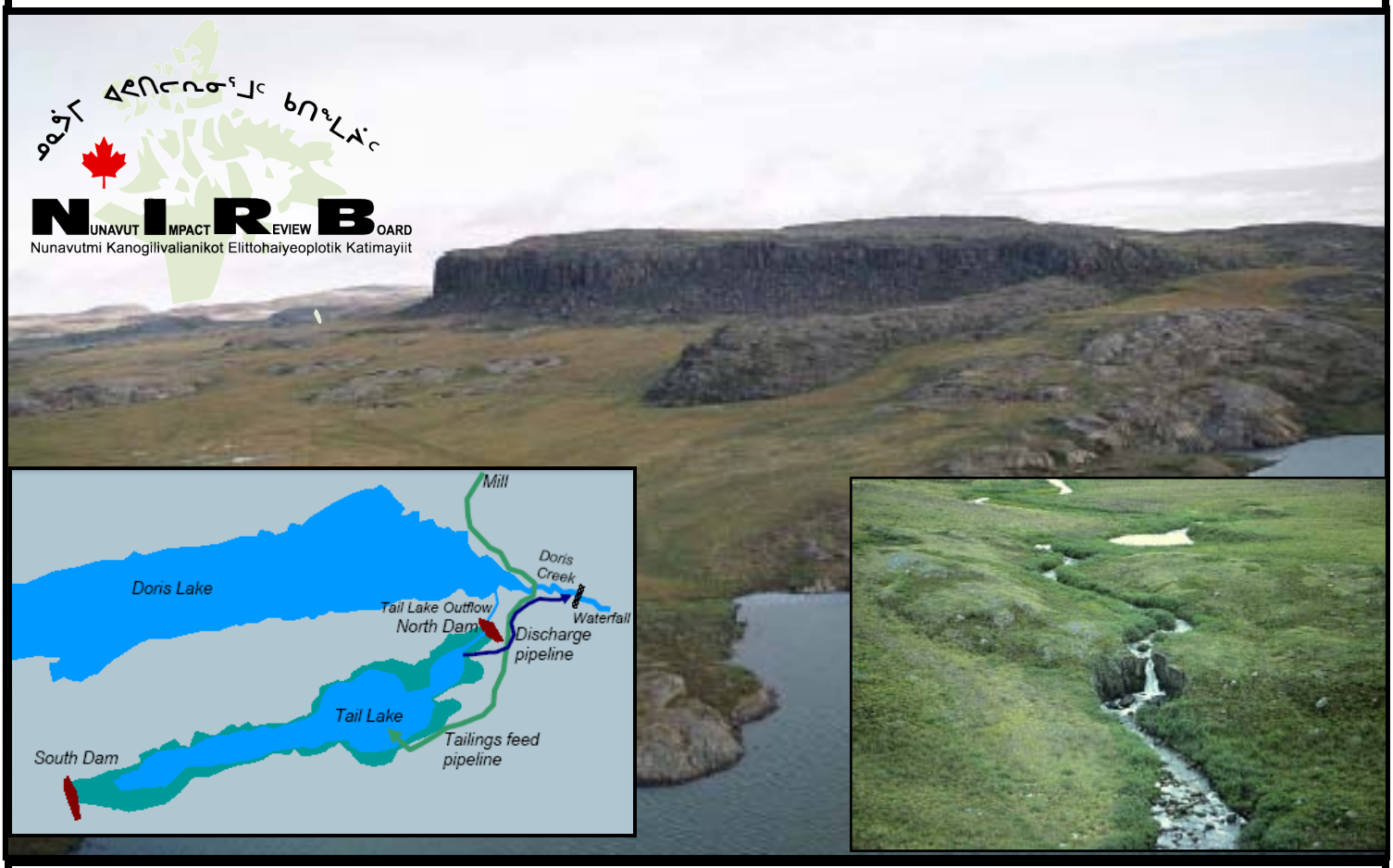
Nunavut Impact Review Board
File No.: 05MN047



Final Hearing Report for the Doris North Gold Project

Miramar Hope Bay Limited
Doris North Gold Mine Application

March 2006

Nunavut Impact Review Board (NIRB)

PO Box 1360
Cambridge Bay, Nunavut, Canada
X0B 0C0

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Cover Photo Credits:
Doris Lake camp site area – Miramar Hope Bay Limited.
Doris creek waterfall – Miramar Hope Bay Limited, Vegetation Report.
Tail Lake Water Management Schematic – Miramar Hope Bay Limited.
NIRB Final Hearing Community Session – J. Rusk (NIRB).

Photo 1. Board members (from left): Peter Paneak, Peter Akkikungnaq, Elizabeth Copland, Mary Avalak, Lucassie Arragutainaq

THIS REPORT IS SUBMITTED TO THE HONOURABLE JIM PRENTICE, MINISTER OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT AND FEDERAL INTERLOCUTOR FOR METIS AND NON-STATUS INDIANS BY THE NUNAVUT IMPACT REVIEW BOARD ON THIS 6TH DAY OF MARCH 2006.

