

Baffinland Iron Mines Corporation Mary River Project

2021 QIKIQTANI INUIT ASSOCATION AND NUNAVUT WATER BOARD ANNUAL REPORT FOR EXPLORATION AND GEOTECHNICAL ACTIVITIES

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TABLE 0: REPORT SUBMISSION SUMMARY

Year of Annual Report	2021
Annual Report Submission Date:	March 31, 2022
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2021 QIKIQTANI INUIT ASSOCATION (QIA) AND NUNAVUT WATER BOARD (NWB) ANNUAL REPORT FOR GEOTECHNICAL ACTIVITIES

EXECUTIVE SUMMARY

This report to the Qikiqtani Inuit Association (QIA) and the Nunavut Water Board (NWB) has been prepared to summarize the 2021 exploration and geotechnical activities conducted under Baffinland Iron Mines Corporation's (Baffinland) Type 'B' Water Licence 2BE-MRY2131 (Type 'B' Water Licence) and the Commercial Lease No. Q13C301 (Commercial Lease) between the QIA and Baffinland for the Mary River Project (the Project). A separate annual report has been prepared for the QIA and NWB to summarize the 2021 Project activities and monitoring conducted under Baffinland's Type 'A' Water Licence 2AM-MRY1325 - Amendment No. 1 (Type 'A' Water Licence) and addresses the remaining annual reporting requirements set forth in the Commercial Lease. Additionally, a separate report has been prepared for the QIA and NWB to summarize the 2021 exploration activities conducted for the Eqe Bay Exploration Program within the scope of Baffinland's Type 'B' Water Licence 2BE-EQE1926 and Land Use Licence QL2-1910.

In 2021, Baffinland submitted an application for the renewal of the Type 'B' Water Licence 2BE-MRY1421 for exploration and geotechnical drilling activities under the Mary River Exploration Project. A new Type 'B' Water Licence No: 2BE-MRY2131 was issued to Baffinland on April 13, 2021 by the Nunavut Water Board. The new Licence has been granted for a term of ten years, expiring in April 2031.

The scope of the Type 'B' Water Licence focuses on exploration and geotechnical drilling activities associated with the Project, and includes provisions and conditions regarding water use, waste management, construction and operation of satellite camps, exploration and geotechnical drilling programs, spill contingency and environmental monitoring.

In response to the COVID-19 Pandemic, additional precautions continued to be applied for exploration and geotechnical drilling programs. Baffinland implemented comprehensive safety plans and protocols to minimize the risk of COVID-19 exposure to their employees, communities, and during any social interactions. To protect communities in Nunavut from COVID-19, Baffinland requested that all Nunavummiut remain home on paid leave in the first half of 2021. Nunavummiut returned to work in late summer 2021, but were sent home again in December due to the Omicron variant. With the extensive precautions and protocols in place by Baffinland, the risk of COVID-19 exposure to Nunavut communities was minimized, and the 2021 drilling and geotechnical programs were completed with minimal risk.

During 2021, activities carried out under the scope of the Type 'B' Water Licence involved continued geotechnical drilling programs and assessments to support ongoing design studies for future Project infrastructure, an exploration drilling program to increase mine pit model confidence at Deposit No. 1, further characterization of Deposit No. 3, and the continued exploration of prospects and Baffinland's mineral leases. No satellite camps were constructed or operated in 2021, with all personnel involved with



the exploration and geotechnical activities being based out of the Mine Site and Milne Port accommodation camps.

Water withdrawn under the authorization of the Type 'B' Water Licence for the Project in 2021 was used solely to support exploration and geotechnical drilling operations. The daily water withdrawal limits stipulated in the Type 'B' Water Licence for the Project were not exceeded in 2021. In addition to tracking water use, environmental monitoring conducted in 2021 consisted of daily monitoring of drilling activities to ensure activities adhered to the practices outlined in the Project's Environmental Protection Plan (EPP). Reclamation works carried out under the Type 'B' Water Licence during 2021 involved the reclamation of borehole and geotechnical drilling locations associated with the 2021 exploration and geotechnical activities.

As outlined in the 2022 Work Plan, exploration activities for 2022 have not yet been finalized; however, it is anticipated that activities at a minimum will include mapping, sampling and geophysical and geochemical surveys of prospects and Baffinland's mineral leases, and will include exploration drilling programs on Deposit Nos. 1 and 3. It is anticipated that Baffinland will continue to conduct geotechnical assessments, including drilling programs, during 2022 to support on-going engineering design studies for future Project infrastructure. With respect to the global COVID-19 Pandemic, any activities in 2022 will be carried out in a manner that ensures the health and safety of all Baffinland staff and Nunavummiut, and follows all applicable guidance from the Government of Nunavut Chief Public Health Officer. As additional details for the 2022 exploration and geotechnical programs become available, this information will be provided to the NWB, Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) and the QIA prior to the commencement of activities.



RAPPORT ANNUEL 2021 DE QIKIQTANI INUIT ASSOCATION (QIA) ET DE L'OFFICE DES EAUX DU NUNAVUT (OEN) POUR LES ACTIVITÉS D'EXPLORATION ET DE GÉOTECHNIQUE

RÉSUMÉ

Le présent rapport adressé à la Qikiqtani Inuit Association (QIA) et à l'Office des eaux du Nunavut (OEN) a été préparé pour résumer les activités d'exploration et de géotechnique menées en 2021 dans le cadre du permis d'utilisation des eaux de type « B », 2BE-MRY2131 de Baffinland Iron Mines Corporation (Baffinland) (permis d'utilisation des eaux de type « B ») et le bail commercial no Q13C301 (bail commercial) entre la QIA et Baffinland pour le projet de la rivière Mary (le projet). Un rapport annuel distinct a été préparé pour la QIA et l'OEN dans le but de résumer les activités et la surveillance du projet en 2021 en vertu de la modification n° 1 du permis d'utilisation des eaux de type « A » n° 2AM-MRY1325 (permis d'utilisation des eaux de type « A ») de Baffinland, et répond aux autres exigences en matière de rapports annuels énoncées dans le bail commercial. Par ailleurs, un rapport distinct a été préparé pour la QIA et l'OEN dans le but de résumer les activités d'exploration de 2021 dans le cadre du programme d'exploration de la baie d'Eqe dans le cadre de la portée du permis d'utilisation des eaux de type « B » n° 2BE-EQE1926 et du permis d'utilisation des terres n° QL2-1910 de Baffinland.

En 2021, Baffinland a soumis une demande de renouvellement du permis d'utilisation des eaux de type « B » n° 2BE-MRY1421 pour des activités d'exploration et de forage géotechnique en vertu du projet d'exploration de la rivière Mary. Un nouveau permis d'utilisation des eaux de type « B » n° 2BE-MRY2131 a été délivré à Baffinland le 13 avril 2021 par l'Office des eaux du Nunavut. Le nouveau permis a été accordé pour une période de dix ans, expirant en avril 2031.

Le permis d'utilisation des eaux de type « B » porte sur les activités d'exploration et de forage géotechnique associées au projet, et comprend des dispositions et des conditions concernant l'utilisation de l'eau, la gestion des déchets, la construction et l'exploitation de camps satellites, les programmes d'exploration et de forage géotechnique, les mesures d'urgence en cas de déversement et la surveillance environnementale.

En réponse à la pandémie de COVID-19, des précautions supplémentaires ont continué d'être appliquées aux programmes d'exploration et de forage géotechnique. Baffinland a mis en œuvre des plans de sécurité et des protocoles exhaustifs afin de réduire au minimum le risque d'exposition de ses employés et collectivités au virus de la COVID-19 et lors de toute interaction sociale. Pour protéger les collectivités du Nunavut de la COVID-19, Baffinland a demandé que tous les Nunavummiut restent chez eux en congé payé pendant la première moitié de 2021. Les Nunavummiut sont retournés au travail à la fin de l'été 2021, mais ont été de nouveau renvoyés chez eux en décembre en raison du variant Omicron. Grâce aux précautions et protocoles exhaustifs mis en place par Baffinland, le risque d'exposition à la COVID-19 dans les collectivités du Nunavut a été minimisé, et les programmes de forage et de géotechnique de 2021 ont été menés à bien avec un minimum de risque.



