

Full Report Title:	2020 Site Update Report for the Nunavut Impact Review Board's Monitoring of TMAC Resources Inc.'s Doris North Gold Mine (NIRB File No. 05MN047) and Phase 2 Hope Bay (NIRB File No. 12MN001) Projects
Project:	Doris North Gold Mine and Phase 2 Hope Bay Projects
Project Location:	Kitikmeot Region, Nunavut
Land Tenure:	Inuit Owned Land
Project Owner:	TMAC Resources Inc. 40 King Street West Suite 2100 Toronto, ON M5H 3C2 Tel: (416) 628-0216
Proponent Contact:	Oliver Curran, Vice President Environment Affairs
Proponent Personnel:	Kyle Conway, On Site Environmental Supervisor
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Public Information Session:	August 29, 2019
Photos by:	TMAC Resources NIRB Staff (2019)
Cover photos:	Madrid Portal

TABLE OF CONTENTS

1	INTRODUCTION	1
	Objectives & Purpose of Site Update	1
	Doris North and Phase 2 Hope Bay Project History	2
	1.1 Hope Bay Projects Descriptions	2
	1.1.1 Doris North Project	2
	1.1.2 Phase 2 Project	3
2	SITE UPDATE	5
3	GENERAL OBSERVATIONS.....	5
	3.1 Doris North	5
	3.1.1 Roberts Bay Saline Discharge	5
	3.1.2 Waste Management.....	7
	3.1.3 Tailings Impoundment Area	8
	3.2 Phase 2 Hope Bay Belt	10
	3.2.1 Madrid North Site, Portal, and Naartok East Crown Pillar.....	10
4	PUBLIC INFORMATION SESSION.....	14
5	RECOMMENDATIONS AND DIRECTION.....	14
	5.1 Naartok East Pit – Wildlife Deterrence	14
6	CONCLUSION	14
	APPENDIX A – PUBLIC INFORMATION SESSION.....	15
	1.1 Meeting Materials	15
	1.2 Advertisements	16
	1.3 Meeting Notes	16

LIST OF TABLES

Table 1: Hope Bay Projects History	2
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LIST OF FIGURES

Figure 1: Hope Bay Layout (2018).....	4
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LIST OF PHOTOS

Photo 1: Roberts Bay (2019).....	3
Photo 2: Doris Site (2020)	4
Photo 3: Saline Discharge Pipeline.....	6
Photo 4: Waste Management Area (2019).....	7
Photo 5: New Incinerator	7
Photo 6: TIA 2018	8
Photo 7: TIA 2019	8
Photo 8: TIA 2020	8
Photo 9: TIA North Dam	9
Photo 10: TIA South Dam	9
Photo 11: Tailings Discharge at South Dam.....	10

Photo 12: Madrid North Portal	11
Photo 13: Madrid North Infrastructure	11
Photo 14: Madrid North Infrastructure 2	12
Photo 15: Madrid North Infrastructure 3	12
Photo 16: Naartok East Pit.....	13
Photo 17: Naartok East Pit Walls.....	13

1 INTRODUCTION

The Nunavut Impact Review Board (NIRB or Board) was established through Articles 10 and 12 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada (Nunavut Agreement)* and is responsible for post environmental assessment monitoring of a Project in accordance with Part 7 of Article 12 of the *Nunavut Agreement* and s. 135(4) of the *Nunavut Planning and Project Assessment Act*, S.C. 2013, c. 14 (*NuPPAA*).

The NIRB Monitoring Officer was unable to conduct a site visit in 2020 due to operational constraints and restrictions caused by the COVID-19 pandemic and therefore was unable to visually inspect activities occurring related to the project and assess compliance to the requirements of the Doris North and Phase 2 Hope Bay Project Certificates. Therefore, to ensure parties are kept up to date at site, the NIRB has developed a Site Update Report based on discussions, updates, and photos provided by the Proponent. This update will form a part of the NIRB's monitoring program.