Mary Avalak
Board Member

Peter Paneak
Board Member

Peter Akkikungnaq
Vice Chairperson

Lucassie Arragutainaq
Board Member/Secretary-Treasurer

Elizabeth Copland
Acting Chair

NIRB File No.: 05MN047

March 6, 2006

Honourable Jim Prentice
Minister of Indian Affairs and Northern
Development and Federal Interlocutor for Métis and Non-Status Indians
Terrasses de la Chaudière
10 Wellington, North Tower
Gatineau, Quebec
K1A 0H4

By Courier and Email

RE: Final Hearing Report for the Doris North Gold Project

Dear Minister Prentice,

Please find enclosed the above-cited report by the Nunavut Impact Review Board (NIRB) issued to you pursuant to section 12.5.6 of the *Nunavut Land Claims Agreement* (NLCA). The report contains an assessment of the Doris North Gold Project (the Project) and its impacts and determines that the Project should proceed. NIRB has proposed terms and conditions for the Project which reflect its objectives set out in section 12.2.5 of the NLCA.

In accordance with section 12.5.7 of the NLCA, your approval and decision is required.

Translated versions of the report are being prepared in Inuktitut, Inuinnaqtun and French, and will be available as soon as possible. Please contact the undersigned in writing should you have any questions regarding this matter.

Sincerely,

(*Original Signed by*)

Elizabeth Copland
Acting Chair

c.c. D. Long, Miramar Hope Bay Limited
Doris North Distribution List
NIRB Public Registry

RECORD OF PROCEEDINGS

Project Proponent: Miramar Hope Bay Limited
300 - 889 Harbourside Drive
North Vancouver, B.C.
Canada, V7P 3S1
Telephone: (604) 985-2572
Facsimile: (604) 980-0731

Project Description Received: February 14, 2005

Dates of Hearings: Day 1: January 30, 2006, Cambridge Bay, NU.
Day 2: January 31, 2006, Cambridge Bay, NU.
Day 3: February 1, 2006, Cambridge Bay, NU.
Day 4: February 2, 2006, Cambridge Bay, NU.
Day 5: February 3, 2006, Cambridge Bay, NU.

Members Present: Elizabeth Copland, Acting Chair
Mary Avalak
Peter Paneak
Lucassie Arragutainaq
Peter Akkikungnuaq

Board Staff:		
	Executive Director:	S. Briscoe, B.A
	Technical Advisor:	S. Lines, P.Biol., DEIA
	Technical Advisor:	K. Tunaley, B.Eng., MIT
	Hearing Coordinator/ Technical Advisor:	C. Inglis, B.A
	Manager of Env. Admin.:	G. Joudrey
	Administrative Trainee:	S. Novoligak

Interpreters: J. Tucktoo-Lacasse, J. Otokiak, J. Panioiak, M. Hunt

NIRB Legal Counsel: W.A. Tilleman, Q.C.

Court Reporter: K. Shumann, (DICTA Court Reporting)

Sound Technician: P. Braden, (PIDO productions)

Parties: Proponent – Miramar Hope Bay Limited:
D. Long, Vice - President Legal
B. Armstrong, Counsel
B. Labadie, Chief Operating Officer
T. Maloof, Manager of Environmental Auditing and Permitting
H. Duggan, Vice President Human Resources

A. Buchan, Manager Community Relations
L. Connell, Engineeer (AMEC)
M. Rykaart, Engineer (SRK)
J. Chapman, Engineer
G. Ash, Biologist (Golder)
C. Robinson, Biologist (Golder)
C. de la Mare, Biologist (Golder)
J. Virgil, Biologist (Golder)
N. Schmidt, Engineer (Golder)

Nunavut Tunngavik Incorporated:
J. Eetoolook, Vice President
J. Ehaloak, Environmental Coordinator
G. Hakongak, Sr. Advisor on Environment
K. Morrison, Administrative Geologist

Kitikmeot Inuit Association:
D. Havioyak, President
J. Donihee, Counsel
G. Clark, Manager Environment and Resource Development
M. McGurk, Rescan Environmental
B. Davidson, Socio-economics
F. Elias, Executive Director

Government of Nunavut:
M. Atkinson, Manager Land Use and Environmental Assessment
M. Setterington, Ecosystems Biologist
J. Ross, Chief Archeologist
C. Hunter, Economic Development and Transportation
B. Jencke, Director of Career and Early Childhood Services
P. Scholz, Community and Government Services

Indian and Northern Affairs Canada:
C. McLean, Director of Operations
L. Webber, Legal Counsel
J. Holwell, Land Administration Specialist
I. Rumbolt, Acting Regional Coordinator Water Resources
R. Abernathy-Gillis, Manager of Environment
A. Fleischer, Environmental Assessment Coordinator
M. Hine, Resource Development Advisor
J. Gertzbein, Mineral Development Advisor
C. Drouin, Communications Officer
A. Cormier, Administration Assistant
E. Hopkins, Environmental Policy Analyst
E. Denholm, (Gartner Lee Ltd)
H. Klein, (Gartner Lee Ltd)

L. Gomm, (Gartner Lee Ltd)
H. Hartmaier, (BGC Engineering)
E. Yaremko, (Northwest Hydraulics Consultants)
P. Mehling (Mehling Environmental)
D. Brubacher, (Brubacher Development Strategies)

Environment Canada:
C. Spagnuolo, Environmental Assessment Specialist

Fisheries and Oceans Canada:
T. Gordanier, Habitat Management Biologist

Natural Resources Canada:
R. Johnstone, Deputy Director of Environmental Assessment and Regulatory Affairs

