	Contractor	1	5
Mine Site	Lunch room	Contractor	1	5

Property Section	Material Item	Owner	Quantity	Revenue Tonne
<i>e.g. Milne Port or Mine Site</i>	<i>Description of the material*</i>		<i>Quantity of the material to be shipped to and stored on the Property (including unit of measurement)</i>	<i>Estimated amount of revenue tonnes (mt) assigned to the shipping of material</i>
Mine Site	Spare parts trailers	Contractor	1	28
Mine Site	Explosive mats	Contractor	50	175
Mine Site	Methanol	Contractor	110	110
Mine Site	Calcium	Contractor	877	877
Mine Site	Concrete bags	Contractor	67	101
Mine Site	20' Various Containers	Contractor	20	440
Mine Site	Non-woven Geotextile (bundle of 3 rolls)	Contractor	15	20
Mine Site	Safety barrier (New Jersey)	Contractor	100	204
Mine Site	Non-woven Geotextile (bundle of 3 rolls)	Contractor	5	7
Mine Site	Non-woven Geotextile (bundle of 3 rolls)	Contractor	5	7
Mine Site	Board insulation 50mm (Styrofoam)	Contractor	600	192
Mine Site	Non-woven Geotextile (bundle of 3 rolls)	Contractor	3	4
Mine Site	Geomembrane Liner (5 500 m ²)	Contractor	1	2
Mine Site	Retaining wall concrete bloc 600 x 600 x 1200	Contractor	50	54
Mine Site	Non-woven Geotextile (bundle of 3 rolls)	Contractor	137	178
Mine Site	Unloader board insulation	Contractor	2000	11
Mine Site	Unloader non-woven geotextile	Contractor	68	15
Mine Site	Parts (for generators)	Contractor	3	2
Mine Site	20' Container Miscellaneous accesories for workers	Contractor	1	20
Mine Site	20' Container -Office equipment	Contractor	1	5

In addition to the above noted equipment to be brought to the Project in 2019, there are materials and equipment that will arrive on the 2019 sealift in support of the Phase 2 expansion, currently in the permitting process. These materials consist of large modules, and were previously referred to in the 2018 Work Plan and 2018 Work Plan Addendum as the Expansion Project Equipment and Materials (the 'Modules'). In addition to the Crushing, Screening, Car Dumper, Bulk Material Handling (BMH) Conveyors, and Rail Materials, a Shiploader Module has been added to the 2019 sealift. While these materials will be constructed following approval of the Phase 2 expansion, they are being mobilized to Site with the understanding that they would need to be backhauled in the event Phase 2 is not approved. To assist with the calculation of reclamation securities, the detailed breakdown of the Modules is provided in Table 8-3.

Table 8-3: Expansion Project Equipment and Materials

Module Package	Description	Total Volume (m3)
Shiploader	Shiploader	77,938
	Jetty Travel Gear for Shiploader	2,268
	Landside Travelgear for shiploader (Pivot Point)	1,174
	Lower Part Pivot point for shiploader (to be casted in grouting)	20
Subtotal Shiploader		81,400
Car Dumper	Steel Tub, Car Dumper, Car Dumper Hall including E-Houses	12,579
	Positioner Hall (Indexer Building) One piece with shipping braces	8,401
	Hopper Support Structure	2,099
	Positioner	487
	Apron Feeder	496
	Hopper	296
	Positioner Track Dwg# 4933706	97
	Hydraulic Power Unit Car Dumper	45
	40' DC or OT (Drive units, small geared motor for the spillage scraper)	77
	Transformer house	179
Subtotal Car Dumper		24,756
Crushing	Crusher building including 4.2 to 4.5	21,111
	Main Shaft Kubria M210	63
	Spider Complete Kubria M210	70
	Crusher feeding chute S6	31
	Various disassembled small parts stowed in 20' Containers	154
	Various disassembled small parts stowed in 20' Containers	387
Subtotal Crushing		21,815
Screening building	Screening building	33,278
Subtotal Screening		33,278
BMH Conveyors (Transfer Conveyor)	Detail 1 Tower (Lower section)	1,476
	Detail 1 Tower (top section)	996
	Detail 1 Tower (diagonal brace)	167
	Detail 1 Tower (horizontal brace)	0
	Detail 2 Tubular Gallery type 2	691
	Detail 3 Tubular Gallery type 1	3,488
	Detail 4 Transfer Truss PT. 1 Head End (Platform)	1,332
	Detail 4 Transfer Truss PT. 2 - Head End (Truss)	349
	Detail 5 Bent TC-B3	184
	Detail 6 Bent TC-B4	129
	Detail 7 Bent TC-B5	97
	Detail 8 Bent TC-B6	73
	Detail 9 Bent TC-B7	38
	Detail 10 Bent TC-B8	21
	Detail 11 Bent TC-B9	0
	Detail 1 - Gravity Takeup Counterweight (4122)	10
	Transfer Conveyor tables, tail and take up pulley supports	232
	Transition walkway	8

