

January 27, 2021

Assol Kubeisinova
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU
X0B 1J0

Re: Application for the Renewal of Baffinland's Type 'B' Water Licence No. 2BE-MRY1421

Baffinland Iron Mines Corporation (Baffinland) has enclosed an application for renewal of its current Type 'B' Water Licence 2BE-MRY1421 (the Licence) to permit ongoing exploration activities on its mineral leases in the Qikiqtani Region of Nunavut. All activities listed under the renewal application have been permitted in the past and are consistent with current exploration and geotechnical drilling activities.

Baffinland wishes to provide the following materials in support of the Type 'B' Water Licence renewal application:

- Nunavut Water Board completed Application for Water Licence Renewal including:
 - Executive Summary in English, Inuktitut and French;
 - General Water Licence Application Form;
 - Project Description;
 - Nunavut Planning Commission (NPC) Conformity Determination Letter;
 - Corporation Profile Report outlining Baffinland's current Officers;
 - Compliance Review for Type 'B' Water Licence 2BE-MRY1421;
 - Confirmation of Reclamation Security;
- Updated version of Baffinland's Exploration Spill Contingency Plan; and
- Updated version of Baffinland's Exploration Closure and Reclamation Plan.

Conformity Determination from Nunavut Planning Commission

The activities associated with this proposal were reviewed by the Nunavut Planning Commission (NPC) and a conformity determination was issued on January 6, 2011 and on February 14, 2014 which still applies as indicated in a letter issued from NPC on January 13, 2021¹. As directed by NPC, the project renewal is exempt from screening by NIRB under Section 12.4.3 of the Nunavut Agreement as the NPC is

¹ Nunavut Planning Commission, Letter dated January 13, 2021. Re: NPC File #149434 Application for Renewal of NWB Water Licence 2BE-MRY1421.

of the understanding that the renewal was part of the original proposal approved under Project Certificate No. 005 (as amended), and is not considered a significant modification to the Project.

Should you have any questions regarding the enclosed documents please do not hesitate to contact myself.

Regards,

A handwritten signature in black ink, appearing to read "Chris Murray", with a stylized flourish at the end.

Christopher Murray
Environment and Regulatory Compliance Manager

Cc: Richard Dwyer, Karén Kharatyan (NWB)
Chris Spencer, Jared Ottenhof (QIA)
Bridget Campbell, Godwin Okonkwo (CIRNAC)
Megan Lord-Hoyle, Lou Kamermans, Amanda McKenzie, Thomas Iannelli, Massoud Robatian (Baffinland)

Attachments

Attachment 1: Type 'B' Water Licence Renewal Application Project Description

Attachment 2: NWB Completed Application for Water Licence Renewal

Appendix A: Executive Summary in English, Inuktitut and French

Appendix B: Nunavut Planning Commission Conformity Determination

Appendix C: Corporation Profile Report

Appendix D: Compliance Review for Type 'B' Water Licence 2BE-MRY1421

Appendix E: Confirmation of Reclamation Security

Attachment 3: Exploration Spill Contingency Plan (BAF-PH1-830-P16-0037)

Attachment 4: Exploration Closure and Reclamation Plan (BAF-PH1-830-P16-0038)

ATTACHMENT 1

TYPE 'B' WATER LICENCE
RENEWAL APPLICATION PROJECT
DESCRIPTION



Type B Water Licence Renewal Application Project Description

BAFFINLAND IRON MINES CORPORATION

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Figure 1 Current Land Tenure

1 INTRODUCTION

1.1 PURPOSE AND SCOPE

This application submitted on behalf of Baffinland Iron Mines Corporation (Baffinland) is for the renewal of the Type “B” Water Licence 2BE-MRY1421 (the “Licence”) for exploration and geotechnical drilling activities under the Mary River Exploration Project. All of the activities listed under this renewal application have been permitted in the past and are consistent with exploration and geotechnical drilling activities throughout Nunavut.

1.2 PROJECT NAME

Baffinland is requesting that the project continue to be referred to as the “Mary River Exploration Project” within the Licence.

1.3 EXTENT OF THE PROJECT

The application encompasses activities on all of Baffinland’s mineral leases in the Qikiqtani Region of Nunavut as depicted in the attached Figure 1. The extent of activities has not changed from the extent presented in the current Licence. The Mary River Exploration Project will rely in part on the infrastructure developed for the Mary River Project and permitted under Project Certificate 005 (as amended) and Type A Water Licence 2AM-MRY1325 (as amended), however all activities undertaken as part of the Mary River Exploration Project will be for exploration and geotechnical investigation purposes, and not production activities.