En 2021, les activités menées dans le cadre du permis d'utilisation des eaux de type « B » ont nécessité la poursuite des programmes de forage et des évaluations géotechniques pour appuyer les études de conception en cours pour l'infrastructure future du projet, un programme de forage exploratoire pour accroître la confiance dans le modèle de la mine au Gisement n° 1, une caractérisation plus poussée du Gisement n° 3 et la poursuite de l'exploration des perspectives et des concessions minières de Baffinland. Aucun camp satellite n'a été construit ou exploité en 2021. Tout le personnel participant aux activités d'exploration et de géotechnique est basé sur le site minier et dans les camps d'hébergement du Port de Milne.

L'eau prélevée en vertu de l'autorisation du permis d'utilisation des eaux de type « B » pour le projet en 2021 a été utilisée uniquement pour appuyer les activités d'exploration et de forage géotechnique. Les limites quotidiennes de prélèvement d'eau stipulées dans le permis d'utilisation des eaux de type « B » pour le projet n'ont pas été dépassées en 2021. Outre le suivi de l'utilisation de l'eau, une surveillance environnementale menée en 2021 a consisté à surveiller les activités de forage pour garantir que les activités respectaient les pratiques décrites dans le plan de protection de l'environnement du projet. Des travaux de remise en état entrepris en vertu du permis d'utilisation des eaux de type « B » en 2021 comprenaient la remise en état de puits et de lieux de forage géotechnique associés aux activités d'exploration et de géotechnique de 2021.

Comme indiqué dans le plan de travail 2022, les activités d'exploration pour 2022 n'ont pas encore été finalisées; cependant, on prévoit que les activités comprendront au minimum la cartographie, l'échantillonnage et les levés géophysiques et géochimiques des perspectives et des concessions minières de Baffinland, et comprendront des programmes de forage d'exploration sur les Gisements nos 1 et 3. On prévoit que Baffinland continuera d'effectuer des évaluations géotechniques, y compris des programmes de forage, au cours de 2022 afin de soutenir les études de conception technique en cours pour l'infrastructure future du projet. En ce qui concerne la pandémie mondiale de COVID-19, toutes les activités en 2022 seront menées de manière à assurer la santé et la sécurité de tout le personnel de Baffinland et des Nunavummiut, et à suivre toutes les directives applicables de l'administrateur en chef de la santé publique du Nunavut. À mesure de la disponibilité d'autres renseignements sur les programmes d'exploration et de géotechnique de 2022, ces renseignements seront fournis à l'OEN, à Relations Couronne-Autochtones et Affaires du Nord Canada (RCAANC) et à la QIA avant le début des activités.



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ABBREVIATIONS

ASR	Annual Security Review
Baffinland	Baffinland Iron Mines Corporation
CIRNAC	Crown-Indigenous Relations and Northern Affairs Canada
Commercial Lease	
EPP	Environmental Protection Plan
LTI	Loss Time Incident
	Long-Term Water Management Plan
MHTO	Mittimatalik Hunter and Trapper Organization
MIA	Medical Aid Incident
Mine Site	Mary River Mine Site
QIA	Qikiqtani Inuit Association
the Project	Mary River Project
	Milne Inlet Tote Road
	Type 'A' Water Licence - 2AM-MRY1325 – Amendment No. 1
Type 'B' Water Licence	Type 'B' Water Licence - 2BE-MRY2131
WSCC	



1 INTRODUCTION

1.1 PURPOSE AND SCOPE

This report to the Qikiqtani Inuit Association (QIA) and the Nunavut Water Board (NWB) has been prepared to summarize the 2021 exploration and geotechnical drilling activities conducted under Baffinland Iron Mines Corporation's (Baffinland) Type 'B' Water Licence 2BE-MRY2131 (Type 'B' Water Licence) and the Commercial Lease No. Q13C301 (Commercial Lease) between the QIA and Baffinland for the Mary River Project (the Project), as well as QIA Land Use Licence QL2-2012. This report also addresses reporting requirements under the Crown Land Use permit for Steensby Port (N2020C0009). A separate annual report has been prepared for the QIA and NWB to summarize the 2021 Project activities and monitoring conducted under Baffinland's Type 'A' Water Licence 2AM-MRY1325 – Amendment No. 1 (Type 'A' Water Licence) and addresses the remaining annual reporting requirements set forth in the Commercial Lease. Concordance tables referencing where in this report annual reporting requirements outlined in the Commercial Lease and Type 'B' Water Licence have been met are presented in Appendix A. Additionally, a separate report has been prepared for the QIA and NWB to summarize the 2021 exploration activities conducted for the Eqe Bay Exploration Program within the scope of Baffinland's Type 'B' Water Licence 2BE-EQE1926 and Land Use Licence QL2-1910.

The scope of the Type 'B' Water Licence focuses on exploration and geotechnical drilling activities and includes provisions and conditions regarding water use, waste management, construction and operation of satellite camps, exploration and geotechnical drilling programs, spill contingency and environmental monitoring. Activities and data discussed in this report are summarized and referenced in the completed NWB Annual Report Forms, included as Appendix B of this report.

Figures 1.1 and 1.2 present the locations of the key areas associated with the Project where activities in 2021 were undertaken. Key areas involved with exploration and geotechnical activities in 2021 included the Mary River Mine Site (Mine Site) and the Milne Inlet Tote Road (Tote Road) extending from Mine Site to Port Site.

1.2 REGULATORY FRAMEWORK

Although the key regulatory and legal documents that relate to this report are the Commercial Lease and the Type 'B' Water Licence, this report is presented in the context of other applicable regulatory authorizations and schedules for the Project. A list of the key regulatory permits, approvals and authorizations that allowed the work to be completed at the Project in 2021 is presented in Table 1.1.

In 2021, Baffinland submitted an application for the renewal of the Type 'B' Water Licence 2BE-MRY1421 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. A new Type 'B' Water Licence No: 2BE-MRY2131 was issued to Baffinland by the Nunavut Water Board on April 13, 2021. The new Licence has been granted for a term of ten years, expiring in April 2031.



1.3 COVID-19 SUMMARY

Tremendous efforts carried over from 2020 into 2021 to ensure that the health and safety of Baffinland's employees, its contractors, and the neighbouring communities remained the foremost priority as operations continued through the COVID-19 Pandemic. Comprehensive safety plans and protocols to minimize the risk of COVID-19 exposure were implemented at the Project. To protect communities in Nunavut from COVID-19, Baffinland requested that all Nunavummiut remain home on paid leave in the first half of 2021. When easing of public health restrictions allowed, Nunavummiut returned to work in late summer 2021, but were sent home again in December due to the presence of the Omicron variant. Additionally, specific protocols were also established to minimize the risk of COVID-19 transmission to hunters and visitors traveling through Project areas. With these extensive precautions and protocols in place by Baffinland, the risk of COVID-19 exposure to Nunavut communities was minimized while the operation continued. Baffinland's Northern and Oakville offices have also been impacted with the Northern offices following local protocols in their respective communities, while the Oakville headquarters has remained closed with employees working from home since the start of the COVID-19 Pandemic.

To minimize risk of exposure to employees and contractors traveling to Mary River, pre flight COVID-19 testing and screening for symptoms was implemented for all inbound personnel as a prerequisite for site access. Baffinland protocols, established in consolation with federal and territorial public health experts included: preventive measures such as physical distancing, proper hand washing, frequent sanitizing, and mask use during travel and on site at Mary River. Baffinland and its consultants implemented comprehensive safety plans and protocols to minimize the risk of COVID-19 exposure to their employees and local communities.

Baffinland was one of the first companies to implement on-site COVID-19 testing facilities at its remote mining site to test all employees and contractors coming to Mary River as well as throughout each rotation. Additionally, all staff undergo daily health screenings to monitor for any symptoms of COVID-19; if any symptoms are experienced, these staff members immediately self isolate. If testing yields positive results or if symptoms develop while on-site, Nunavut Public Health is contacted and the employee are quarantined until medically cleared.

With the extensive precautions and protocols in place by Baffinland, the risk of COVID-19 exposure to Nunavut communities was minimized, and operations continued with minimal risks and remained viable.



2 EXPLORATION AND GEOTECHNICAL ACTIVITIES

2.1 EXPLORATION ACTIVITIES AND DRILLING PROGRAMS

During 2021, exploration activities were based out of the Mine Site and consisted of day trips by helicopter to prospects and Baffinland's mineral leases to conduct sampling, and geophysical and geochemical surveys. No new satellite camps were constructed and/or operated to support exploration activities in 2021. Although Steensby Port was used as a refuelling location for helicopters transporting exploration field crews in 2021, the site remained closed throughout the year and was not used to house personnel.