Module Package	Description	Total Volume (m3)
	Corrugated wall panels for tower base	0
BMH Conveyors (Screen Feed Conveyor)	Detail 4 - Tubular gallery (Type 2)	578
	Detail 24 - Tubular gallery (Type 4)	1,744
	Detail 24 - Tubular gallery (Type 5)	581
	Detail 5 - Tubular gallery (Type 3)	527
	Detail 6 - Truss section	596
	Detail 8 - Bent SF-B3	76
	Detail 9 - Bent SF-B4	38
	Detail 10 - Bent SF-B5	17
	Detail 11 - Bent SF-B6	8
	Detail 12 - Bent SF-B8	2
	Detail 12 - Bent SF-B9	0
	Detail 15 - Gravity Take up Tower Bent SF-B2	329
	Detail 15 - Gravity Take up Tower Platform	110
	Detail 16 - Gravity Take up Tower Bent SF-B1	121
	Detail 13 - Caged Ladders	77
	Detail 14 - Caged Ladders	77
	Detail 2 - Counter Weight (CV-001)	8
	Bracing, Guarding, Bolts, Monorail and Monorail Supports in Containers	155
	Detail 4 - Transition walkway	10
BMH Conveyors (Stockpile #1 Conveyor)	Apron Feeder Modular Structure Dribble and head chute	1,011
	Apron Feeder Modular Structure and Dribble and head chute	1,045
	Detail 25 - Apron Feeder Modular Structure stairs	0
	Detail 21 - Feeding Hopper (Top Half)	201
	Detail 18 Arches	573
	Detail 18 Arch cross beam connectors	0
	Reclaim tunnel concrete foundations	1,152
	Reclaim tunnel corrugated steel segments and Exit tunnel segments	189
BMH Conveyors (Oversize Conveyor)	Detail 13 - Gravity Takeup Counterweight (CV-002)	8
	Detail 2 - Truss	726
	Detail 3 - Tubular Gallery (Type 1)	493
	Detail 3 - Tubular Gallery (Type 2)	493
	Detail 3 - Tubular Gallery (Type 3)	1,480
	Detail 4 - Tubular gallery (Type 4)	406
	Detail 5 - Bent OSC-B1	113
	Detail 6 - Bent OSC-B2	61
	Detail 7 - Bent OSC-B3	30
	Detail 8 - Bent OSC-B4	14
	Detail 9 - Bent OSC-B5	6
	Detail 10 - Caged Ladder	77
	Detail 11 - Caged Ladder	77
	Detail 12 - Bent OSC-B6	363
	Detail 13 - Gravity Take up Tower Bent OSC-B7	131
	Detail 13 - Gravity Take up Tower Platform	110
	Containers	155
BMH Conveyors	Detail 1 Head Platform for Fines Collection Conveyor	182

Module Package	Description	Total Volume (m3)
(Fines Conveyor)	Detail 2 Head Platform Stairs and legs for Fines Collection Conveyor	77
	Fines collection conveyor stick built section and Head Chute	0
BMH Conveyors (Lump Conveyor)	Detail 1 - Tubular Gallery Section (Type 1)	405
	Detail 1 - Tubular Gallery Section (Type 2)	405
	Detail 2 - Tubular Gallery Section (Type 3)	366
	Detail 3 - Bent LC-B3	3
	Detail 4 - Bent LC-B2	10
	Detail 5 - Bent LC-B1	17
	Detail 6 - Platform	237
	Detail 6 - Platform Columns	36
	Detail 8 - Platform Stairs	33
	40' Container	155
	Detail 7 - Chute - 2336-CV-001 Head Lump conveyor	19
	Detail 7 - Chute - 2336-CV-001 Head Lump conveyor	7
	Detail 7 - Chute - 2336-CV-001 Head Lump conveyor	6
	Detail 7 - Chute - 2336-CV-001 Head Lump conveyor	1
BMH Conveyors (Stockpile #2 Conveyor)	Detail 1 - Truss Sections T1	508
	Detail 1 - Truss Sections T2	1,016
	Detail 1 - Truss Sections T3	508
	Drive Station	9,023
	Chute - 4211-CV-001 Head Yard Stockpile #2 conveyor	67
	Chute - 4211-CV-001 Head Yard Stockpile #2 conveyor	183
	Chute - 4211-CV-001 Head Yard Stockpile #2 conveyor	23
	Chute - 4211-CV-001 Head Yard Stockpile #2 conveyor bypass chute	23
	Stockpile Conveyor Chute Platform - shipped in container	0
	Detail 11 - Tail Section	0
	Conveyor table parts in 40 ft containers or pallets	1,084
	Detail 2 Bent STYC-B1	6
	Detail 2 Bent STYC-B2	3
	Detail 2 Bent STYC-B3	1
	Detail 2 Bent STYC-B4	0
	Detail 10 Loading Area Holding assembly	0
BMH Conveyors (Shiploader Feed Conveyor)	Containers	387
	Tail End Assembly and Conveyor Loading module	0
	Conveyr Stick Built parts for conveyor tables / modules	0
	Conveyor table modules	0
	Drive Station	3,844
	Detail X Bent SFC-B1	7
	Detail X Bent SFC-B2	24
	Detail X Bent SFC-B3	22
	Detail X Bent SFC-B4	39
	Detail X Bent SFC-B5	78
	Detail X Bent SFC-B6	139
	Detail X Bent SFC-B7	250
	Detail X Bent SFC-B8	612
	Detail X Truss T1-1	529