2 SUMMARY OF PLANNED ACTIVITIES

Baffinland plans to continue to execute the following activities within the Mary River Project area and active mineral leases, as depicted in the attached Figure 1 and described in Section 3.0. Generally, the project activities include:

- Mineral exploration drilling;
- Surface mineral exploration activities including mapping, sampling, geophysical surveys, geochemical surveys, mechanical trenching and stripping of surficial overburden;
- Geotechnical drilling programs;
- Activities in support of scientific and engineering studies related to the advancement of future expansion of the Mary River Project, including geotechnical investigations;
- Construction and use of airstrips and icestrips;
- Construction of winter roads, stream/river crossings;
- Sealift operation and establishment and use of laydown area;
- Potential for establishing future satellite camps to support exploration and drilling activities on Baffinland's mineral claims; and,
- Progressive reclamation programs associated with exploration programs.

All of these activities were considered under the current Licence, and were previously assessed by the Nunavut Planning Commission (NPC) for conformity with the North Baffin Regional Land Use Plan, and the Nunavut Impact Review Board (NIRB).

3 DESCRIPTION OF THE MARY RIVER EXPLORATION PROJECT

3.1 MINERAL EXPLORATION DRILLING

The main focus of this Licence is for on-going mineral exploration activities on all of Baffinland's mining leases and mineral claims in the North Baffin Region. Baffinland has already identified a number of promising deposits which will necessitate further exploration drilling to quantify resources. The current drilling targets focus on mining leases 2483, 2484 and 2485 (Deposit No. 4, Deposit No. 1 and Deposit Nos. 2 and 3) as well as contiguous mining leases L-5816 to L-5829 (Deposit Nos. 4 and 5), Exploration agreements PI17-001 Subarea A and PI17-001 Subarea B and vicinity as well as other mineral targets. As more information is generated, focus may turn to other prospects in the area. Surface exploration activities will include drilling as well as trenching.

Access to specific areas may require the construction of pioneer trails or roads as exploration drilling intensifies at a particular deposit and or prospect. The NWB will be informed of the specific locations of such developments as they are identified.

3.2 GEOTECHNICAL DRILLING PROGRAMS

Geotechnical investigations are an integral part of Project development. Baffinland will continue its geotechnical drilling program in support of future rail infrastructure for the Mary River Project. In addition, should the need arise for the development of new project infrastructure or water crossings, geotechnical investigations may be necessary in other Project areas. The NWB will be informed of the specific locations of such developments as part of the Annual Work Plan, the Annual Report, or in accordance with the notification procedure outlined in the current Licence.

3.3 SCIENTIFIC AND ENGINEERING STUDIES

Scientific and engineering studies are also an integral part of Project development. These studies are intended to support engineering design, environmental studies, and, support environmental management. The NWB will be informed of the extent of these studies as part of the Annual Work Plan, and/or the Annual Report.

3.4 SATELLITE CAMPS

In order to support exploration and drilling activities on Baffinland's extensive mineral claims in the North Baffin Region, Baffinland foresees the potential need to establish satellite exploration camps. Under this renewed Licence, Baffinland proposes that a condition be included that would enable Baffinland to proceed with the development of satellite camps.

The table below identifies locations of potential satellite camps related to ongoing mineral exploration activities on Baffinland's mineral claims (refer to Figure 1). It is unlikely that all of these satellite camps will be operated simultaneously, however it is noted that total licence-wide operations would limit domestic use of water to a proposed total of 49 m³ per day.

Table 1 – Locations of Potential Satellite Camps

Potential Exploration Camp	Map Sheet Number	Mineral Exploration Target	Objective
A	37G/11	Long Lake Prospect	Access and service to mineral claims/ leases within Map sheets 37G-11 and 37G-12
B	37G/6	Turner River Prospect	Access and service to mineral claims/ leases within Map sheets 37G-6, 37G-7 and 37G-11
C	37F/15	Cockburn River Prospect	Access and service to mineral claims/ leases within Map sheets 37G-1, 37G-2, 37F- 16 and 37F-15
D	37F/16	Rowley River Prospect	Access and service to mineral claims/ leases within Map sheets 37F-16, 37F-9 and 37E-13
E	37E/11-12	Magnetite Hill Prospect	Access and service to mineral claims within Map sheets 37E-5, 37E-6, 37E-11, 37E-12, 37E-14 and 37E-15
F	37F/1 and 37C/15-10	Isortoq Prospect	Access and service to mineral claims/ leases within Map sheets 37F-1, 37C10 and 37C-15
G	37G/6	Glacier Lake Prospect	Access and service to mineral claims/ leases within Map sheets 37G-6