The exploration diamond drilling program was conducted from June to September to increase mine pit model confidence at Deposit No. 1 and further characterize ore bodies at Deposit No. 3. The drilling program consisted of twenty-one (21) boreholes; eight (8) on Deposit No. 1 and thirteen (13) on Deposit No. 3. Equipment used in the diamond drilling program was transported between borehole sites using helicopters, and consisted of non-skid mounted drill rigs, drill rods and other supplies. Borehole locations associated with the 2021 exploration drilling program are presented in Table 2.1 and Figure 2.1. In addition, the detailed inspection logs including the pre-inspection, daily inspection, and post inspection logs are located in Appendix E.2.

Prior to commencing exploration drilling activities, a notification was submitted to the NWB, Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) and the QIA to ensure compliance with the conditions set out in the Type 'B' Water Licence and Commercial Lease. Exploration activities and drilling program were consistent with the activities proposed in Section 4.1 of the 2021 Work Plan and the notifications submitted for the respective activities. Copies of the notifications are provided in Appendix C.

2.2 GEOTECHNICAL ASSESSMENTS AND DRILLING PROGRAMS

To support on-going engineering design for Phase 2, a land-based geotechnical drilling program was conducted to characterize the geotechnical conditions along the proposed Route 3 of the North Railway. This program was conducted off the Tote Road southwest of KM 63, and eight (8) boreholes were drilled between 1.5 Km and 12.5 Km southwest of KM 63. One borehole was also drilled in proposed Quarry 14B, located 200 m east from Tote Road KM 90.

Geotechnical drilling was also completed at the Mary River Mine Site in April and May, 2021, to support engineering designs for water management infrastructure for the proposed Mine Site Long-Term Water Management Plan (LTWMP). Twenty-three (23) boreholes were completed.

The program consisted of thirty-two (32) boreholes which are presented in Figure 2.1 and detailed in Table 2.1. The extended details for each borehole are located in the pre-inspection, daily inspection, and post inspection logs in Appendix E.1.





To ensure compliance with the relevant conditions outlined in the Type 'B' Water Licence and Commercial Lease, Baffinland submitted notifications to the NWB, CIRNAC and the QIA prior to commencement of activities. Copies of these notifications are provided in Appendix C of this report.



MODIFICATIONS, INFRASTRUCTURE CHANGES AND CONSTRUCTION 3

No modifications, infrastructure changes or construction was conducted in 2021 under the Type 'B' Water Licence or Commercial Lease to support exploration and/or geotechnical activities.



4 WATER USE

4.1 QUANTITIES OF FRESHWATER USED FOR DOMESTIC PURPOSES

During 2021, water was not withdrawn under the authorization of the Type 'B' Water Licence for domestic (camp) purposes. No satellite camps were operated to support exploration and drilling activities in 2021.

4.2 QUANTITIES OF FRESHWATER USED FOR DRILLING ACTIVITIES

During 2021, water was withdrawn under the authorization of the Type 'B' Water Licence for drilling purposes.

During the 2021 land-based geotechnical drilling program, 40 m³ of water was withdrawn from Camp Lake for the purposes of drilling. No under ice drilling was conducted at Milne Port during 2021.

During the 2021 exploration drilling program at Deposit No. 1 and 3, approximately 4,426 m³ of water was used to support exploration drilling activities. For boreholes at Deposit No. 1, water was sourced from nearby water source KM 108.5 sump via water pumps, and from one (1) location along the Mary River, referred to as MRP-1. Water requirements for the drilling program at Deposit No. 3 were supplied by pumping water from one (1) location along the Mary River, referred to as MRP-3.

During the 2021 Long-term Term Water Management Plan (LTWMP) drilling program, approximately 97 m³ of water was withdrawn from Camp Lake for the purposes of drilling.

All water sources used to support 2021 drilling activities were identified by Baffinland as potential water sources in the drilling notifications submitted to the NWB, CIRNAC and QIA (refer to Appendix C).

Locations of the water sources used for the 2021 drilling programs are provided in Table 4.1 and are presented in Figures 2.1 and 2.2. Daily and monthly water use volumes for drilling activities by water source are detailed in Table 4.2. There were no exceedances of the daily water use limit for drilling activities (250 m³), stipulated in the Type 'B' Water Licence, in 2021.



5 ENVIRONMENTAL MONITORING

5.1 ENVIRONMENTAL MONITORING FOR DRILLING/TESTING ACTIVITIES

Daily environmental monitoring, including the completion of pre, daily and post inspections, were performed at borehole locations by on-site Environment Department personnel. Protocols and mitigation measures consistent with the Project's Environmental Protection Plan (EPP; BAF-PH1-830-P16-0008) for the management of fuel, hazardous materials, and waste were employed during the 2021 drilling programs and associated activities. Copies of the environmental monitoring logs completed for the 2021 borehole locations are provided in Appendix E (refer to Table 5.1).

Under the Type B Water Licence, the Licensee is required to record the depth of the active layer and depth of the top and bottom of permafrost of the drill holes where drilling activity has penetrated below the permafrost layer, and shall report this information within the Annual Report, including the location (GPS coordinates) and dates. The dates, coordinates and permafrost observations for drilling are included in Appendix E – Pre, Daily and Post Environmental Monitoring Logs, alongside field observations.

Areas that were drilled were initially assessed prior to the commencement of drilling, and it was determined there was no presence of archaeological sites in 2021. To minimize the potential for disturbance of cultural heritage resources and prior to drilling operations, if there were any identified archaeological sites near areas to be drilled, the proper procedure would be to stake off and the location and communicate the findings to the appropriate drilling crews, as per the Project's Cultural Heritage Resource Protection Plan (BAF-PH1-830-P16-0006).



6 WASTE MANAGEMENT

Satellite camps were not operated to support exploration and geotechnical drilling activities in 2021. Personnel associated with exploration and geotechnical drilling activities were based out of the Mary River Mine Site and Milne Port camps, operated under the Type 'A' Water Licence. As a result, the sewage, greywater, and solid waste generated by the 2021 exploration and geotechnical drilling activities was captured under the Project's Type 'A' Water Licence. The reader is referred to the 2021 QIA and NWB Annual Report for Operations for additional details on sewage, greywater and waste generated and managed under the Type 'A' Water Licence.

Small amounts of drilling wastes (i.e. cuttings) generated from 2021 drilling programs were deposited in boreholes and/or sumps, as well as captured by sedimentation and erosion control measures (e.g. silt fencing) near exploration borehole locations. Table 6.1 details the approximate quantities and locations of drilling wastes deposited during the 2021 drilling programs. Locations of the sump used to support the exploration drilling program at Deposit No. 1 are presented in Figure 2.1.

2021 QIA and NWB Annual Report for Exploration & Geotechnical Activities



7 REPORTED INCIDENTS

7.1 SPILLS

Under the Type 'B' Water Licence, there were no spills 2021 from the exploration or geotechnical drilling programs that met or exceeded the reporting thresholds outlined in the Nunavut Spill Contingency Planning and Reporting Regulations or applicable legislation.

7.2 HEALTH & SAFETY INCIDENTS

Under the Commercial Lease, two (2) health & safety incidents were reported to the QIA and/or the Workers' Safety and Compensation Commission (WSCC) that pertained to the 2021 exploration and geotechnical activities. On April 26, 2021, an elbow injury occurred during the North Railway Route 3 geotechnical drilling program which resulted in a Medical Aid Incident (MIA). On August 10, 2021, an ankle injury occurred during the Exploration drilling program which resulted in a Loss Time Incident (LTI)



8 RECLAMATION, CLOSURE AND FINANCIAL SECURITY

8.1 PROGRESSIVE AND FINAL RECLAMATION

New impacts from 2021 exploration and geotechnical activities were minimal and are summarized in Table 8.1.

Progressive and final reclamation works undertaken in 2021 are summarized in Table 8.2. As shown in Table 8.2, progressive and final reclamation works undertaken in 2021 solely consisted of reclaiming borehole locations associated with the 2021 exploration and geotechnical programs.

Following the completion of a borehole, as per Part I, Item 9 of the Type 'B' Water Licence, drilling equipment was removed and sites were restored to their natural condition. For exploration borehole locations, the borehole casing was cut off near ground surface. Please note that some post drilling inspections do not have the final photos with the cut off anchor to near ground surface as detailed in Appendix D. Baffinland will provide the final photos in late spring 2022. Anchoring rods used to secure the drill rig at the exploration borehole locations were left in place until the end of the field season, and were then cut off to near ground surface. With respect to geotechnical borehole locations, all holes were backfilled using native material and reinstated to natural conditions. A routine inspection of 2021 boreholes will be completed during summer months of 2022.