Module Package	Description	Total Volume (m3)
	Detail X Truss T1-2	529
	Detail X Truss T1-3	529
	Detail X Truss T1-4	529
	Detail X Truss T1-5	529
	Detail X Truss T1-6	529
	Detail X Truss T2	534
	Detail X Truss T3	487
	Head Bridge support	163
	Head Bridge support column	125
	Head Bridge support column	125
	Head Truss 1st section	1,201
	Head Truss Final section	845
	Head Platform	96
	Head Chute Removable Portion Section 1	14
	Head Chute Removable Portion Section 2	22
	Head Chute Stationary portion	15
Subtotal BMH Conveyors		49,868
Rail Materials	Pandrol Victor Tie Plates (preplated on ties)	764
	Screw Spikes Bags (30/bag)	1,447
	E-Clip Fastener Bags (25kg - 40 bags/pallet)	126
	11" Tie Plates Pallet (300/pallet)	2
	Rail Ties Bundle of 30 ties	11,213
	weld kits (25/ pallet)	171
	Keg track spikes (48/pallet)	3
	joint bar (100/pallet) 136#	3
	Keg bolts & washers (48/pallet)	3
	turnout rail 136# AHH RE	17
	joint bar 115#	10
	HW turnout package ties	150
	TO frog	8
	Sliding Derail	1
	Bumping Post	12
	136# RE RAIL guardrail	3
	Crossing Panel	19
	Timber Screws (1 Pallet)	142
	Rails 25 per bundle	4,059
	115# RE Rail	17
Subtotal Rail		18,172

Additional supplies to support construction and operations through 2019 and 2020 will arrive on the 2019 sea lift include:

- Delivery of ammonium nitrate (AN), up to 12,142 m³ (9,714 tonnes) to be stored on-site in 2019
- Delivery of pre-packaged explosives, up to 176,000 kg to be stored on-site in 2019
- Delivery of maintenance parts.
- Delivery of consumables (lubricants, grease, detergents, boosters, EZ Dets, dry goods, food, household supplies, etc.).

SECTION 9.0 - UPDATES TO ITEMS CONTAINED IN THE SCHEDULES OF THE LEASE

9.1 UPDATES TO THE EMERGENCY RESPONSE PLAN

In accordance with Clause 5.1 item H of the existing Commercial Lease Q13C031, the applicable Emergency Response Plan BAF-PH1-830-P16-0007 and Spill Contingency Plan BAF-PH1-830-P16-0036 have been provided in Appendices of this Work Plan. Note that these documents were updated in September 2018 in support of the approved production increase to 6 Mtpa. Please refer to Section 11 for location and details.

9.2 UPDATES TO ENVIRONMENTAL MANAGEMENT AND MONITORING PLANS

All updated Environmental Management and Monitoring Plans were submitted in March 2018 with the Annual Reports, with the exception of the Milne Port Oil Pollution Emergency Plan (OPEP), Spill Contingency Plan, and Emergency Response Plan which were updated in September 2018 in support of the approved 6Mtpa production increase. It is noted that Baffinland and QIA have been working to update the Roads Management Plan for 2018, as well as implement a Tote Road Quarry and Borrow Source Management Plan, however these revised and new documents remain in draft at the time of this Work Plan submission. An extensive list of the current plans for the project is presented in Table 9-1 below.