Transport Canada:
D. Soloway, Environmental Assessment Programme Manager
M. Akhtar, Marine Safety
J. Morrell, Environmental Assessment Officer

Health Canada:
C. Dunn, Environmental Assessment Officer

Independent Consultant:
R. Halim, Sr. Geotechnical Engineer (Hatch Acres)

Kugluktuk Hunters and Trappers Organization:
J. Novoligak
D. Enogaloak

Hamlet of Cambridge Bay:
C. King, Economic Development Officer
M. Gillis, Mayor

Community Representation:
Community Representatives from Cambridge Bay
Community Representatives from Kugluktuk
Community Representatives from Bathurst Inlet
Community Representatives from Omingmaktok
Community Representatives from Gjoa Haven
Community Representatives from Taloyoak

Nunavut Water Board observer: D. Filiatrault, Director of technical services

Chairperson's Foreword

This report is prepared for the Minister of Indian and Northern Affairs Canada as per Article 12 of the Nunavut Land Claims Agreement. However, it is also intended for the diverse group of interested persons who participated in the Part 5 Review process and will be translated accordingly.

The Board would like to thank all those who provided expert advice, traditional knowledge, and who shared their support and/or concerns for the Project. With this input the Board was able to make an informed decision recommending that this Project proceed to the regulatory stage, subject to the terms and conditions included in this report.

NIRB would also like to thank Miramar Hope Bay Limited for their cooperation during this process, and expects that such cooperation will continue with NIRB and the regulators in the future.

As development in Nunavut continues to expand, NIRB is confident that the future well-being of Nunavut residents and their land, water and resources, can be protected through the impact assessment process. The success of this Part 5 Review is indicative of NIRB's capacity and determination to meet those objectives, and the Board thanks Indian and Northern Affairs Canada for its funding and support. NIRB hopes for the continued participation and cooperation of all parties in the impact assessment process in Nunavut.

Finally, I would like to thank the Board and Board staff for their effort throughout the process for without them this would not be possible.

Kind Regards,

Elizabeth Copland
Acting Chair

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Executive Summary – English

The Nunavut Impact Review Board has a Nunavut Land Claims mandate to review the environmental and socio-economic impacts of project proposals, and to recommend to the Minister whether or not projects should proceed, and if so, to add terms and conditions to the approval.

In the case of Miramar Hope Bay Limited, and its Doris North Gold Project proposal, the Board held a Final Hearing in the community of Cambridge Bay. The Board heard from community members from Kugluktuk, Cambridge Bay, Bathurst Inlet, Omingmaktok, Gjoa Haven, and Taloyoak. Input was also received from Elders, Hamlet representatives, both the federal and territorial governments, and an independent consultant.

In result, the Board is recommending that Miramar Hope Bay Limited's Doris North Gold Project be approved and proceed to the regulatory stage.

The Board finds that this Project will provide employment and economic benefits particularly to the people of the Kitikmeot, and overall economic benefits to the people of Nunavut through royalties collected by Nunavut Tunngavik Inc.. The Board also notes that the Kitikmeot Inuit Association has initialed an Inuit Impact Benefit Agreement with Miramar Hope Bay Limited indicating their support for this Project. However, to supplement the Inuit Impact Benefit Agreement and achieve local government objectives, the Board requires that a Socio-economic Monitoring Committee follow the Doris North Project.

Further, the Board has significant concern for potential impacts on the biophysical environment, including water quality and wildlife. The Doris North Project is the first mine development in the Hope Bay Belt; as such, the Board requires that strict monitoring be undertaken.

NIRB finds that the impacts from the Doris North Gold Project proposal can be mitigated and managed. Therefore, contingent on the Minister's approval, the Doris North Gold Project will be subject to the terms and conditions contained in this report, including a NIRB Monitoring Officer.

Executive Summary – Inuktitut

ᑐᓴᕋᒃᓴᖅ ᓇᐃᓈᖅᓯᒪᔪᖅ - ᐃᓄᒃᑎᑐᑦ

ᓄᓇᕗᑦ ᐊᕙᑎᓕᕆᔩᑦ ᑲᑎᒪᔨᖏᑦ ᐱᔪᓐᓇᕈᑎᖃᒻᒪᑕ ᐱᖁᔭᖅᔪᐊᖅᑎᒍᑦ ᕿᒥᕐᕈᔪᓐᓇᐅᑎᒥᓐᓂᒃ ᐊᕙᑎᓕᕆᔾᔪᑎᓂᒃ ᐊᒻᒪᓗ ᐃᓄᓯᕐᓅᖓᔪᓂᒃ - ᑮᓇᐅᔾᔭᒃᓴᐅᑎᓄᑦ ᒪᑭᒪᔾᔪᑎᒃᓴᓂᒃ ᐊᒃᑐᐊᓂᓕᖕᓂᒃ ᐱᔪᓂᒃ ᐱᓕᕆᐊᒃᓴᐅᔪᒪᔪᓂᒃ ᑐᒃᓯᕌᖑᓯᒪᔪᓂᒃ, ᐊᒻᒪᓗ ᐊᑑᑎᓕᖁᔭᒥᓐᓂᒃ ᑐᓂᓯᔪᓐᓇᕐᒪᑕ ᒥᓂᔅᑕᒧᑦ ᓇᓪᓕᐊᒃᑯᑐᐃᓐᓇᖅ ᐅᕝᕙᓗᑭᐊᖅ ᐱᓕᕆᐊᒃᓴᑦ ᑲᔪᓯᑭᐊᖅᑲᖏᒻᒪᖔᑕ, ᑲᔪᓯᓂᐊᖅᐸᑦ ᐊᓯᐃᓪᓛᒃ, ᐃᓚᒋᓕᐅᔾᔮᒍᓐᓇᕐᒪᑕ ᑐᑭᓕᐅᖅᓯᒪᔪᓂᒃ ᐊᒻᒪᓗ ᖃᓄᖅ ᐅᖃᐅᓯᓕᐅᖅᓯᒪᔭᖏᓐᓂᒃ ᐊᑑᑕᐅᖁᔭᖏᓐᓂᒃ ᒪᓕᒃᑕᐅᓗᑎᒃ ᐊᖏᖅᑲᒃᓴᕈᓐᓂᐊᕐᒪᑕ ᑕᐃᒪᓐᓇ ᑭᓯᐊᓂ.