To support exploration drilling activities at Deposit No. 1 and 3 in 2021, select supplies were secured including two (2) survival shelters and pump shack left at the MRP-3 water source location.

Available photographs of conditions before, during and after geotechnical and exploration drilling activities in 2021 are provided in Appendix D.

8.2 CURRENT RESTORATION LIABILITY

The current status of restoration liability for the Project, including exploration and drilling activities conducted under the Type 'B' Water Licence, is summarized in Table 8.3.



9 PLANS, REPORTS AND STUDIES

9.1 SUMMARY OF STUDIES REQUESTED BY THE BOARD

In 2021, studies under the Type 'B' Water Licence were not requested by the NWB.

9.2 REVISIONS TO PLANS, REPORTS AND MANUALS

An annual review of the management plans developed under the Type 'B' Water Licence was completed in 2021. The current versions of the Exploration Spill Contingency Plan (BAF-PH1-830-P16-0037; Rev. 1; January 2021) and the Exploration Closure and Reclamation Plan (BAF-PH1-830-P16-0038; Rev. 2; January 2021) reflect current operations, protocols, and procedures. The reader is referred to the 2021 QIA and NWB Annual Report for Operations for a complete list of the Project's current management and monitoring plans and the recent revisions undertaken during 2021.

9.3 SUMMARY OF FUEL STORAGE

Fuel storage and refueling facilities at the Mine Site, Milne Port and Steensby Port were used to support exploration and geotechnical drilling activities in 2021.

Fuel requirements for exploration activities in 2021 consisted of Jet-A1 fuel, for on-site helicopters transporting crews and equipment to prospects, mineral leases and borehole locations, and Arctic Diesel, for drill operations and support equipment (i.e. pick-up trucks). Jet-A1 fuel requirements for exploration activities were supplied using drummed Jet-A1 fuel stored in lined containment areas at the Mine Site and Steensby Port.

Fuel requirements for the 2021 geotechnical drilling programs consisted of Arctic Diesel supplied by the Mine Site and Milne Port bulk fuel storage facilities. The drill rig and supporting equipment (Nodwell flatdeck, skidsteer) were refueled using pick-up trucks equipped with double walled portable tanks (tidy tanks).

To safeguard impacts to freshwater bodies and mitigate fuel spills, fueling activities adhered to the protocols and mitigation measures (i.e. spill trays, spill kits) outlined in Baffinland's current Environmental Protection Plan and Exploration Spill Contingency Plan (BAF-PH1-830-P16-0037).

As of December 31, 2021, there were 854 drums (205 L) of fuel (624 Arctic Diesel and 230 Jet-A1) stored at Steensby Port, 1520 drums (205 L) of fuel (1281 Jet-A1¹ and 239 gasoline) at the Mine Site and 336 drums (205 L) of fuel (12 Jet-A1 and 324 gasoline) at Milne Port, and 7 drums (205 L) of fuel at Bruce head (5 diesel and 2 gasoline). No fuel remains at the Mid-Rail camp. Drummed fuel at the Mine Site, Milne Port and Steensby Port are stored within lined secondary containment areas. End of year fuel inventories for the Mine Site and Milne Port bulk fuel storage facilities, operated under the Type 'A' Water Licence, are provided in the 2021 QIA and NWB Annual Report for Operations.

¹ Some drums may be empty; cannot determine with snow cover.



9.4 INSPECTION AND COMPLIANCE REPORTS

9.4.1 CIRNAC Inspections

During 2021, Baffinland did not receive any inspection and/or compliance reports from CIRNAC Water Resources Officers (the Inspector) outlining concerns pertaining to the scope of the Type 'B' Water Licence.

9.4.2 QIA Inspections

During 2021, the QIA conducted an inspection at the Project. The July 2021 inspection identified apparent issues at an exploration drill site MR3-20-283 and 287 for which BIM provided a response, demonstrating that the drill holes and residual drill cuttings were remediated in accordance with the Exploration Closure and Reclamation Plan. To refer to the detailed responses provided for QIA's inspection requests, refer to Appendix E.8.2 of the Type 'A' Annual Report.

9.5 SUMMARY OF ARTESIAN FLOWS

During the 2021 geotechnical and exploration drilling programs, artesian flows were not observed at any of the borehole locations.

9.6 SUMMARY OF GEOCHEMICAL ANALYSIS OF DRILL CORES

As of March 31, 2022, geochemical analysis of the drill cores, collected during the geotechnical drilling program at Deposit No. 1, has been completed and the results are currently under review.

As of March 31, 2022, geochemical analysis of the drill cores, collected during the resource drilling program at Deposit Nos. 1 and 3, have been completed and the results are currently under review.



10 PUBLIC CONSULTATIONS

Throughout 2021, Baffinland continued to consult with the North Baffin communities and organizations regarding the Mary River Project as a whole, which includes the exploration program. Baffinland engages on a variety of topics, including ongoing construction and operational activities at the Project, the 2021 shipping season, employment from the North Baffin communities, environmental monitoring activities and results, exploration activities and future phases of the Project. However, due to COVID-19 and with the extensive precautions and protocols in place by Baffinland, the risk of COVID-19 exposure to Nunavut communities was minimized, and the majority of public consultation was completed by distance through virtual communication methods. For a complete list of consultations and meetings held with regulators, stakeholders, and the public by Baffinland for the Mary River Project during 2021 refer to the 2021 QIA and NWB Annual Report for Operations.

Specific to the exploration activities in 2021, Baffinland engaged with the Government of Nunavut Chief Public Health Officer to develop plans that would ensure exploration activities outside of the Mary River camp would not result in interactions with local communities, and received prior approval to conduct of this Program. In addition, Baffinland engaged with the Hamlet of Clyde River and Mittimatalik Hunter and Trapper Organization (MHTO), to ensure awareness of the planned air-borne geophysical survey of Crown Land Mineral Claims in the Magnetite Hill area in July-August, 2021, and to outline the appropriate COVID-19 precautions put in place.



11 2022 EXPLORATION AND GEOTECHNICAL ACTIVITIES

The 2022 Work Plan was prepared and provided by Baffinland to relevant parties on November 1, 2021, as required under Section 6.1 of the Commercial Lease and under Part J, Item 3 of the Type 'A' Water Licence, for the purposes of an Annual Security Review (ASR) for activities undertaken on an annual basis. The 2022 Work Plan described the planned development and operation of the Project in 2022, including planned exploration and geotechnical drilling activities.

The scope of Baffinland's Type 'B' Water Licence and Commercial Lease allows for Baffinland to continue to undertake exploration activities and drilling programs at Project areas and Baffinland's mineral leases within the Qikiqtani Region of Nunavut. This includes exploration land use areas as defined in Section 2.2 of the Commercial Lease.

Exploration activities for 2022 have not yet been finalized; however, it is anticipated that activities at a minimum will include mapping, sampling, and geophysical and geochemical surveys of prospects and Baffinland's mineral leases and will include additional exploration drilling programs on Deposit No. 1, 2 and 3. Notification will be provided to the NWB, CIRNAC and the QIA prior to the commencement of exploration drilling activities.

Geotechnical activities, including drilling programs, will be conducted during 2022 to support on-going engineering design studies for future Project infrastructure. Baffinland will provide notification to the NWB, CIRNAC and the QIA prior to commencement of the activities.

Operation of the Steensby and Mid Rail camps to support exploration and geotechnical activities are not anticipated to be required during 2022.