1.1 Objectives & Purpose of Site Update

The objective of the NIRB's site update is to determine whether, and to what extent the land or resource use in question, is being carried out within the predetermined Terms and Conditions as set out in the amended Project Certificate as issued for the Doris North Gold Mine Project (Doris North) Certificate No. 003, and the Phase 2 Hope Bay (Phase 2) Certificate No. 009 in accordance with Section 12.7.2(b) of the *Nunavut Agreement* and [s. 135(3)(b) of the *NuPPAA*].

At the NIRB's request, TMAC personnel provided images of the project area and activities based on a list provided by the NIRB. The observations resulting from the 2020 imagery and information provided by TMAC Resources Inc. (TMAC) shall, wherever possible, be incorporated into the measurement of the relevant effects of both the Doris and the Phase 2 Projects, provide the information necessary for agencies to enforce terms and conditions of land or resource use approvals, and will further be used to assess the accuracy of the predictions contained in the project impact statements for both projects in accordance with Section 12.7.2 of the *Nunavut Agreement* and s. 135(3) of the *NuPPAA*.

2 DORIS NORTH AND PHASE 2 HOPE BAY PROJECT HISTORY

Table 1: Hope Bay Projects History

September 2006	Issuance of Project Certificate No. 003 (Doris North) to Miramar Hope Bay Limited
2008	Hope Bay Belt properties acquired by Newmont Mining Corporation
2012	Project placed in care and maintenance
March 2013	TMAC acquires Hope Bay Belt properties
April 2013	Project Certificate No. 003 amended to indicate TMAC as holder
2015	Doris North operations resumed and mine construction started
September 2016	Amendment of Project Certificate No. 003
February 2017	First gold pour
May 2017	Start of commercial production at Doris North
Winter 2018	Trenching and reclamation of Doris Crown Pillar
November 2018	Issuance of Project Certificate No. 009 (Phase 2 Hope Bay, Madrid North/South and Boston deposits)
Spring 2019	Start of construction at Madrid North
March 2020	Madrid construction ceases, Doris North enters minimal operations due to COVID-19

2.1 Hope Bay Projects Descriptions

The Hope Bay Belt properties are located 110 kilometres (km) south of Cambridge Bay and 65 km east of Omingmaktok (Bay Chimo) near Melville Sound in the West Kitikmeot region of Nunavut. The Project involves the construction, operation, and eventual decommissioning of underground gold mines and small open pits for crown pillar removal located on Inuit-owned lands and involving both Inuit and Crown-owned minerals. Doris is located at the north end of the Hope Bay Belt while the Phase 2 Hope Bay Belt is divided into two (2) parts with the Madrid sites (North and South) located approximately eight (8) km south of Doris North, and the Boston site 80 km further south. The Project sites are accessed by sealift for fuel and supplies, and by air for select freight and all personnel movements (see [Figure 1](#) and [Photo 1](#)).

2.1.1 Doris North Project

The Doris North mine site is comprised of a camp ([Photo 2](#)), airstrip, and associated mining infrastructure including fuel storage, jetty, laydown areas, and a single ramp access. The

Amendment Application approved in 2016 extended the mine life for the Doris North Project from a four (4) years of operations to six (6) years through the mining of two (2) additional mineralized zones (Doris Connector and Doris Central) to be accessed via the existing Doris North portal. Also approved in the amendment were the alteration of deposition of tailings to aerial. TMAC has constructed a pipeline to dispose of water from the Tailings Impoundment Area (TIA) and saline water from underground into Roberts Bay. At the time of this writing the pipeline was constructed but has not been used for saline discharge.

Operations were reduced to minimal levels beginning in March 2020 due to the COVID-19 pandemic.



Photo 1: Roberts Bay (2019)

2.1.2 Phase 2 Hope Bay Belt Project

The Madrid North site is currently undergoing construction and is connected by an all-weather road to Doris North. Mining will be carried out via portal and the ore transported to Doris North for processing with personnel based out of the Doris North camp. In 2019 – early 2020 a pit to excavate the crown pillar was started, as well as an underground portal and support infrastructure. However, operations at Madrid ceased in March 2020 due to the COVID-19 pandemic.