Table 9-1: Environmental Monitoring and Management Plans

Document Number	Plan Name	Version
BAF-PH1-830-P16-0002	Air Quality and Noise Abatement Management Plan	March 2016
BAF-PH1-830-P16-0006	Cultural Heritage Resource Protection Plan	March 2016
SD-STD-002	Hazard Identification and Risk Assessment Procedure	December 2010
N/A	EHS Framework Standard	December 2010
H337697-0000-01-126-0002	Health and Safety Management Plan	January 2012
SD-SEMP-003	Human Resources Management Plan	December 2010
BAF-PH1-830-P16-0027	Terrestrial Environmental Management and Monitoring Plan	March 2016
BAF-PH1-830-P16-0025	Stakeholder Engagement Plan	March 2016
BAF-PH1-830-P16-0023	Roads Management Plan	March 2016
BAF-PH1-830-P16-0024	Shipping and Marine Wildlife Management Plan	March 2016
N/A	Blasting Management Plan	April 2013
BAF-PH1-830-P16-0004	Borrow Pits and Quarry Management Plan	March 2014
N/A	Borrow Source Management Plan (See Note 1)	October 2013
BAF-PH1-830-P16-0030	Borrow Source Management Plan - Kilometer 2	October 2014
BAF-PH1-830-P16-0032	Borrow Source Management Plan - Kilometer 97	October 2014
BAF-PH1-830-P16-0035	Borrow Source Management Plan - Kilometer 104	March 2014
H349000-4200-07-245-0001	Quarry Management Plan D1Q1	October 2013
H349000-4200-07-245-0002	Quarry Management Plan D1Q2	October 2013

Document Number	Plan Name	Version
BAF-PH1-830-P16-0017	Quarry Management Plan Q1	July 2017
H349000-3000-07-245-0002	Quarry Management Plan Q11	October 2013
H349000-3000-07-245-0003	Quarry Management Plan Q19	October 2013
H349000-3000-07-245-0001	Quarry Management Plan Q7	October 2013
BAF-PH1-830-P16-0040	Quarry Management Plan QMR2	July 2017
BAF-PH1-840-P16-0002	Emergency Response Plan	September 2018
BAF-PH1-830-P16-0036	Spill Contingency Plan	September 2018
BAF-PH1-830-P16-0008	Environmental Protection Plan	August 2016
BAF-PH1-830-P16-0010	Fresh Water Supply, Sewage and Wastewater Management Plan	March 2018
BAF-PH1-830-P16-0011	Hazardous Materials and Hazardous Waste Management Plan	March 2017
BAF-PH1-830-P16-0012	Interim Closure and Reclamation Plan	October 2018
BAF-PH1-830-P16-0026	Surface Water and Aquatic Ecosystems Management Plan	March 2016
BAF-PH1-830-P16-0001	Surface Water Sampling Program - Quality Assurance and Quality Control Plan	March 2017
BAF-PH1-830-P16-0039	Aquatic Effects Monitoring Plan	October 2015
BAF-PH1-830-P16-0028	Waste Management Plan	September 2018
BAF-PH1-830-P16-0029	Phase 1 Waste Rock Management Plan	November 2017
N/A	Interim Waste Rock Management Plan	March 2018
BAF-PH1-830-P16-0031	Life of Mine Waste Rock Management Plan	April 2014
N/A	Explosives Management Plan (see Note 2)	August 2013
BAF-PH1-830-P16-0013	Milne Port Oil Pollution Emergency Plan (OPEP)	September 2018
BAF-PH1-830-P16-0041	Polar Bear Safety Plan	March 2016
BAF-PH1-830-P16-0037	Exploration Spill Contingency Plan	June 2014
BAF-PH1-830-P16-0038	Exploration Closure and Reclamation Plan	July 2014
BAF-PH1-830-P16-0042	Spill at Sea Response Plan	August 2015

NOTES:

¹ Discontinued and incorporated into the March 2014 Borrow Pits and Quarry Management Plan.

² The Explosives Management Plan is a contractor document.

9.3 PROPOSED UPDATES TO THE INTERIM CLOSURE AND RECLAMATION PLAN

The Interim Closure and Reclamation Plan (ICRP) was updated in 2018 (Revision 5, 30 October 2018) and approved by QIA, and has been provided as an appendix to this Work Plan. Significant updates to the ICRP have been completed relative to Revision 4 (2016), notably the updates to the Closure Objectives and Criteria, and Closure and Post Closure Monitoring. This update to the ICRP reflects engagement with QIA since 2016 on these and other key topics, however it is recognized that uncertainty remains with respect to topics such as closure criteria and final closure conditions (aesthetics). Future iterations of the ICRP will aim to reduce this uncertainty, both as a result of reclamation research and community engagement. The

ICRP is intended to be an iterative document that will evolve over the life of the mine, and it is recognized that QIA as the land owner will provide valuable input and approval of future versions of the ICRP.