ᐅᑯᓄᖓᖓᔪᑦ Miramar Hope Bay Limited-ᑯᓐᓄᑦ ᐊᒻᒪᓗ ᐅᑯᐊ Doris North-ᒥ ᒎᓗᓂᒃ ᐱᓕᕆᕝᕕᒃᓴᐅᔪᒪᔪᒥᒃ ᑐᒃᓯᕌᖑᓯᒪᓪᓗᓂ, ᑲᑎᒪᔩᑦ ᑲᑎᒪᑎᑦᓯᕋᑖᓚᐅᕐᒪᑕ ᑭᖑᓪᓕᖅᐹᖅᓯᐅᒻᒥᒃ ᓈᓚᒋᐊᖅᓯᒪᑎᑦᑐᒋᑦ ᓄᓇᓕᖓᓐᓂᒃ ᐱᔪᑦ ᐃᖃᓗᒃᑑᑦᑎᐊᒥ ᑲᑎᒪᔩᑦ ᓈᓚᓚᐅᕐᒪᑕ ᓄᓇᓕᖕᓂᒃ ᐱᔪᓂᒃ ᖁᒡᓗᖅᑑᖅ, ᐃᖃᓗᒃᑑᑦᑎᐊᖅ, ᑭᖓᐅᑦ, ᐅᒥᖕᒪᒃᑑᖅ, ᐅᖅᓱᖅᑑᖅ, ᑕᓗᕐᔪᐊᒥᒡᓗ. ᐃᓚᐅᑎᑕᓂᒃ ᐱᔪᖃᓚᐅᕐᒥᔪᖅ ᐃᓐᓇᑐᖃᓐᓂᒃ, ᑕᒪᕐᒥᒃ ᑲᓇᑕᐅᑉ ᒐᕙᒪᒃᑯᖏᓐᓂᒃ ᐊᒻᒪᓗ ᓄᓇᕗᑦ ᒐᕙᒪᒃᑯᖏᓐᓂᒃ, ᐃᖕᒥᒃᑯᓗ ᐱᓕᕆᕝᕕᖃᕈᑎᓖᑦ ᐱᒃᑯᔾᔨᔩᑦ ᑕᕝᕙᐅᓚᐅᕐᒥᔪᑦ.

ᓴᕿᐊᓚᐅᖅᑐᑦ ᑭᖑᓪᓕᖅᐹᖅᓯᐅᒥᒃ ᑲᑎᒪᔾᔪᒻᒥᒃ ᓈᓚᒋᐊᖅᓯᒪᔪᖃᑦᑎᑦᓗᒍ ᑲᑎᒪᔩᑦ ᐊᑑᑎᓕᖁᔨᔪᑦ ᐅᑯᓂᖓ Miramar Hope Bay Limited-ᑯᑦ Doris North-ᒥ ᒎᓗᓂᒃ ᐱᓕᕆᕝᕕᒃᓴᖅ ᐊᖏᖅᑕᐅᓗᓂ ᐊᒻᒪᓗ ᐱᒋᐊᕐᓗᑎᒃ ᐋᕿᒃᓯᐃᔾᔪᑎᓅᖓᔪᓄᑦ ᐱᖁᔭᓕᐅᕈᑎᓄᑦ ᑎᑭᐅᑎᓗᑎᒃ.