Madrid South and Boston sites will be constructed later. The all-weather road will be extended to the Boston Site, with construction at Boston beginning when the road is completed. The Boston site is approved to have its own camp, air strip, and other mining infrastructure/facilities.

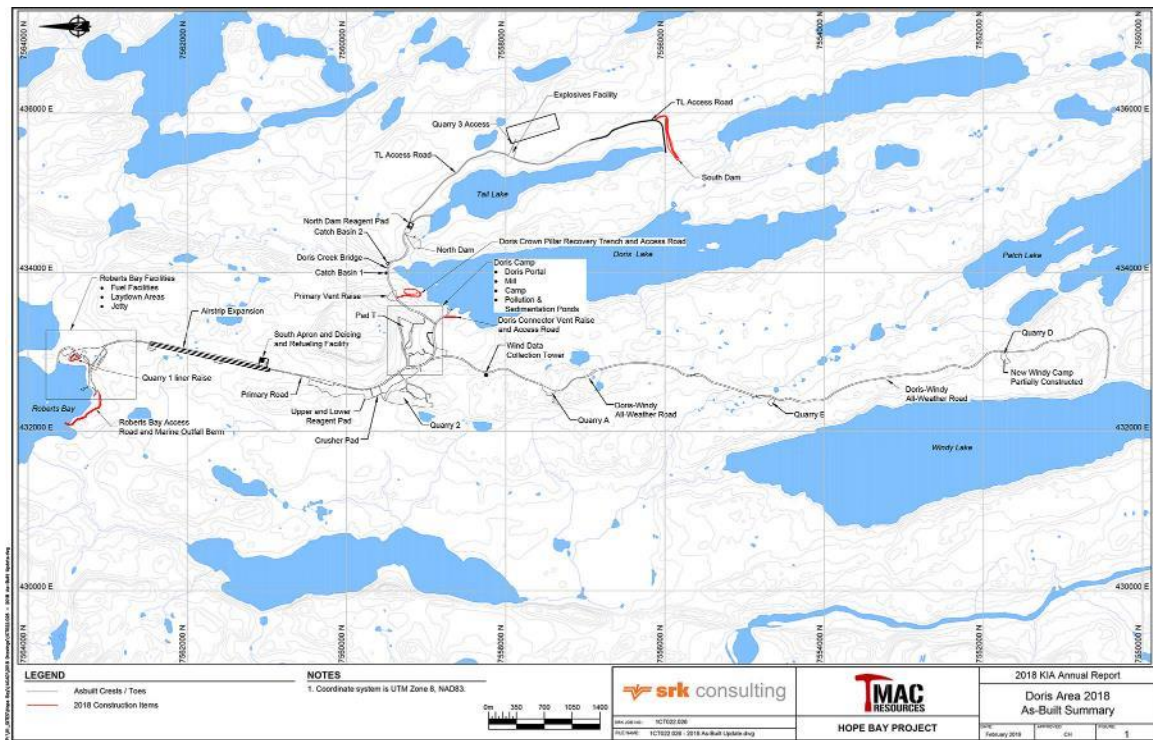


Figure 1: Hope Bay Layout (2018)



Photo 2: Doris Site (2020)

3 SITE UPDATE

Owing to travel restrictions imposed by Nunavut's Chief Public Health Officer as a result of the ongoing Covid-19 (novel coronavirus) pandemic, NIRB staff were unable to organize a site visit in the summer of 2020.

NIRB staff will endeavor to continue to meet their obligations under Part 7 of Article 12 of the *Nunavut Agreement* and s. 135(4) of the *Nunavut Planning and Project Assessment Act*, S.C. 2013, c. 14 (*NuPPAA*) to monitor post environmental assessment of a Project in future years as practicable owing to Chief Public Health Officer directions.