The provision of additional securities for the 2019 Work Plan is allocated as summarized in Table 9-2 below. Further detail can be found in Appendix B.

Table 9-2: Mary River Project Total Closure and Reclamation Security Summary¹ – 2019 Work Plan

	A	B	C	D	E	F	G	H
	Authorization	Liability	Global Estimate from 2018 Addendum Estimate (\$)	2018 Unit Rate Adjustment (\$)	2019 Estimate, Including 2018 Reconciliation (\$)	Total 'Global' Estimated Security for 2018 (\$)	Total Posted as of July 2018 (\$)	Marginal Adjustment to be Posted (\$)
						C + D + E		F - G
1	Type A 2AM-MRY1325	IOL ²	68,835,000	-7,754,000	34,399,000	95,480,000	73,829,771	21,650,229
2		Crown	1,196,000	-147,000	730,000	1,779,000	1,298,555	480,445
3		Water	1,714,000	-338,000	18,313,000	19,689,000	-	-
4		Land	68,316,878	-7,563,000	16,815,000	77,568,878	-	-
5	Subtotal Type A		70,031,000	-7,901,000	35,128,000	97,258,000	75,128,326	22,130,674
6	Type B Exploration ² BE-MRY1421 ³	IOL	165,000	-	-	165,000	-	165,000
7		Crown	1,082,000	-	-	1,082,000	1,250,000	-168,000
8		Water	18,000	-	-	18,000	-	-
9		Land	1,229,000	-	-	1,229,000	-	-
10	Subtotal Type B Exploration		1,247,000	-	-	1,247,000	1,250,000	-3,000
11	DFO Security Associated with Ore Dock	IOL ²	-	-	-	-	-	-
12		Crown	563,000	-	-	563,000	563,000	-
13		Water	563,000	-	-	563,000	563,000	-
14		Land	-	-	-	-	-	-
15	Subtotal DFO		563,000	-	-	563,000	563,000	-
16	AANDC Land Lease 47H/16-1-2 ⁴	IOL ²	-	-	-	-	-	-
17		Crown	4,975,000	-	-	4,975,000	4,975,000	-
18		Water	-	-	-	-	-	-
19		Land	4,975,000	-	-	4,975,000	4,975,000	-
20	Subtotal AANDC Land Lease		4,975,000	-	-	4,975,000	4,975,000	-
21	GRAND TOTAL		76,816,000			104,043,000	81,916,326	

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)

SECTION 10.0 - REQUESTED AMENDMENTS TO THE PROVISIONS OF THE LEASE

Tote Road Adjustment Notices (TRANS) and Options Exercise Notices (OENs) will be submitted as per Table 3-1, throughout 2019. It is noted that per the Commercial Lease, review of OENs and TRANS outside of the Work Plan will require an associated fee for review.

Included as an appendix of this Work Plan is an OEN for the Tote Road. The intent of this OEN is to reconcile historic adjustments to the Tote Road completed between 2013 and 2016 with the Commercial Lease boundaries, and to incorporate the proposed quarries and laydowns included in the 2019 Work Plan (Item No. 1 and 2).

SECTION 11.0 - ADDITIONAL REPORTS, INFORMATION OR DATA

Additional reports, information or data required to support the 2019 Work Plan are summarized in Table 11-1 below.

Table 11-1: Additional Reports, Information or Data

Title	Organization	Date	Annex
<i>Identify the title of the additional report, information or data to be included with the Annual Work Plan.</i>	<i>Disclose the name of the organization that produced the additional report, information or data.</i>	<i>Include the publish date or reference year to the additional report, information or data.</i>	<i>Identify the Annex letter/number corresponding to the additional report, information or data.</i>
Work Plan Figures - Milne Port - Mine Site - Tote Road	Knight Piésold on behalf of Baffinland	1 November 2018	Appendix A
2019 Marginal Closure and Reclamation Financial Security Estimate	Baffinland	-	Appendix B
Interim Closure and Reclamation Plan	Baffinland	BAF-PH1-830-P16-0012	Appendix C
Emergency Response Plan	Baffinland	BAF-PH1-830-P16-0007	Appendix D
Spill Contingency Plan	Baffinland	BAF-PH1-830-P16-0036	Appendix E
OEN – Tote Road	Baffinland	1 November 2018	Appendix F