ᑲᑎᒪᔩᑦ ᐅᔾᔨᕈᓯᓚᐅᕐᒪᑕ ᐅᕗᖓᖓᔪᓂᒃ ᐱᓕᕆᐊᒃᓴᒎᖓᔪᒥᒃ ᐊᑐᐃᓐᓇᕈᖅᑎᑦᓯᓚᖓᓪᒪᑦ ᐱᓕᕆᐊᒃᓴᓂᒃ ᐊᑑᑎᓂᖃᓐᓂᐊᖅᑐᓂᒃ ᐊᒻᒪᓗ ᑮᓇᐅᔾᔭᒃᓴᐅᑎᒃᓴᑦ ᐊᑑᑎᓂᖃᕈᓐᓇᓚᓇᓐᓂᐊᓇᐊᖏᓐᓂᒃ ᐱᓗᐊᖅᑐᒥᒃ ᐃᓄᖏᓐᓄᑦ ᐅᐊᓕᓂᐊᓂ ᕿᑎᕐᒥᐅᓄᑦ ᓄᓇᓕᖕᓄᑦ ᐊᒻᒪᓗ ᑕᒪᐃᑕ ᑮᓇᐅᔾᔭᒃᓴᐅᑎᒃᓴᑦ ᐊᑑᑎᓂᖃᓐᓂᐊᕐᒪᑕ ᐃᓄᖏᓐᓄᑦ ᓄᓇᕗᑦ ᐅᑎᖃᔭᖅᑐᑦ ᓄᐊᓐᓂᐊᖅᑕᖏᑦ ᓄᓇᕗᑦ ᑐᙵᕕᒃᑯᑦ. ᑲᑎᒪᔩᑦ ᐅᔾᔨᕈᓯᓚᐅᕐᒥᔪᑦ ᕿᑎᕐᒥᐅᑦ ᐃᓄᐃᑦ ᑲᑐᔾᔨᖃᑎᒌᖏᑦ ᐱᒋᐊᖅᑎᑦᓯᓯᒪᖕᒪᑕ ᐅᑯᓄᖓᖓᔪᓂᒃ ᐃᓄᐃᑦ ᐊᒃᑐᐊᓂᖃᕝᕕᖏᓐᓄᑦ ᓄᓇᑖᖅᓯᒪᔪᓄᑦ ᐊᖏᕈᑎᓂᒃ ᐊᑑᑎᕆᐊᓕᖏᓐᓂᒃ Miramar Hope Bay Limited-ᑯᑦ ᐅᖃᖅᓯᒪᖕᒪᑕ ᐃᑲᔪᖅᑐᕐᓂᖅᓯᑎᒃ ᑕᒡᕗᖓᖓᔪᒧᑦ ᐱᓕᕆᕝᕕᒃᓴᒧᑦ. ᑕᐃᒪᐃᑦᑕᕐᒪᑕ ᑕᒪᒃᑯᐊ, ᐃᓚᒋᓕᐅᑎᓂᐊᕐᒪᑕ ᐃᓄᐃᑦ ᐊᒃᑐᐊᓂᖃᕝᕕᖏᓐᓄᑦ ᓄᓇᑖᖅᓯᒪᔪᓄᑦ ᐊᖏᕈᑦ ᑲᑎᒪᔩᑦ ᐊᑑᑎᖁᔨᔪᑦ ᐃᓅᓯᕐᓅᖓᔪᓂᒃ ᑮᓇᐅᔾᔭᒃᓴᐅᑎᒃᓴᓂᒃ ᖃᐅᔨᓴᖅᑎᐅᓂᐊᖅᑐᓂᒃ ᑲᑎᒪᔨᕋᓛᓂᒃ ᓴᕿᖅᑐᖃᑦᑐᓂ ᐋᕿᒃᓯᒪᔪᓂᒃ.

ᓱᓕᓗ, ᑲᑎᒪᔩᑦ ᐃᓱᒫᓗᒋᔭᖃᕝᕕᖃᑦᓚᓇᒻᒪᑕ ᓱᕐᕋᐃᑐᐃᓐᓇᓇᐃᓕᖕᓂᒃ ᓄᓇᒥᒃ ᓱᕐᕋᒃᓯᒪᖏᑦᑐᒥᒃ ᐱᐅᓯᕐᓯᕐᑐᒥᒃ ᐊᕙᑖᓃᑦᑐᒥᒃ ᒪᑯᐊ ᐃᓚᒋᔭᐅᓪᓗᑎᒃ ᖃᓄᐃᑦᑑᓂᖓ ᓱᕐᕋᒃᓯᒪᖏᑦᑐᖅ ᐃᒥᖅ ᐊᒻᒪᓗ ᐆᒪᔪᑦ ᐊᒻᒪᓗ ᒪᓕᒋᐊᖃᑦᓚᓇᓐᓂᐊᕐᒪᑕ ᐊᒃᓱᕉᑕᐅᓗᑎᒃ ᖃᐅᔨᓴᕈᑏᑦ ᒪᓕᒃᑕᐅᔪᐊᖁᔭᖏᑦ.

ᓄᓇᕗᑦ ᐊᕙᑎᓕᕆᔩᑦ ᑲᑎᒪᔨᖏᑦ ᐅᔾᔨᕈᓱᒻᒪᑕ ᓱᕐᕋᐃᔪᓐᓇᖅᑐᓂᒃ ᐱᔪᓂᒃ Doris North-ᒥ ᒎᓗᓂᒃ ᐱᓕᕆᕝᕕᒃᓴᒥᒃ ᑐᒃᓯᕌᒥᒃ ᑕᒡᕗᖓᖓᔪᑦ ᐸᓚᖅᑎᑕᐅᔪᓐᓇᕐᒪᑕ ᐊᒻᒪᓗ ᐊᐅᓚᑕᐅᑦᓯᐊᖅᑐᑎᒃ. ᐃᒪᐃᒻᒪᑕ, ᐊᑑᑕᐅᒐᔭᖅᑐᑦ ᒥᓂᔅᑕᐅᑉ ᐊᖏᖅᐸᐅᒃ, ᐅᑯᐊ Doris North-ᒥ ᒎᓗᓂᒃ ᐱᓕᕆᕝᕕᒃᓴᖅ ᒪᓕᒋᐊᖃᓐᓂᐊᖅᑐᖅ ᑐᑭᓕᐅᖅᓯᒪᔪᓂᒃ ᐊᒻᒪᓗ ᐊᑑᑕᐅᖁᔭᓂᒃ ᒪᓕᒃᑕᐅᖁᔭᓂᒃ ᐅᖃᐅᓯᓕᐅᖅᓯᒪᔪᓂᒃ ᐅᕙᓃᑦᑐᑦ ᑐᓴᕋᒃᓴᓂ, ᐃᓚᖃᓪᓗᑎᒃ ᑎᒃᑯᐊᖅᑕᖓᓂᒃ ᓄᓇᕗᑦ ᐊᕙᑎᓕᕆᔩᑦ ᑲᑎᒪᔨᖏᑦᑕ ᖃᐅᔨᓴᖅᑎᒃᓴᖅ ᐱᓕᕆᔨᐅᓗᓂ.