CIRNAC inspectors will be visiting the Hope Bay site in October 2020 and will be observing the site for the Project Certificate.

4 GENERAL OBSERVATIONS

The following are general observations based on images supplied by TMAC and do not pertain specifically to any terms or conditions of the Project Certificates No. 003 and No. 009.

In general, the site has not changed significantly since the last site visit in 2019 aside from the construction of infrastructure at Madrid, which halted in March 2020. As such, this report will focus on significant material changes to the project areas.

4.1 Doris North

4.1.1 Roberts Bay Saline Discharge

The Roberts Bay saline discharge pipe ([Photo 3](#)) was completed in 2019 but TMAC has reported that it has not yet been used for discharge.



Photo 3: Saline Discharge Pipeline

4.1.2 Waste Management



Photo 4: Waste Management Area (2019)



Photo 5: New Incinerator

Waste management at Hope Bay is carried out in a portion of Quarry 2 ([Photo 4](#)), which will be eventually used as a solid waste landfill. TMAC confirmed that in the 2019 sealift a new incinerator was delivered to Hope Bay and has since been installed ([Photo 5](#)) in the waste management area adjacent to the burn pan.

4.1.3 Tailings Impoundment Area

As anticipated the volume of tailings within the Tailings Impoundment Area (TIA) has increased. The following series of images show the changes which have taken place within the TIA from 2018 to 2020 ([Photo 6](#), [Photo 7](#), and [Photo 8](#)).



Photo 6: TIA 2018



Photo 7: TIA 2019



Photo 8: TIA 2020

Photos 9 through 11 show the North Dam and South Dam and South Dam tailings discharge.



Photo 9: TIA North Dam



Photo 10: TIA South Dam



Photo 11: Tailings Discharge at South Dam

4.2 Phase 2 Hope Bay Belt

4.2.1 Madrid North Site, Portal, and Naartok East Crown Pillar

As noted, operations at the Madrid North site were halted in March 2020 as part of the general operational slowdown at Hope Bay. Images show the Madrid North Portal ([Photo 12](#)) and associated infrastructure ([Photo 13](#), [Photo 14](#), [Photo 15](#)).

The open pit of the Naartok East Crown Pillar ([Photo 16](#)) has water resulting from snowmelt and natural accumulation ([Photo 17](#)) that, when operations are resumed, will have to be pumped out and handled in accordance with the water management plan.



Photo 12: Madrid North Portal



Photo 13: Madrid North Infrastructure



Photo 14: Madrid North Infrastructure 2



Photo 15: Madrid North Infrastructure 3



Photo 16: Naartok East Pit



Photo 17: Naartok East Pit Walls

5 PUBLIC INFORMATION SESSION

Pursuant to the *Nunavut Agreement* and the Project Certificates No. 003 and No. 009; the NIRB monitoring responsibilities include providing periodic updates regarding its Monitoring Program for the communities most affected by the Hope Bay Projects. To further ensure ongoing awareness of Project-specific terms and conditions, and encourage effective participation throughout the Board's monitoring process, the NIRB scheduled a community information session in Cambridge Bay on August 20, 2020 in conjunction with the update for the Jericho Diamond Mine Project (00MN059) and the Back River Project (12MN036).

For a summary of the NIRB's Public information session and questions that were asked, please refer to [Appendix A](#). These comments help the Board identify items that need to be addressed or considered throughout the NIRB's monitoring program for the Hope Bay Projects.

6 RECOMMENDATIONS AND DIRECTION

Based on the imagery provided by TMAC, the Hope Bay Project facilities in operation appear to be well managed, and generally are maintained with adequate environmental protection measures and procedures in place.

6.1 Naartok East Pit – Wildlife Deterrence

One potential issue noted in the site imagery is the lack of wildlife deterrence, specifically for caribou, around the Naartok East Crown Pillar Pit. As operations have been suspended at the Madrid location, there is little to no deterrence to wildlife caused by mining activity. Consideration may be required for installing some form of deterrence to prevent wildlife from falling into the pit.