Baffinland notes that prior to establishing any satellite camp in the above noted locations, the applicable land use licences/permits/leases will need to be approved by either QIA (IOL) or CIRNAC (Crown land). Consistent with the terms of the current licence, Baffinland proposes that prior to establishing any satellite camp in the above noted locations, that it will provide the Board with thirty (30) days or more advance notice and that such notice will include specific information such as the associated power supply and fuel depot, method of sewage disposal, and if required sewage treatment, incineration equipment, and waste management facilities. Camp size limits will be maintained at 49 persons or less per camp. Water sources would be proximate to each camp location and would be identified as part of Baffinland's notice, and in any event would comply with the protocols identified at Section 4.0 below. In the unlikely event that Baffinland wishes to establish satellite camps in any other locations, it would provide advance notice to the Board of 60 days or more.

With respect to security matters relating to satellite camps, all notices to the board would include a proposed reclamation security allocation pertaining to the establishment of the satellite camp for the board's consideration. It is Baffinland's expectation that reclamation security will be addressed with the relevant land owner during the land use permitting stage, with confirmation provided to the NWB as part of the notification of construction.

3.5 FUEL CACHE, STORAGE AND SUPPLY

Fuel will be supplied from the existing bulk fuel storage facilities authorized under Type A Licence 2AM-MRY1325 or by barrelled fuel delivered by sealift. Small storage tanks and fuel cache (fuel barrels) are already installed/stored and authorized at Steensby and Mid-Rail pioneer camps.

In the future, double walled storage tanks up to 4,000 L and barrelled fuel would be required at the future exploration camps and exploration site areas. It is anticipated that a total of up to 20 m³ of fuel could be delivered and stored at any one time at existing and new satellite exploration camps. Barrel fuel caches and tanks will incorporate field constructed secondary containment measures to minimize the potential effect of spills and leakage, consistent with the terms of the current Licence.

3.6 ABANDONMENT AND RECLAMATION

The renewed Licence authorizes the reclamation activities described in the *Exploration Closure and Reclamation Plan* (BAF-PH1-830-P16-0038). As the scope and scale of the Mary River Exploration Program remain unchanged, there are no revisions to the current plan or adjustments to reclamation security proposed.

Baffinland intends to carry out progressive reclamation of components of the project no longer required for the exploration activities. The sites will be restored in accordance with the goals and objectives outlined in the *Exploration Closure and Reclamation Plan* (BAF-PH1-830-P16-0038).

Baffinland will remove from the site, all infrastructure and site materials, fuel caches, drums, barrels, buildings and contents, water pumps and lines, material and equipment prior to the expiry of this Licence.

4 WATER USE AND WATER SUPPLY

As per the aforementioned description, Baffinland wishes to be authorized to undertake the following uses of water under this renewed licence:

- Drill water use to support ongoing exploration and geotechnical drilling for the life of the Project (specific sources identified prior to drilling); and
- Domestic water supply for future satellite exploration camps (see more details at Section 3.4 above).

As the primary focus of this renewed licence is for exploration activities, the specific sources of water cannot be identified at this time. Appropriate sources will depend on the locations of the targets. Baffinland will report precise locations of water supply and quantities drawn in its annual report.

Consistent with the terms of the current Licence, streams will not be used as a water source unless authorized and approved by the Board in writing. Baffinland will, at least thirty (30) days prior to the commencement of use of water, submit the following to the Board for approval, in cases where Baffinland requires water in sufficient volume that the source water body may potentially be drawn down:

- volume required,
- hydrological overview of the water body,
- details of impacts, and ,
- proposed mitigation and monitoring measures.

Baffinland will equip all water intake hoses with a screen of an appropriate mesh size to ensure that fish are not entrained and will withdraw water at a rate such that fish do not become impinged on the screen. Baffinland will not remove any material from below the ordinary high water mark of any water body unless authorized. Baffinland will abide by the DFO Protocol for Winter Water Withdrawal in the NWT (2005). Baffinland activities will not cause erosion to the banks of any body of water and shall provide necessary controls to prevent such erosion.