Executive Summary – Inuinnaqtun

Aolatiyin Naetumik Okaohen

Nunavumi Avatatilikiyin Katimayin havakhakakmata ihivgeogeagani avataoyumik inuheoyuniklo manileogutikhanulo aktokniginik havaguyumayun, atulikoelotiklo Ministaoyumun ukoa havagiyaoyumayun aolavaleaneakmaga hivumun, taemaeneaknikalo, ilageaklogin atugeakaktaenik pikageakakniginiklo agitutaoyumi.

Piyutigivlogo Mirarar-kun Kapihiliktumi Timeoyok, Doris North-mi Kulmik Oyagakheokveoyumayummik, Katimayin kitulikmik Tuhaktitivikaktun Ikaloktuteami Katimayilo tuhakhimakmata nunaliknigakhimayunnin Kugluktumin Ikaloktuteamilo, Kagaokmilo Umikmaktumilo Okhoktumilo Taloyoamilo. Tuhakhimakmiyulo Inutkuyanin, tamaenilo kanatami aviktokhimayunilo kavamaoyunin, inmikulo ikayoktokteoyunin.

Kanogilivaleanikhagun Kigulikmi Tuhaktitivikmi ukoa Katimayin atulikeovun Miramar-kun Kapihiliktumi Timeoyum Doris North Kulmik Oyagakheokvikhaa agiktaoyagani igilgageaklonilo maligoagakhalikiyinin ihoakhaktaovaaligeagani.

Katimayin kaoyimaliktun una Havaagiyaoyumayok hatkigutaoneakman havaakhanik manileogutikhanulo ikayutaoyukhanik inuknik Kitikmeoni, tamaenulo ikayutaoneakman Nunavumeonun akileotaoyutigun avakhaotinik katitiktaenik Nunavumi Tungavitkunin. Katimayilo kaoyimayun Kitikmeoni Inoen Katimayen saenikhihimalikmata Inoen Aktoknigagun Agikatigegutaoyumik Miramar-kulo ikayokteonigakhutik umiga Havaakhamik. Kiheani, ilageagutaoyagani Inoen Aktoknigagun Ikayutaoyunik Agikatigegutaoyok Katimayin piyumayun Inoen Inuhenik Manileogutikhanulo Amigiyaagani Kamiteoyok hatkigeakakman.

Uvalo, Katimayin ihumalutikakmata aktoknikakneakata umayukaktok avataoyok imavaloelo imagiknigin umayulo akhulo amigiyaoyageakakmata.

NIRB-kun kaoyiyun ukoa aktoknigin Doris North-mi Kulmik Oyagaktakveoyumayok ihoakhivaalilakman ihoelitukageakan monagiteaktaolonilo. Taemaetilogo, piyutikakman Ministaoyum agigutanik, una Doris North-mi Kulmik Oyagakheokvikhak maligoageakakneakaen maligeakaktun pikageakaknigilo okakhimayun uvani unipkami, ilagiyaolonilo tikoaktaoniganik NIRB-kuni Amigiyutaoyunik Atanguyakhamik.

1. INTRODUCTION

1.1 Procedural History

On March 1, 2002, Miramar Hope Bay Limited ("MHBL" or "Proponent"), known as Hope Bay Joint Venture at the time, submitted a project description for the then entitled Doris Hinge Project (later renamed Doris North Gold Project (the "Project")) to the Nunavut Impact Review Board ("NIRB" or "Board")[1]. The project proposal was referred to a Part 5 Review by the Minister of Indian and Northern Affairs Canada ("INAC")[2] following a NIRB 12.4.4(b) Screening Decision[3].

After guideline development, draft and final environmental impact statements, and technical meetings, a Final Hearing was held from July 11 to 16, 2004, in the communities of Cambridge Bay, Gjoa Haven, Taloyoak and Kugluktuk[4]. Following the Final Hearing the Board considered the evidence available to it and decided that it could not approve the Project based on insufficient information in five key areas: the assessment of alternatives to the use of Tail Lake for tailings disposal; Tail Lake water quality and water management strategy; the design of the jetty and related issues including effects on fish habitat, shoreline erosion, and the sea bed; the Wildlife Mitigation and Monitoring Plan ("WMMP") including Cumulative Effects Assessment ("CEA"); and the socio-economic impact of the Project on affected residents and communities of Nunavut[5]. On December 6, 2004, the Minister of INAC accepted NIRB's report and the recommendation of not approving the Project[6].