TABLES



Table 1.1: Current Approvals, Permits and Authorizations - 2021

Permit or Licence No.	Licence Name	Status Update for 2021	Expiry	
Nunavut Impact Review I	Board			
No. 005	Amended Project Certificate	All works and activities have been screened by the Nunavut Impact Review Board (NIRB) and have been considered in the Project Certificate amendments issued by the NIRB in May 2014 (ERP) and October 2018 (Production Increase). A NIRB Annual Report is submitted each year that summarizes the status of the Project relative to the conditions outlined in the Project Certificate.	N/A	
Nunavut Water Board				
2AM-MRY1325	Type 'A' Water Licence – Amendment No. 1	In good standing; no amendments were issued by the NWB in 2020.	10-Jun-25	
2BE-MRY2131	Type 'B' Water Licence	Licence was re-issued by NWB in 2021.	16-Apr-31	
Qikiqtani Inuit Associatio	n			
Q13C301	Inuit Owned Land Commercial Lease	Compliance with the lease is outlined in the 2020 QIA and NWB Annual Reports submitted by March 31 st of each year.	31-Dec-43	
-	Inuit Impact and Benefit Agreement (IIBA)	Compliance with the agreement is outlined in the Annual IIBA Implementation Report submitted by March 31 st of each year.	N/A	
Crown Land Use Permits	and Quarry Permits			
47H16-1-2	Foreshore Area for Milne Port Ore Dock Lease	In good standing. Amendment to the lease currently under review.	30-Jun-35	
N2019Q0011	Tote Road and Borrow Area Land Use Permit	New lease issued in 2019, replaces prior permit N2014Q0016.	29-Jun-24	
N2019C0009	Steensby Land Use Permit	New lease issued in 2019, replaces prior permit N2014C0013.	29-Jun-24	
N2019J0010	Bruce Head Land Use Permit	New lease issued in 2019, replaces prior permit N2014J0011.	29-Jun-24	
Authorizations under the	Fisheries Act			
06-HCAA-CA7-0084	Crossings along the Milne Inlet Tote Road Authorization	The authorization remains valid and has been amended over the years. A monitoring report for the water crossings was submitted to DFO on December 31, 2021.		
NU-06-0084	Fisheries Authorization – Tote Road	-	N/A	
18-HCAA-00160	Fisheries Authorization – Freight Dock	-	N/A	
Various Letter of Advice	Project crossings along Tote Road and at quarries, culvert extensions and replacements.	-	N/A	
Approvals under the Nav	igable Waters Protection Act (Transp	ort Canada)		
8200-07-10273, 10267, 10269, 10268, 10274, 10272, 10266, 10271	Construction of Watercourse Crossings (Bridges and Culverts)	In good standing, no changes from previous year.	Until complete	
Licence under the Explosi	ives Act			
F76068/E	Division 1 Factor Licence	Held by explosives contractor for the Project.	N/A	



Table 2.1: Exploration and Geotechnical Activities and Drilling Summary - 2021

Location	Property Section	Description of Activity	Description of Drilling Plan	ID	Location (UTM NAD83 Zone 17W)		Status ^f	Results
					Easting	Northing		
15 KM Southwest	Tote Road ^b	Land Geotechnical	Characterize geotechnical conditions along Route 3 of the North Railway	BH21-03A	528623	7925080	Completed May 1, 2021	Geotechnical conditions characterized
3 KM Southwest	Tote Road ^b	Land Geotechnical	Characterize geotechnical conditions along Route 3 of the North Railway	BH21-03B	528693	7924272	Completed May 5, 2021	Geotechnical conditions characterized
4.5 KM Southwest	Tote Road ^b	Land Geotechnical	Characterize geotechnical conditions along Route 3 of the North Railway	BH21-03C	528717	7922628	Completed September 19, 2021	Geotechnical conditions characterized
5.5 KM Southwest	Tote Road ^b	Land Geotechnical	Characterize geotechnical conditions along Route 3 of the North Railway	BH21-03D	529249	7921486	Completed September 18, 2021	Geotechnical conditions characterized
6.5 KM Southwest	Tote Road ^b	Land Geotechnical	Characterize geotechnical conditions along Route 3 of the North Railway	BH21-03E	529496	7920549	Completed September 20, 2021	Geotechnical conditions characterized
14 KM Southwest	Tote Road ^b	Land Geotechnical	Characterize geotechnical conditions along Route 3 of the North Railway	BH21-03F	534809	7918518	Completed September 23, 2021	Geotechnical conditions characterized
9.5 KM Southwest	Tote Road ^b	Land Geotechnical	Characterize geotechnical conditions along Route 3 of the North Railway	BH21-03G	530165	7917915	Completed September 21, 2021	Geotechnical conditions characterized
12.5 KM Southwest	Tote Road ^b	Land Geotechnical	Characterize geotechnical conditions along Route 3 of the North Railway	BH21-03J	533102	7918264	Completed September 21, 2021	Geotechnical conditions characterized
200 M East	Tote Road ^b	Land Geotechnical	Characterize geotechnical conditions at proposed quarry location along the Tote Road.	Quarry 14B	551082	7917408	Completed September 24, 2021	Geotechnical conditions characterized
KM106	Mine Site ^e	Land Geotechnical	Long Term Water Management Plan	DH21-01	563880	7913098	Completed April 28, 2021	Geotechnical conditions characterized
KM 106	Mine Site ^e	Land Geotechnical	Long Term Water Management Plan	DH21-02	563748	7913054	Completed April 28, 2021	Geotechnical conditions characterized
KM 106	Mine Site ^e	Land Geotechnical	Long Term Water Management Plan	DH21-03	563754	7913183	Completed April 28, 2021	Geotechnical conditions characterized
KM 104	Mine Site ^c	Land Geotechnical	Long Term Water Management Plan	DH21-04	562117	7913107	Completed April 27, 2021	Geotechnical conditions characterized
KM 104	Mine Site ^c	Land Geotechnical	Long Term Water Management Plan	DH21-05	561954	7913100	Completed April 26, 2021	Geotechnical conditions characterized
KM 104	Mine Site ^c	Land Geotechnical	Long Term Water Management Plan	DH21-06	561853	7913127	Completed April 25, 2021	Geotechnical conditions characterized

^a Crown Lands.

^b Inuit-Owned Lands - Parcel PI-16.

^c Inuit-Owned Lands - Parcel PI-17.

^d Inuit-Owned Lands - Parcel PI-19.

^e Mining Lease L-2484

f Mining Lease L-2485

^g In cases where a site's completion date is not available, the date of the site's final cleanup is provided.



Table 2.1: Exploration and Geotechnical Activities and Drilling Summary - 2021

Location	Location Property Section		ty Description of Drilling Plan	ID	Location (UTM NAD83 Zone 17W)		Status ^f	Results
					Easting	Northing		
KM 104	Mine Site ^c	Land Geotechnical	Long Term Water Management Plan	DH21-07	561778	7913211	Completed April 24, 2021	Geotechnical conditions characterized
KM 104	Mine Site ^c	Land Geotechnical	Long Term Water Management Plan	DH21-08	561739	7913289	Completed April 23, 2021	Geotechnical conditions characterized
KM 104	Mine Site ^c	Land Geotechnical	Long Term Water Management Plan	DH21-09	561762	7913476	Completed April 22, 2021	Geotechnical conditions characterized
Sheardown Lake	Mine Site ^c	Land Geotechnical	Long Term Water Management Plan	DH21-10	561234	7912913	Completed April 30, 2021	Geotechnical conditions characterized
Sheardown Lake	Mine Site ^c	Land Geotechnical	Long Term Water Management Plan	DH21-11	561145	7913032	Completed April 30, 2021	Geotechnical conditions characterized
Sheardown Lake	Mine Site ^c	Land Geotechnical	Long Term Water Management Plan	DH21-12	561060	7913144	Completed May 1, 2021	Geotechnical conditions characterized
Sheardown Lake	Mine Site ^c	Land Geotechnical	Long Term Water Management Plan	DH21-13	560955	7913275	Completed May 1, 2021	Geotechnical conditions characterized
Sheardown Lake	Mine Site ^c	Land Geotechnical	Long Term Water Management Plan	DH21-14	560833	7913423	Completed May 2, 2021	Geotechnical conditions characterized
Sheardown Lake	Mine Site ^c	Land Geotechnical	Long Term Water Management Plan	DH21-15	560884	7913454	Completed May 3, 2021	Geotechnical conditions characterized
WH Camp	Mine Site ^b	Land Geotechnical	Long Term Water Management Plan	DH21-16	558196	7914315	Completed May 5, 2021	Geotechnical conditions characterized
KM 105 Pond - S Embankment	Mine Site ^b	Land Geotechnical	Long Term Water Management Plan	DH21-17	558082	7914410	Completed July 14, 2021	Geotechnical conditions characterized
KM 105 Pond - S Embankment	Mine Site ^b	Land Geotechnical	Long Term Water Management Plan	DH21-18	557960	7914579	Completed July 15, 2021	Geotechnical conditions characterized
Camp Lake	Mine Site ^b	Land Geotechnical	Long Term Water Management Plan	DH21-19	557887	7914786	Completed May 4, 2021	Geotechnical conditions characterized
KM 105 Pond - NW Embankment	Mine Site ^e	Land Geotechnical	Long Term Water Management Plan	DH21-20	563710	7913090	Completed July 12, 2021	Geotechnical conditions characterized
KM 105 Pond - NW Embankment	Mine Site ^e	Land Geotechnical	Long Term Water Management Plan	DH21-21	561709	7913339	Completed July 12, 2022	Geotechnical conditions characterized

^a Crown Lands.