7 CONCLUSION

The Monitoring Officer notes that based on the information provides by TMAC, overall TMAC has generally complied with the Terms and Conditions of the amended Project Certificate No. 003 and Project Certificate No. 009 and has been responsive in addressing any concerns raised by the Monitoring Officer. The Project sites remain in good condition as TMAC progresses with construction and operations activities on site. The Monitoring Officer also commends TMAC on the general cleanliness and tidiness of the Project site.

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Date: October 22, 2020
Signature:



Reviewed by: Kelli Gillard, PAg. CTAJ
Title: Manager, Project Monitoring
Date: October 22, 2020
Signature:



Appendix A – Public Information Session

To further ensure ongoing awareness of Project-specific terms and conditions, and encourage effective participation throughout the Board's monitoring process, the NIRB scheduled a community information session for TMAC's Doris North Gold Mine Project (05MN047) and Phase 2 Hope Bay Belt Project (12MN001), Sabina's Back River Project (12MN036), and an update on the Jericho Diamond Mine (00MN059) site stabilization and remediation activities. The sessions consisted of an afternoon open house (2:00-4:00pm) and an evening update meeting (7:00pm-9:00pm) at the Luke Noviligak Community Hall in Cambridge Bay on August 20, 2020 and were open to all members of the public, subject to COVID-19 limits on the number of people gathered.

All in attendance, including government, industry representatives and media, were asked to sign in and identify the community or organization they represented. The afternoon session had no attendance and the evening session three (3) people. The NIRB Staff in attendance included Keith Morrison, Technical Advisor II/Monitoring Officer for Doris North, Phase 2 Hope Bay, Back River, and Jericho; Karen Costello, Executive Director; Kelli Gillard, Manager Project Monitoring; Emily Koide, Technical Advisor; and Francis Emingak, Jr. Technical Advisor.



The NIRB Monitoring Officer made a PowerPoint presentation covering each Project and providing a general update of the NIRB's Monitoring Process, with a focus on Project updates, including an overview of project activities and key components, and issues identified through the project specific monitoring programs. The presentation also outlined the ways in which the public can participate in the Board's monitoring process. The public was encouraged to comment and ask questions relating to the NIRB's process, activities undertaken, project effects, and any concerns related to the Project. Both written and verbal comments were accepted and verbal comments were recorded by NIRB staff members.

1.1 Meeting Materials

At the public meeting, the following materials were provided by the NIRB:

- The NIRB's PowerPoint presentation (in English and Inuinnaqtun)
- Comment Forms (in English and Inuinnaqtun)

All document received and pertaining to this project, including copies of consultation materials, the presentation, and advertisements, can be accessed from the NIRB's online public registry at:

Doris North Gold Mine: www.nirb.ca/project/123632

Phase 2 Hope Bay: www.nirb.ca/project/124148

Back River Project: www.nirb.ca/project/124149.

Jericho Diamond Mine: www.nirb.ca/project/123035

1.2 Advertisements

The NIRB advertised the meeting through radio, poster, and online through Facebook in Cambridge Bay both in English and Inuinnaqtun in the three (3) weeks prior to the meeting.

1.3 Meeting Notes

The following sections summarize the comments and concerns that were raised both verbally and in writing at the community information sessions. The comments assist the Board identify items that need to be addressed or considered throughout the NIRB's monitoring program for each project.

Doris North / Hope Bay Belt Projects

Tailings Impoundment Area:

- Is Tails Lake still full of water?
- They fished out Tails Lake?

Operations:

- Are they still working at Madrid?
- How long until they start hiring again?

Back River Gold Mine Project

COVID-19 Restrictions:

- Comment from Sabina rep that current restrictions on Nunavut employees are likely to continue until December.

Jericho Diamond Mine Project

Open Pit:

- Someone once fell and slid down the pit.