[1] Hope Bay Joint Venture, Preliminary Project Description: Doris Hinge Project, March 2, 2002.
[2] Letter from the Honourable Robert D. Nault, Minister, INAC, to Elizabeth Copland, Chairperson, NIRB August 27, 2002.
[3] Letter from Elizabeth Copland, Chairperson, NIRB, to the Honourable Robert D. Nault, Minister, INAC, Re: Hope Bay Joint Venture Doris Hinge Gold Mine (Project), June 5, 2002.
[4] NIRB Public Registry file No.: 02MN134.
[5] NIRB *Final Hearing Report for the Doris North Gold Project File #02MN134*, August 2004.
[6] Letter from the Honourable Andy Scott, Minister INAC, to Albert Ehaloak, Acting Chairperson, NIRB, December 6, 2004.

MHBL began working on an Updated Preliminary Project Description which was received by NIRB on February 14, 2005. Following an abbreviated screening process, the Board once again issued a Screening Decision of 12.4.4(b) stating that the Project required a review under Part 5 or 6 of Article 12 of the *Nunavut Land Claims Agreement* ("NLCA")[7]. The Minister agreed and referred the Project to a second Part 5 Review by NIRB and provided the following direction to NIRB in conducting the review[8]:

> *"…a major objective of this review should be to address the information deficiencies, as outlined in the Board's August (2004) Final Hearing Report. However, it is essential that this new information is not reviewed in isolation and that the potential effects of the Project as a whole are considered. The submission of a complete and new environmental impact statement that incorporates any new information provided by the proponent will help achieve this goal while providing for a more efficient review of the Project".*

The original guidelines developed for the Project[9] remained the basis for the submission of MHBL's Draft Environmental Impact Statement ("DEIS") and were supplemented by the direction provided by the Board in its August 2004 Final Hearing Report and NIRB's 10 Minimum EIS Requirements[10].

MHBL filed a DEIS on June 13, 2005, and a Conformity Review was undertaken by NIRB. NIRB solicited input into the Conformity Review from interested persons including Intervenors[11]. Following Conformity Review, on July 8, 2005, NIRB advised MHBL of deficiencies in the DEIS[12]. MHBL submitted a supplement to the DEIS on July 21, 2005, to address the deficiencies and Intervenors were then asked to complete a technical review of the DEIS prior to holding a Technical Meeting[13].

[7] Letter from Albert Ehaloak, Chairperson, NIRB, to the Honourable Andy Scott, Minister INAC, March 7, 2005.
[8] Letter from Honourable Andy Scott, Minister INAC, to Albert Ehaloak, Acting Chair, NIRB, April 22, 2005.
[9] NIRB *Final Environmental Guidelines for the Doris North Project*, October 15, 2002.
[10]
[11] NIRB Letter from Stephanie Briscoe, Executive Director, to Doris North distribution list, June 17, 2005.
[12] NIRB Letter from Stephanie Briscoe, Executive Director, to David Long of Miramar Hope Bay Limited, July 8, 2005.
[13] NIRB Letter from Stephanie Briscoe, Executive Director, to Doris North distribution list, July 22, 2005.

On August 23 to 25, 2005, NIRB staff held a Technical Meeting in Yellowknife with MHBL and Intervenors from Nunavut Tunngavik Inc. ("NTI"), Kitikmeot Inuit Association ("KIA"), INAC, Department of Fisheries and Oceans Canada ("DFO"), Government of Nunavut ("GN"), Natural Resources Canada("NRCAN"), Environment Canada ("EC"), Health Canada ("HC"), and Hatch Acres. In addition, four representatives from each of the Hamlets of Cambridge Bay, Gjoa Haven, Kugluktuk, and Taloyoak attended the Technical Meeting. The purpose of the meeting was to discuss and resolve significant technical issues prior to the Preliminary Hearing Conference ("PHC")[14]. The PHC was held on August 25, 2005, at the same location.

Photo 2. Preliminary Hearing Conference, Yellowknife, September 25, 2005 (Courtesy of R. Halim Hatch Acres).

On September 13, 2005, the Board issued a PHC decision which provided MHBL with specific direction on requirements for the Final Environmental Impact Statement (FEIS) and administrative details for the FEIS technical review and a potential Final Hearing. The PHC decision also contained a list of 187 commitments MHBL made during the Technical Meeting[15]. The timeline for filing the FEIS was left up to MHBL and was eventually hand-delivered by them, with the supporting documents, to the Cambridge Bay office on October 31, 2005. This effort evaded any potential delivery setbacks and secured MHBL with priority status for NIRB's FEIS internal conformity review[16].

[14] NIRB Document 80, Technical Meeting and Preliminary Hearing Conference Agenda, August 19, 2005.
[15] NIRB Preliminary Hearing Conference Decision, September 13, 2005, Appendix A.
[16] NIRB Letter from Stephen Lines, Technical Advisor, to Doris North distribution list Re: Receipt of Doris North FEIS, November 1, 2005.

NIRB's internal conformity review focused on the new content in the FEIS ensuring it responded to the direction provided by the Board in the PHC decision. The internal conformity review found that the FEIS generally conformed to the PHC decision but that an addendum would be required. Nevertheless, in the meantime NIRB was satisfied that it could proceed with setting the dates of the Final Hearing for the week of January 30 to February 3, 2006, in Cambridge Bay[17].