^b Inuit-Owned Lands - Parcel PI-16.

^c Inuit-Owned Lands - Parcel PI-17.

^d Inuit-Owned Lands - Parcel PI-19.

^e Mining Lease L-2484

f Mining Lease L-2485

⁸ In cases where a site's completion date is not available, the date of the site's final cleanup is provided.



Table 2.1: Exploration and Geotechnical Activities and Drilling Summary - 2021

Location	Property Section	Description of Activity	Description of Drilling Plan	ID	Location (UTM NAD83 Zone 17W)		Status ^f	Results
					Easting	Northing		
KM 105 Pond - NW Embankment	Mine Site ^e	Land Geotechnical	Long Term Water Management Plan	DH21-22	560945	7913389	Completed July 9, 2021	Geotechnical conditions characterized
KM 105 Pond - NW Embankment	Mine Site ^b	Land Geotechnical	Long Term Water Management Plan	DH21-23	558294	7914264	Completed July 13, 2021	Geotechnical conditions characterized
Deposit No. 1	Mary River ^e	Diamond Drilling	Infill Drilling	MR1-21-308	563857	7914888	Completed June 28, 2021	Deposit No. 1 ore body further characterized.
Deposit No. 1	Mary River ^e	Diamond Drilling	Infill Drilling	MR1-21-310	563818	7915055	Completed July 5, 2021	Deposit No. 1 ore body further characterized.
Deposit No. 1	Mary River ^e	Diamond Drilling	Infill Drilling	MR1-21-312	563818	7915055	Completed July 11, 2021	Deposit No. 1 ore body further characterized.
Deposit No. 1	Mary River ^e	Diamond Drilling	Infill Drilling	MR1-21-314	563644	7914656	Completed July 20, 2021	Deposit No. 1 ore body further characterized.
Deposit No. 1	Mary River ^e	Diamond Drilling	Infill Drilling	MR1-21-321	563,756	7914834	Completed August 31, 2021	Deposit No. 1 ore body further characterized.
Deposit No. 1	Mary River ^e	Diamond Drilling	Infill Drilling	MR1-21-326	563450	7914243	Completed September 8, 2021	Deposit No. 1 ore body further characterized.
Deposit No. 1	Mary River ^e	Diamond Drilling	Infill Drilling	MR1-21-GT01	563680	7915023	Completed July 27, 2021	Deposit No. 1 ore body further characterized.
Deposit No. 1	Mary River ^e	Diamond Drilling	Infill Drilling	MR1-21-GT02	563510	7914581	Completed August 7, 2021	Deposit No. 1 ore body further characterized.
Deposit No. 3	Mary River ^f	Diamond Drilling	Infill Drilling	MR3-21-309	567660	7913579	Completed July 5, 2021	Deposit No. 3 ore body further characterized.
Deposit No. 3	Mary River ^f	Diamond Drilling	Infill Drilling	MR3-21-311	567660	7913579	Completed July 10, 2021	Deposit No. 3 ore body further characterized.
Deposit No. 3	Mary River ^f	Diamond Drilling	Infill Drilling	MR3-21-313	567807	7913612	Completed July 21, 2021	Deposit No. 3 ore body further characterized.
Deposit No. 3	Mary River ^f	Diamond Drilling	Infill Drilling	MR3-21-317	567807	7913612	Completed July 28, 2021	Deposit No. 3 ore body further characterized.
Deposit No. 3	Mary River ^f	Diamond Drilling	Infill Drilling	MR3-21-315	567650	7913635	Completed July 19, 2021	Deposit No. 3 ore body further characterized.

^a Crown Lands.

^b Inuit-Owned Lands - Parcel PI-16.

^c Inuit-Owned Lands - Parcel PI-17.

^d Inuit-Owned Lands - Parcel PI-19.

^e Mining Lease L-2484

f Mining Lease L-2485

⁸ In cases where a site's completion date is not available, the date of the site's final cleanup is provided.



Table 2.1: Exploration and Geotechnical Activities and Drilling Summary - 2021

Location	Property Section	Description of Activity	Description of Drilling Plan	ID	Location (UTM NAD83 Zone 17W)		Status ^f	Results
					Easting	Northing		
Deposit No. 3	Mary River ^f	Diamond Drilling	Infill Drilling	MR3-21-316	567449	7913471	Completed July 27, 2021	Deposit No. 3 ore body further characterized.
Deposit No. 3	Mary River ^f	Diamond Drilling	Infill Drilling	MR3-21-318	567449	7913471	Completed August 1, 2021	Deposit No. 3 ore body further characterized.
Deposit No. 3	Mary River ^f	Diamond Drilling	Infill Drilling	MR3-21-319	567074	7913450	Completed August 9, 2021	Deposit No. 3 ore body further characterized.
Deposit No. 3	Mary River ^f	Diamond Drilling	Infill Drilling	MR3-21-320	568038	7914032	Completed August 14, 2021	Deposit No. 3 ore body further characterized.
Deposit No. 3	Mary River ^f	Diamond Drilling	Infill Drilling	MR3-21-322	568038	7914032	Completed August 19, 2021	Deposit No. 3 ore body further characterized.
Deposit No. 3	Mary River ^f	Diamond Drilling	Infill Drilling	MR3-21-323	567154	7913428	Completed August 31, 2021	Deposit No. 3 ore body further characterized.
Deposit No. 3	Mary River ^f	Diamond Drilling	Infill Drilling	MR3-21-324	567305	7913443	Completed August 28, 2021	Deposit No. 3 ore body further characterized.
Deposit No. 3	Mary River ^f	Diamond Drilling	Infill Drilling	MR3-21-325	567305	7913443	Completed September 6, 2021	Deposit No. 3 ore body further characterized.

^a Crown Lands.

^b Inuit-Owned Lands - Parcel PI-16.

^c Inuit-Owned Lands - Parcel PI-17.

^d Inuit-Owned Lands - Parcel PI-19.

^e Mining Lease L-2484

f Mining Lease L-2485

^g In cases where a site's completion date is not available, the date of the site's final cleanup is provided.



Table 4.1: Annual Volumes of Water Used for Drilling Activities on Inuit-Owned and Crown Lands by Source - 2021

Property Section	Water Source ID	Water Source Location (UTM NAD83 Zone 17W)		Annual Volume Used (m³)a	Percent of Total Annual Volume Used (%)	
		Easting	Northing	(111)	03ca (70)	
Mine Site	Km 108 Sump	564006	7915693	1,473.6	32.28%	
Mine Site	MRP-1 (Mary River)	563964	7913013	174.2	3.82%	
Mine Site	Camp Lake	557776	7914723	136.6	2.99%	
Mine Site	MRP-3 (Mary River)	567769	7912761	2,781.1	60.92%	
	•		TOTAL	4,565.5	100%	

^a Refer to Table 4.2 for 2021 daily and monthly water use volumes by water source.



Table 4.2: Daily and Monthly Volumes of Water Used for Drilling Activities on Inuit-Owned and Crown Lands by Source - 2021

Day	April	May	June	July			
Day	Camp Lake	Camp Lake	KM 108 Runoff	Camp Lake	MRP-3 (Mary River)	KM 108 Runoff	
1	0	10.0	0	0	30.2	7.3	
2	0	4.0	0	0	45.9	32.6	
3	0	4.0	0	0	50.8	50.8	
4	0	6.0	0	0	50.8	50.8	
5	0	10.5	0	0	59.2	34.9	
6	0	0	0	0	50.8	36.1	
7	0	0	0	0	56.1	48.2	
8	0	0	0	0	50.8	48.2	
9	0	0	0	5.5	0	48.2	
10	0	0	0	0	0	45.7	
11	0	0	0	0	22.2	13.2	
12	0	0	0	8.5	16.1	0	
13	0	0	0	3.5	80.1	0	
14	0	0	0	5.5	27.4	29.3	
15	0	0	0	5.0	16.5	0	
16	0	0	0	0	44.3	45.0	
17	0	0	0	0	41.1	52.2	
18	0	0	0	0	53.2	52.2	
19	0	0	0	0	26.6	52.2	
20	0	0	0	0	0	4.4	
21	0	0	0	0	80.6	0.0	
22	10.0	0	0	0	33.0	16.9	
23	5.0	0	0	0	43.5	24.2	
24	4.6	0	0	0	98.1	48.4	
25	3.5	0	0	0	76.4	48.4	
26	5.0	0	50.8	0	20.9	41.1	
27	5.0	0	48.3	0	69.2	12.1	
28	4.5	0	50.8	0	72.1	0	
29	0	0	0	0	41.1	0	
30	4.5	0	0	0	53.2	27.7	
31	-	0	-	0	21.8	50.6	
TOTAL	42.1	34.5	149.9	28.0	1,332.0	920.7	
MONTHLY TOTAL	42.1	34.5	149.9	2,280.7			

All volumes in cubic metres (m³).