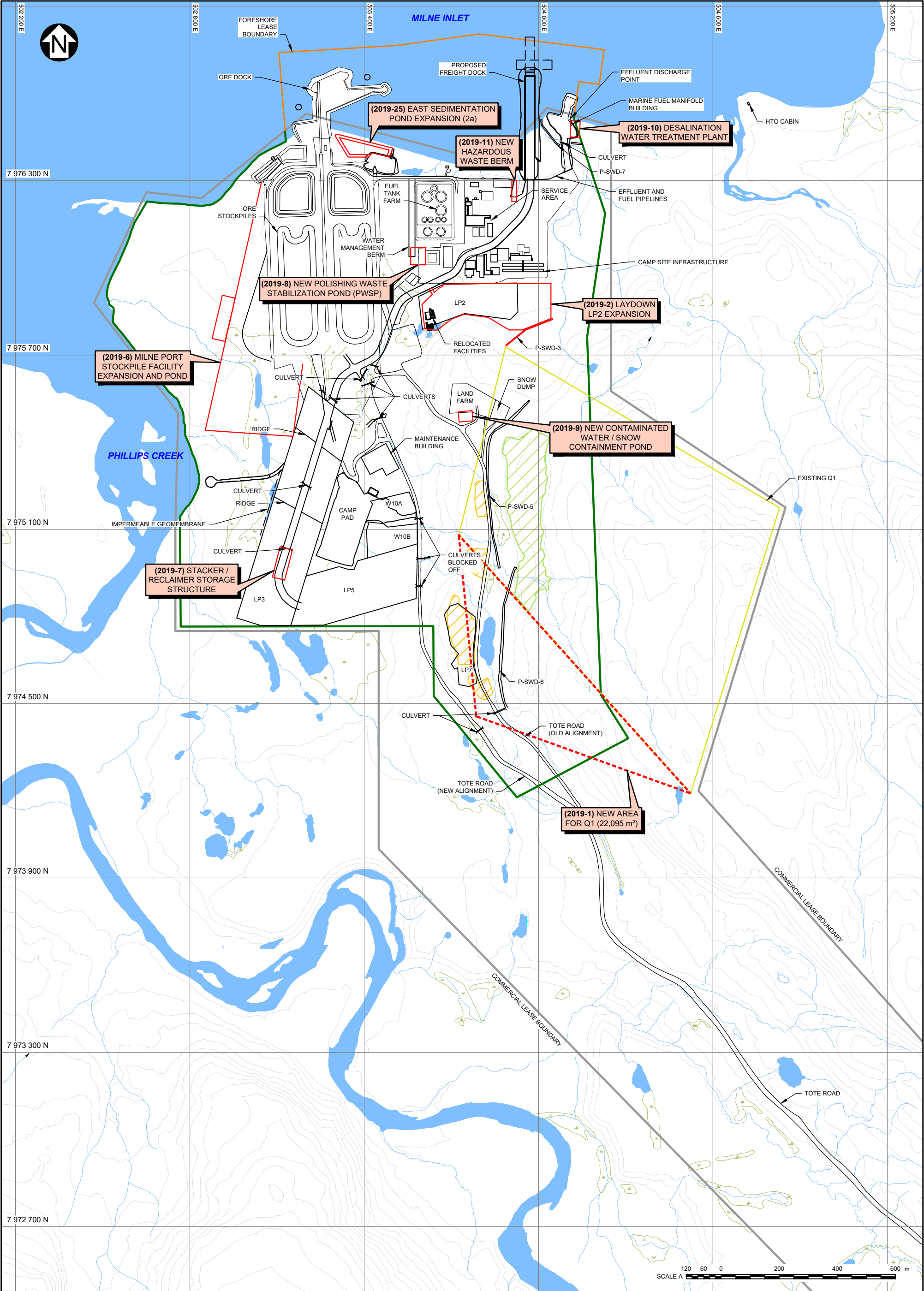
Appendix A:

2019 Work Plan Site Layouts

2019 Work Plan – Milne Port Site Layout

2019 Work Plan – Mine Site Layout

2019 Work Plan – Tote Road



LEGEND:

WATER

ROAD

RIVER/STREAM/DRAINAGE

BORROW AREAS

QUARRY AREA

QIA SURFACE COMMERCIAL LEASE IMPACT BOUNDARY

POTENTIAL DEVELOPMENT AREA BOUNDARY

FORESHORE LEASE BOUNDARY

NOTES:

1. COORDINATE GRID IS UTM NAD83 ZONE 17N.

2. TOPOGRAPHY PROVIDED BY EAGLE MAPPING (2005).

3. CONTOUR INTERVAL IS 10 METRES.

MARY RIVER PROJECT

MILNE PORT SITE PLAN

2019 WORK PLAN

Knight Piésold CONSULTING

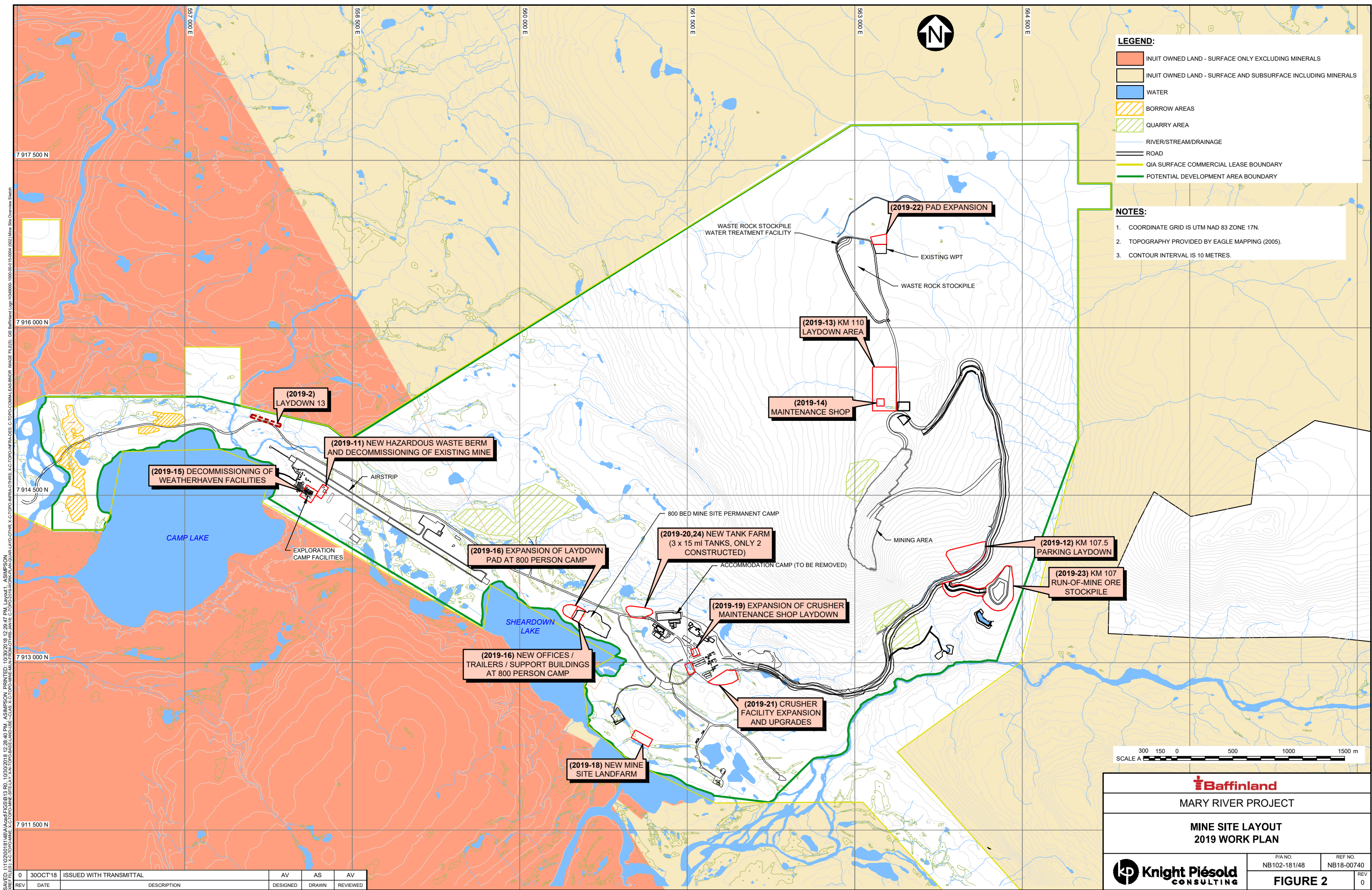
P/A NO.
NB102-181/48

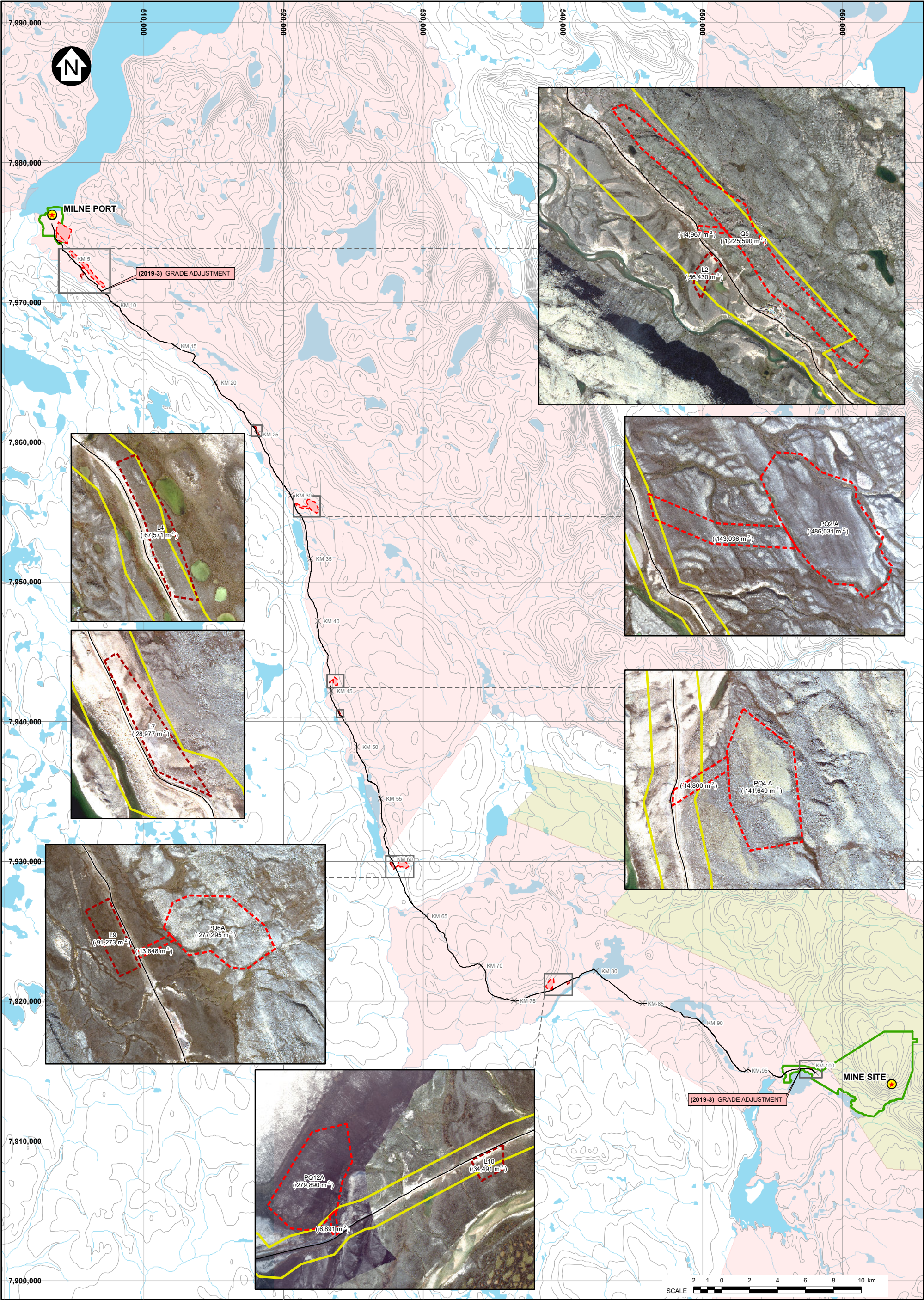
REF NO.
NB18-00740

FIGURE 1

REV
0

0	30OCT'18	ISSUED WITH TRANSMITTAL	AV	AS	AV
REV	DATE	DESCRIPTION	DESIGNED	DRAWN	REVIEWED





LEGEND:

MILNE PORT / MINE SITE

MILNE INLET TOTE ROAD

LAYDOWN AREA

QUARRY

CURRENT COMMERCIAL LEASE BOUNDARY

IOL SURFACE AND SUBSURFACE

IOL SURFACE ONLY

REFERENCE SHEET EXTENT

POTENTIAL DEVELOPMENT AREA

WATER

- NOTES:**
- COORDINATE GRID IS IN METRES.
COORDINATE SYSTEM: NAD 1983 UTM ZONE 17N.
 - BASE MAP: HER MAJESTY THE QUEEN IN RIGHTS OF CANADA, DEPARTMENT OF NATURAL RESOURCES, (2004).
 - COMMERCIAL LEASE BOUNDARY COORDINATES OBTAINED FROM BAFFINLAND IRON MINES CORPORATION, JANUARY, 2018. BOUNDARY EXTENTS HAVE BEEN DIGITIZED BASED ON THESE POINT LOCATIONS ARE APPROXIMATE ONLY.



MARY RIVER PROJECT

TOTE ROAD
2019 WORK PLAN



P/A NO.
NB102-181/48

REF NO.
NB18-00740

FIGURE 3

REV
1

1	31 OCT'18	ISSUED WITH TRANSMITTAL	AV	AS	AV
REV	DATE	DESCRIPTION	DESIGNED	DRAWN	REVIEWED

SAVED: I:\1102\0018148\A\GIS\Figs\B13 R1.mxd, Nov 01, 2018 8:28 AM, asimpson