5 WASTE MANAGEMENT

5.1 TYPES OF WASTES

For future satellite camps and drilling activities, the types of wastes generated will be similar in nature and volume to the types of wastes currently generated by the Steensby pioneer camp. Waste consists mainly of camp wastes and waste from drilling activities.

Drilling waste material consist mainly of rock chips, mud, spent brine. These wastes will be disposed in a properly constructed sump or an appropriate natural depression located at a distance of at least thirty-one (31) metres from the ordinary high water mark of any adjacent water body, where direct flow into a water body is not possible and no additional impacts are created. Baffinland's commitments related to the undertaking of drilling activities are outlined in Section 8 of this document.

5.2 WASTE MANAGEMENT

All wastes generated by activities permitted under this Licence will be managed in accordance to the terms and conditions of the 2AM-MRY1325 Licence and associated *Waste Management Plan* (BAF-PH1-830-P16-0028) approved by the NWB.

For activities regulated under this Licence, Baffinland will locate areas designated for waste disposal at a minimum distance of thirty-one (31) metres from the ordinary high water mark of any water body such that the quality, quantity or flow of water is not impaired, unless otherwise approved by the Board in writing.

Baffinland will dispose of all acceptable food waste, paper waste in an incinerator. Untreated wood products and cardboard can be open burned. Prior to open burning at exploration camps, Baffinland will submit to the NWB for its approval, an open burn procedure that will be developed in accordance with appropriate Government of Nunavut guidelines.

Baffinland will not open burn plastics, wood treated with preservatives, electric wire, Styrofoam, asbestos or painted wood so as to prevent the deposition of waste materials of incomplete combustion and/or leachate from contaminated ash residual, from impacting any surrounding waters, unless otherwise approved by the Board in writing.

Baffinland will backhaul and dispose of all solid wastes generated by the Mary River Exploration Project at the Mary River landfill site approved under Type A Licence 2AM-MRY1325 or to other accredited disposal facilities via sealift.

Baffinland will backhaul and dispose of all hazardous wastes, waste oil and non-combustible waste generated through the course of the operation, at a licensed waste disposal site.

Baffinland will maintain records of all waste backhauled and records of confirmation of proper disposal of backhauled waste. These records shall be made available to an Inspector upon request by the Board in writing.

For each camp, Baffinland will contain grey water in a sump located at a distance of at least thirty-one (31) metres above the ordinary high water mark of any water body, at a site where direct flow into a water body is not possible and no additional impacts are created, unless otherwise approved by the Board in writing.

Baffinland will contain all other toilet wastes in latrine pits or use incineration, chemical, portable or composting toilets. Latrine pits shall be located at a distance of at least thirty-one (31) metres above the ordinary high water mark of any water body, treated with lime and covered with native material to achieve the pre-existing natural contours of the land prior to abandonment. In the event a sewage treatment plant is required at any of its existing or satellite exploration camps, the NWB will be informed of such development.

All Sewage Effluent discharged from the pioneer camps or future satellite camps Waste Water Treatment Facility will not exceed the Effluent quality limits established in Type A Licence 2AM-MRY1325.

All grey water generated at the pioneer camps or future satellite camps, not directed to the a sewage treatment facility, will be channeled to a sump located at a distance of at least thirty one (31) metres above the ordinary high water mark of any water body, at a site where direct flow into a water body is not possible and no additional impacts are created, unless otherwise approved by the Board.

6 CAMP OPERATION

Future camps will be located such as to minimize impacts on surface drainage. Baffinland will not erect temporary camps or store material on the surface of frozen streams or lakes including the immediate banks except what is for immediate use.

All camp activities will be conducted in such a way as to minimize impacts on surface drainage. Baffinland will immediately undertake any corrective measures in the event of any impacts on surface drainage.

7 EARTHWORKS, STREAMS AND WATER CROSSINGS

7.1 GENERAL EARTHWORK, ROADS AND LAYDOWN AREA

Baffinland will not utilize any equipment or vehicles in the course of this undertaking unless the ground surface is in a state capable of fully supporting the equipment or vehicles and will minimize any rutting or gouging. Overland travel of equipment or vehicles shall cease if rutting occurs.