No exceedances of the daily drilling water use limit (250 m³/day) occurred in 2021.



Table 4.2: Daily and Monthly Volumes of Water Used for Drilling Activities on Inuit-Owned and Crown Lands by Source - 2021

Day	Aug	gust	September			
Day	MRP-3 (Mary River)	KM 108 Runoff	MRP-3 (Mary River)	MRP-1	Camp Lake	
1	33.8	41.0	48.4	0	0	
2	49.6	21.6	24.2	0	0	
3	24.2	34.9	33.9	0	0	
4	9.7	24.1	43.6	38.7	0	
5	33.8	22.9	33.9	55.6	0	
6	0	38.5	23.0	46.0	0	
7	13.3	39.8	0	33.9	0	
8	24.2	0	0	0	0	
9	99.2	27.7	0	0	0	
10	43.5	21.8	0	0	0	
11	24.2	7.3	0	0	0	
12	21.8	31.5	0	0	0	
13	4.8	21.8	0	0	0	
14	39.9	0	0	0	0	
15	33.9	0	0	0	0	
16	78.8	0	0	0	0	
17	66.0	0	0	0	0	
18	78.8	0	0	0	6.0	
19	32.1	0	0	0	5.0	
20	24.9	0	0	0	4.0	
21	35.2	0	0	0	7.0	
22	7.9	0	0	0	0	
23	45.9	0	0	0	4.0	
24	48.4	0	0	0	6.0	
25	78.8	0	0	0	0	
26	43.5	0	0	0	0	
27	98.2	58.0	0	0	0	
28	21.8	9.7	0	0	0	
29	31.5	2.4	0	0	0	
30	48.4	0	0	0	0	
31	46.0	0	-	-	-	
TOTAL	1,242.1	403.0	207.0	174.2	32.0	
MONTHLY TOTAL	1,64	45.1		413.2		

All volumes in cubic metres (m³).

No exceedances of the daily drilling water use limit (250 m³/day) occurred in 2021.



Table 5.1: Exploration and Geotechnical Environmental Monitoring Logs - 2021

Location	Property Section	ID		ation 33 Zone 17W)	Environmental Monitoring Logs	
	,,		Easting	Northing	(Pre, Daily, Post)	
~1.5 KM Southwest from Tote Road KM 63	Tote Road ^b	BH21-03A	528623	7925080	Appendix E.1.1	
~3 KM Southwest from Tote Road KM 63	Tote Road ^b	BH21-03B	528693	7924272	Appendix E.1.2	
~4.5 KM Southwest from Tote Road KM 63	Tote Road ^b	BH21-03C	528717	7922628	Appendix E.1.3	
~5.5 KM Southwest from Tote Road KM 63	Tote Road ^b	BH21-03D	529249	7921486	Appendix E.1.4	
~6.5 KM Southwest from Tote Road KM 63	Tote Road ^b	BH21-03E	529496	7920549	Appendix E.1.5	
~14 Southwest KM from Tote Road KM 63	Tote Road ^b	BH21-03F	534809	7918518	Appendix E.1.6	
~9.5 Southwest KM from Tote Road KM 63	Tote Road ^b	BH21-03G	530165	7917915	Appendix E.1.7	
~12.5 Southwest KM from Tote Road KM 63	Tote Road ^b	BH21-03J	533102	7918264	Appendix E.1.8	
~200 m East from Tote Road KM 90	Tote Road ^b	Quarry 14B	551082	7917408	Appendix E.1.9	
KM 106 (Explosives Magazine)	Mine Site ^e	DH21-01	563880	7913098	Appendix E.1.10	
KM 106 (Explosives Magazine)	Mine Site ^e	DH21-02	563748	7913054	Appendix E.1.11	
KM 106 (Explosives Magazine)	Mine Site ^e	DH21-03	563754	7913183	Appendix E.1.12	
KM 104	Mine Site ^c	DH21-04	562117	7913107	Appendix E.1.13	
KM 104	Mine Site ^c	DH21-05	561954	7913100	Appendix E.1.14	
KM 104	Mine Site ^c	DH21-06	561853	7913127	Appendix E.1.15	
KM 104	Mine Site ^c	DH21-07	561778	7913211	Appendix E.1.16	
KM 104	Mine Site ^c	DH21-08	561739	7913289	Appendix E.1.17	
KM 104	Mine Site ^c	DH21-09	561762	7913476	Appendix E.1.18	
SDLT - Sheardown Lake	Mine Site ^c	DH21-10	561234	7912913	Appendix E.1.19	
SDLT - Sheardown Lake	Mine Site ^c	DH21-11	561145	7913032	Appendix E.1.20	
SDLT - Sheardown Lake	Mine Site ^c	DH21-12	561060	7913144	Appendix E.1.21	
SDLT - Sheardown Lake	Mine Site ^c	DH21-13	560955	7913275	Appendix E.1.22	
SDLT - Sheardown Lake	Mine Site ^c	DH21-14	560833	7913423	Appendix E.1.23	
SDLT - Sheardown Lake	Mine Site ^c	DH21-15	560884	7913454	Appendix E.1.24	
WH Camp	Mine Site ^b	DH21-16	558196	7914315	Appendix E.1.25	
KM 105 Pond - S Embankment	Mine Site ^b	DH21-17	558082	7914410	Appendix E.1.26	
KM 105 Pond - S Embankment	Mine Site ^b	DH21-18	557960	7914579	Appendix E.1.27	
Camp Lake	Mine Site ^b	DH21-19	557887	7914786	Appendix E.1.28	
KM 105 Pond - NW Embankment	Mine Site ^e	DH21-20	563710	7913090	Appendix E.1.29	
KM 105 Pond - NW Embankment	Mine Site ^e	DH21-21	561709	7913339	Appendix E.1.30	
KM 105 Pond - NW Embankment	Mine Site ^e	DH21-22	560945	7913389	Appendix E.1.31	
KM 105 Pond - S Embankment	Mine Site ^b	DH21-23	558294	7914264	Appendix E.1.32	
Deposit No. 1	Mary River ^e	MR1-21-308	563857	7914888	Appendix E.2.1	
Deposit No. 1	Mary River ^e	MR1-21-310	563818	7915055	Appendix E.2.2	
Deposit No. 1	Mary River ^e	MR1-21-312	563818	7915055	Appendix E.2.3	
Deposit No. 1	Mary River ^e	MR1-21-314	563644	7914656	Appendix E.2.4	
Deposit No. 1	Mary River ^e	MR1-21-GT01	563680	7915023	Appendix E.2.7	
Deposit No. 1	Mary River ^e	MR1-21-GT02	563510	7914581	Appendix E.2.8	
Deposit No. 1	Mary River ^e	MR1-21-321	563756	7914834	Appendix E.2.5	
Deposit No. 1	Mary River ^e	MR1-21-326	563450	7914243	Appendix E.2.6	
Deposit No. 3	Mary River ^f	MR3-21-309	567660	7913579	Appendix E.2.9	
Deposit No. 3	Mary River ^f	MR3-21-311	567660	7913579	Appendix E.2.10	
Deposit No. 3	Mary River ^f	MR3-21-315	567650	7913635	Appendix E.2.11	
Deposit No. 3	Mary River ^f	MR3-21-313	567807	7913612	Appendix E.2.12	
Deposit No. 3	Mary River ^f	MR3-21-317	567807	7913612	Appendix E.2.13	
Deposit No. 3	Mary River ^f	MR3-21-316	567449	7913471	Appendix E.2.14	
Deposit No. 3	Mary River ^f	MR3-21-318	567449	7913471	Appendix E.2.15	
Deposit No. 3	Mary River ^f	MR3-21-319	567074	7913450	Appendix E.2.16	
Deposit No. 3	Mary River ^f	MR3-21-320	568038	7914032	Appendix E.2.17	
Deposit No. 3	Mary River ^f	MR3-21-322	568038	7914032	Appendix E.2.18	
Deposit No. 3	Mary River ^f	MR3-21-323	567154	7913428	Appendix E.2.19	
Deposit No. 3	Mary River ^f	MR3-21-324	567305	7913443	Appendix E.2.20	
Deposit No. 3	Mary River ^f	MR3-21-325	567305	7913443	Appendix E.2.21	

^a Crown Lands.