Equipment storage holding areas should be located on gravel, sand or other durable land, a distance of at least thirty-one (31) metres above the ordinary high water mark of any water body in order to minimize impacts on surface drainage and water quality.

Baffinland will designate areas for the deposition of excavated and stockpiled materials that is at least thirty- one (31) metres above the ordinary high water mark of any water body.

Baffinland will avoid the deposition of debris or sediment into or onto any water body. These materials will be disposed of at a distance of at least thirty-one (31) metres from the ordinary high water mark in such a manner that they do not enter the water. Baffinland will ensure that any chemicals or waste associated with undertakings do not enter any water body

7.2 WATER CROSSINGS

For construction of water crossings, Baffinland will not cut any stream bank or remove any material from below the ordinary high water mark of any water body unless authorized by the Board. Stream crossings will be located to minimize approach grades. Approaches will be stabilized during construction and upon completion of the project, to control runoff, erosion and subsequent siltation to any water body.

Baffinland will implement sediment and erosion control measures prior to and maintain such measures during construction and operation to prevent entry of sediment into water. To the extent practicable, Baffinland will limit any in-stream activity to low water periods. In-stream activity will be avoided during fish migration.

Machinery will not travel up the stream bed and fording of any water body will be kept to a minimum. Equipment used will be cleaned and free of oil and grease and maintained free of fluid leaks. Baffinland will ensure that pollutants from machinery fording the crossings do not enter water.

8 DRILLING AND TRENCHING OPERATIONS

Baffinland will not conduct any land-based drilling within thirty-one (31) metres of the ordinary high water mark of any water body, unless otherwise approved by the Board in writing.

Baffinland may, for the purpose of geotechnical or exploration investigations carry out drilling activities within thirty-one (31) metres of the high water mark of any water body or on ice, provided that such activities are consistent with the terms of this Licence and a request has been submitted and received by the NWB, ten(10) days in advance of drilling, that includes a thorough description of the proposed activities and the following:

- An appropriate scaled site map, complete with approximate GPS coordinates of planned drilling locations and the associated water bodies;
- Locations of waste deposition; and,
- Mitigation measures that are planned to be in place, prior to, during drilling and following if required to protect waters.

Baffinland will dispose of all drill waste, including water, chips, muds and salts (Calcium Chloride CaCl_2), from land-based drilling, in a properly constructed sump or an appropriate natural depression located at a distance of at least thirty one (31) metres from the ordinary high water mark of any adjacent water body, where direct flow into a water body is not possible and no additional impacts are created.

Drilling additives or mud shall not be used in connection with holes drilled through lake ice unless they are demonstrated to be non-toxic.

If artesian flow is encountered, drill holes shall be immediately sealed and permanently capped to prevent induced contamination of groundwater or salinization of surface waters. Baffinland will report all artesian flow occurrences within the Annual Report to NWB, including the location (GPS coordinates) and dates.