^b Inuit-Owned Lands - Parcel PI-16.

^c Inuit-Owned Lands - Parcel PI-17.

^d Inuit-Owned Lands - Parcel PI-19.

^e Mining Lease L-2484.

^f Mining Lease L-2485.



Table 6.1: Drilling Wastes Managed and Deposit on Inuit-Owned and Crown Lands - 2021 a

ID	Property Section	Type of Drilling Waste Produced	Waste Storage	Waste Storage Location (UTM; NAD83 Zone 17W)		Annual Drilling
		(e.g. drill cuttings, drill mud)	Area / Type ^b	Easting	Northing	Waste Deposit (m³) ^c
MR1-21-308	Deposit No. 1 ^e	Drill Cuttings	Silt Fences	563857	7914888	0.71
MR3-21-313	Deposit No. 3 ^f	Drill Cuttings	Silt Fences	567807	7913612	0.89
MR1-21-310	Deposit No. 1 ^e	Drill Cuttings	Silt Fences	563818	7915055	0.96
MR3-21-309	Deposit No. 3 ^f	Drill Cuttings	Silt Fences	567660	7913579	0.81
MR3-21-311	Deposit No. 3 ^f	Drill Cuttings	Silt Fences	567660	7913579	0.91
MR1-21-312	Deposit No. 1 ^e	Drill Cuttings	Silt Fences	563818	7915055	1.22
MR3-21-315	Deposit No. 3 ^f	Drill Cuttings	Silt Fences	567650	7913635	0.54
MR1-21-314	Deposit No. 1 ^e	Drill Cuttings	Silt Fences	563644	7914656	1.04
MR1-21-GT01	Deposit No. 1 ^e	Drill Cuttings	Silt Fences	563680	7915023	0.74
MR3-21-316	Deposit No. 3 ^f	Drill Cuttings	Silt Fences	567449	7913471	0.81
MR3-21-317	Deposit No. 3 ^f	Drill Cuttings	Silt Fences	567807	7913612	0.98
MR3-21-318	Deposit No. 3 ^f	Drill Cuttings	Silt Fences	567449	7913471	1.04
MR1-21-GT02	Deposit No. 1 ^e	Drill Cuttings	Silt Fences	563510	7914581	1.06
MR3-21-319	Deposit No. 3 ^f	Drill Cuttings	Silt Fences	567074	7913450	0.87
MR3-21-320	Deposit No. 3 ^f	Drill Cuttings	Silt Fences	568038	7914032	1.01
MR3-21-322	Deposit No. 3 ^f	Drill Cuttings	Silt Fences	568038	7914032	1.14
MR3-21-324	Deposit No. 3 ^f	Drill Cuttings	Silt Fences	567305	7913443	1.16
MR1-21-321	Deposit No. 1 ^e	Drill Cuttings	Silt Fences	563756	7914834	0.25
MR3-21-323	Deposit No. 3 ^f	Drill Cuttings	Silt Fences	567154	7913428	1.06
MR3-21-325	Deposit No. 3 ^f	Drill Cuttings	Silt Fences	567305	7913443	1.44
MR1-21-326	Deposit No. 1 ^e	Drill Cuttings	Silt Fences	563450	7914243	0.63
					TOTAL	19.26

^a Other small volumes of drill cuttings were Deposit within or within close proximity to land based geotechnical and exploration boreholes (refer to Table 2.1 for borehole coordinates).

^b In-Ground Sump IDs correspond to the exploration boreholes IDs that generated the Deposit cuttings.

^c Approximate volumes based on visual assessment.

^d Inuit-Owned Lands - Parcel PI-17.

^e Mining Lease L-2484

f Mining Lease L-2485



Table 8.1: New Impacts Related to Exploration and Geotechnical Activities on Inuit-Owned and Crown Lands - 2021

Property Section	Land Type / Parcel ID	Description of New Impact	Impact on Financial Security
Mine Site and on/off Tote Road (Route 3 of the North Railway)	Crown Lands, Inuit- Owned Lands - Surface and Subsurface (PI-16), Mining Lease L-2485	boreholes: BH21-03A, BH21-03B, BH21-03C, BH21-03D, BH21-03E, BH21- 03F, BH21-03G, BH21-03J and Quarry 14B.	No impact on financial security. Boreholes backfilled and equipment removed from site following completion. No outstanding reclamation works.
Water Management Plan	Inuit-Owned Lands - Surface and Subsurface (PI-17)	the proposed Mine Site Long-Term Water Management Plan (LTWMP). Twenty-three (23) boreholes were completed including: DH21-01 to DH21-	No impact on financial security. Boreholes backfilled and equipment removed from site following completion. No outstanding reclamation works.
Mine Site (Deposit Nos. 1 & 3)	Inuit-Owned Lands - Surface and Subsurface (PI-17)	Deposit No. 1 and thirteen (13) on Deposit No. 3. Includes boreholes: MR1-21-308, MR1-21-310, MR1-21-312, MR1-21-314, MR1-21-GT01, MR1-21-GT02, MR1-21-321, MR1-21-326, MR3-21-309, MR3-21-311, MR3-21-315, MR3-21-313, MR3-21-317, MR3-21-316, MR3-21-318, MR3-21-319, MR3-21-320, MR3-21-322, MR3-21-323, MR3-21-324, and MR3-21-325.	No impact on financial security. Boreholes backfilled or within footprint of the Deposit 1 open pit ultimate limit. All equipment removed, with the exception of survival shelters and supplies remaining at water source MRP-3.



Table 8.2: Reclamation Works Related to Exploration and Geotechnical Activities on Inuit-Owned and Crown Lands - 2021

Property Section	Land Type / Parcel ID	Reclamation Objectives	Reclamation Principle	Description of Reclamation Works	Regulatory Authority	Impact on Financial Security
Mine Site and Tote Road (Route 3 of the North Railway, Long Term Water Management Plan Drillling)	Crown Lands, Inuit-Owned Lands - Surface and Subsurface (PI-16, PI-17), Mining Lease L-2485	and chemical stability of the Exploration Project areas so as to protect the public health and safety and ecosystem integrity. • Allow for productive use of the land where		Boreholes backfilled and drilling equipment removed at the 2021 land-based geotechnical borehole locations along the proposed Route 3 of the North Railway, and at the mine site for the Long-Term Water Managament Plan.	CIRNAC, QIA	No impact on financial security held by the QIA or CIRNAC. No reclamation works outstanding for 2021 activities.
Mine Site (Deposit Nos. 1 & 3)	Inuit-Owned Lands - Surface and Subsurface (PI-17)	exploration activities are undertaken and ensures all disturbed areas are restored to a predisturbed state upon completion of work. • Ensure that the land is reclaimed in a manner that minimize or prevents erosion, and negates the requirement for long term maintenance and monitoring.		Drilling equipment removed from the exploration boreholes at the Mine Site on Deposit No. 1 and 3, with the exception of survival shelters and supplies stored at water source MRP-3.	QIA	No impact on financial security held by QIA. Exploration boreholes are either situated within the disturbed active mining area limits or are within close proximity to the Mine Haul Road and active mining area, resulting in negligible costs to reclaim. Borehole casings and drill rig anchoring rods were cut to near ground surface.



Table 8.3: Mary River Project Total Closure and Reclamation Security Summary - 2021 ^a

Authorization	Liability	Securities Held on 1 Jan 2021 (Actual) (\$)	Adjustments for 2021 (Actual) ^c (\$)	Securities Held on 31 Dec 2021 (Actual) (\$)
Type 'A' Water Licence	IOL ^b	113,371,000	7,628,500	120,999,500
2AM-MRY1325	Crown	1,591,000	1,197,000	2,788,000
Subtotal 1	Гуре 'A' Water Licence	114,962,000	8,825,500	123,787,500
Type 'B' Water Licence	IOL ^b			
2BE-MRY2131	Crown	1,250,000	-	1,250,000
Subtotal Type 'B' Water Licence		1,250,000	-	1,250,000
	GRAND TOTAL	116,212,000	8,825,500	125,037,500

^a Totals rounded to nearest '000 in CAD.

^b All security relating to Inuit Owned Land (IOL) held by Qikiqtani Inuit Association (QIA) under Commercial Lease No. Q13C301.

^cTotal adjustments for 2021 include the 2021 Annual Security Review, and the arbitration completed with QIA regarding the 2021 Work Plan.



FIGURES