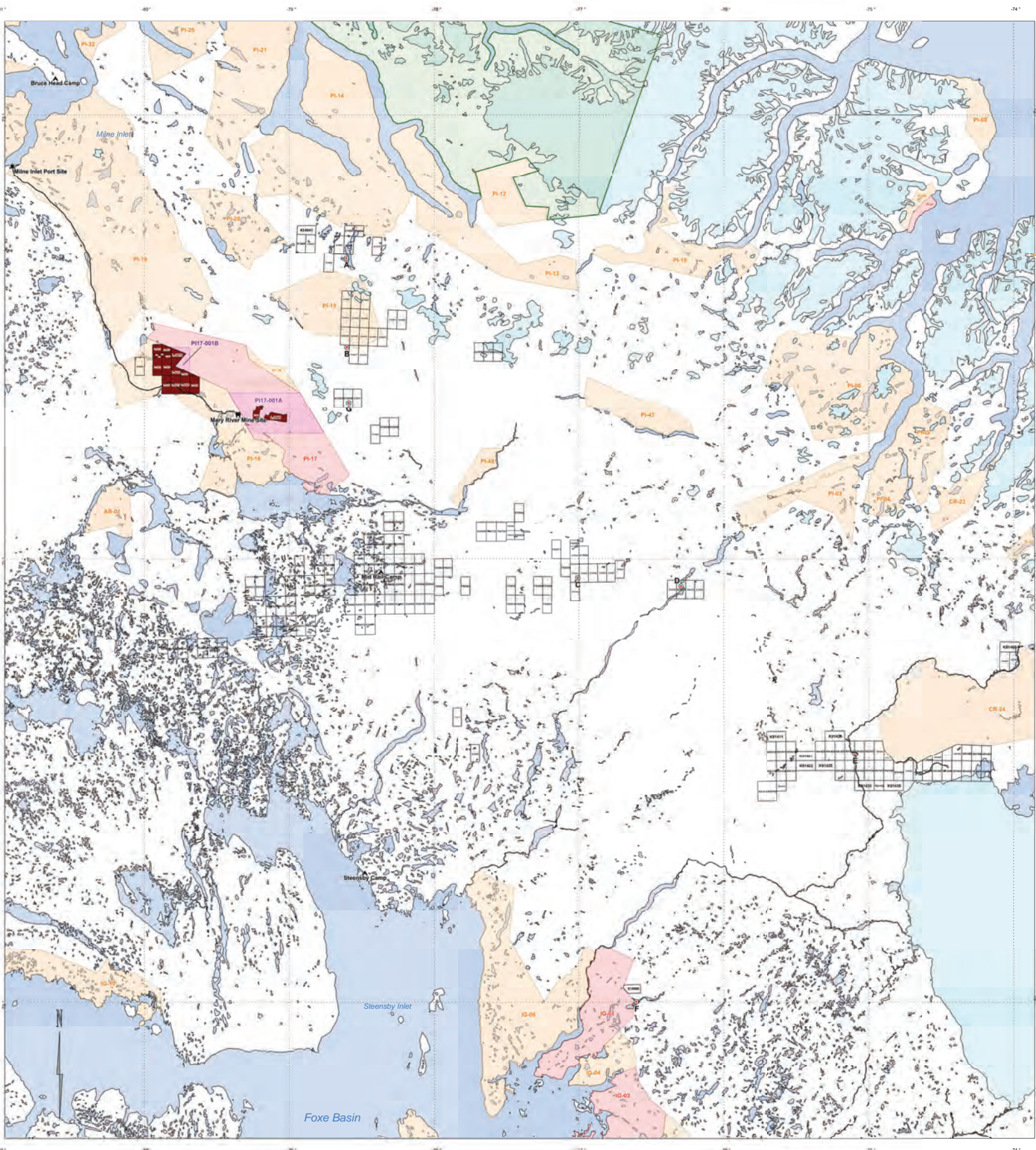
If the bottom of the permanently frozen ground, or permafrost, is broken through by the drill, the depth of the bottom of permafrost and location should be reported in the annual report to the Board for data management purposes.

For “on-ice” drilling where drill additives are being used, return water released must be non-toxic, and not result in an increase in total suspended solids in the immediate receiving waters above the Canadian Council of Ministers of the Environment, Guidelines for the Protection of Freshwater Aquatic Life (i.e. 10 mg/L for lakes with background levels under 100 mg/L or 10% for those above 100 mg/L).

Baffinland will submit to the NWB for approval in writing, at least sixty (60) days prior to the start of any trenching activities a stand-alone *Trenching Plan* that includes size and location of trenches, approximate dimensions and mass of extracted materials from trenches, proposed mitigation measures, plans for disposal of waste rock and overburden, projected volume and quality of water discharged from each trench, and the proposed monitoring program to be carried out on trench wastewater prior to discharge.

9 RECLAMATION SECURITY

Baffinland confirms that \$1,250,000 will remain under the renewed licence as reclamation security for relevant activities and/or facilities, as there are no changes to the scope and scale of the Mary River Exploration Program. To the extent that the establishment of any satellite camp has an impact on reclamation security, Baffinland would post the additional security with the relevant land owner required prior to proceeding with the activity.





Date: 2020-10-28

Author: Jon Hey, P. Geo

Office: Exploration

Drawing: 1

Scale: 1:446,300

Current Land Tenure

Projection: Longitude / Latitude (WGS 84)

LEGEND

BIM Infrastructure

- Tote Road
- Potential Camp (location not exact)

Baffinland Land Tenure

- Mineral Claim
- Mining Lease
- NTI-BIM Exploration Agreement

Inuit Owned Land

- Type 1 - Surface Rights Only
- Type 2 - Surface and Subsurface Rights Including Minerals

Federal Land

- National Park

Geographic Features

- Permanent Snow & Ice
- Waterbody