NIRB received the FEIS addendum on November 18, 2005, and an additional letter from MHBL on November 24, 2005 confirming additional community consultation for December 2005. This satisfied all outstanding areas of non-conformity in the FEIS[18].

During the FEIS technical review period, NIRB established a process for an information request period[19]. NIRB received a total of 22 information requests and of those requests approved 14 for MHBL to respond to[20]. On December 9, 2005, MHBL provided responses to the 14 information requests[21] and Intervenors and NIRB staff began detailed preparations for the Final Hearing.

Photo 3. NIRB Staff (from left): Carolanne Inglis, Karlette Tunaley, Stephen Lines, William Tilleman, and Stephanie Briscoe.

[17] NIRB Letter from Stephanie Briscoe to Doris North distribution list, Re: Final Hearing schedule, Associated Deadlines and Information, November 9, 2005.
[18] NIRB Letter from Stephen Lines, Technical Advisor, to David Long of Miramar Hope Bay Limited, Re: FEIS Conformity Supplement and Information Requests, November 29, 2005.
[19] NIRB Letter from Stephanie Briscoe to Doris North distribution list, Re: Final Hearing schedule, Associated Deadlines and Information, November 9, 2005.
[20] NIRB Letter from Stephen Lines, Technical Advisor, to David Long of Miramar Hope Bay Limited, Re: FEIS Conformity Supplement and Information Requests, November 29, 2005.
[21] NIRB Letter from Stephen Lines, Technical Advisor, to Doris North distribution list Re: Information Request Responses, December 9, 2005.

Written submissions from Intervenors were received by NIRB on January 18, 2006[22]. However, following discussions between MHBL and EC and DFO concerning a regulatory matter, MHBL submitted additional information attempting to resolve the issue. In order to allow EC and DFO sufficient time to review the information and incorporate it into their written submission, NIRB allowed EC and DFO until January 24, 2005, to provide written submissions to NIRB[23].

The Final Hearing was held in Cambridge Bay from January 30 to February 3, 2006. The first day of the proceedings was delayed until the afternoon due to the late arrival of the GN, EC, and DFO whose joint charter, which was only scheduled to leave Iqaluit on the same morning of the Final Hearing, went mechanical. NRCAN also arrived late to the hearing after a scheduled flight from Yellowknife was cancelled. Fortunately, all Intervenors eventually arrived safely and the Final Hearing progressed throughout the week and ended with a full day community session on February 3, 2006. The Final Hearing was well attended with approximately 100 people present each day.

Photo 4. Final Hearing in Cambridge Bay.

1.2 Public Participation

All necessary steps shall be taken by way of notice, dissemination of information, and scheduling and location of hearings to provide and promote public awareness of and participation at hearings.

Section 12.2.27 of the *Nunavut Land Claims Agreement*

[22] NIRB Letter from Stephen Lines, Technical Advisor, to Doris North distribution list Re: Receipt of Written Submissions, January 18, 2006.
[23] NIRB Letter from Stephen Lines, Technical Advisor, to Doris North distribution list Re: Additional Information for DFO and EC, January 18, 2006.

NIRB views the amount of public involvement and meaningful community participation at hearings as an indicator of the level of success achieved by the review process. For this purpose, NIRB's Hearing Coordinator spent considerable time to foster meaningful community participation and this was achieved in NIRB's judgment for the Part 5 Review of this Project through NIRB's public participation program[24].

More particularly, public participation activities began in 2005 with a June newsletter update, which was sent to every household in the affected communities, including Bathurst Inlet and Omingmaktok via charter mail delivery.

Further, NIRB arranged for two municipal representatives and two community representatives from each of the Hamlets of Gjoa Haven, Taloyoak, Cambridge Bay and Kugluktuk to participate in the Technical Meeting and PHC in Yellowknife. Following these events, NIRB again issued a newsletter to affected communities including Bathurst Inlet and Omingmaktok. This newsletter discussed the PHC decision and informed the communities of upcoming NIRB public participation meetings on the Doris North project.

In November and December 2005, NIRB's Hearing Coordinator held meetings in Gjoa Haven, Taloyoak, Cambridge Bay and Kugluktuk. The purpose of these meetings was to discuss the Doris North Gold Project and the FEIS with a variety of community organizations and representatives.

For the Final Hearing in Cambridge Bay, NIRB invited representatives from the affected communities, and arranged travel and accommodations for six representatives from each of Gjoa Haven, Taloyoak and Kugluktuk for the Final Hearing. NIRB also brought ten community members from Bathurst Inlet and Omingmaktok for the duration of the Final Hearing.

[24] NIRB Carolanne Inglis, Hearing Coordinator, *Consultation Action Plan Report*, December 2005.

Prior to the Final Hearing, the 28 community representatives, including any interested community members from Cambridge Bay, attended a meeting facilitated by the Hearing Coordinator. The meeting provided information on the Project, potential impacts and mitigation measures, and the NIRB process.

Finally, NIRB organized the Final Hearing to include both a technical session, as well as a community session. This community session was held on February 3, 2006, and was set up as a round-table discussion between MHBL and community representatives and was facilitated by the Board.

Photo 5. Community members from Cambridge Bay, Kugluktuk, Bathurst Inlet, Omingmaktok, Gjoa Haven, and Taloyoak came to the table during the community portion of the Final Hearing to question MHBL one-on-one and speak to the Board.

1.3 Project Maps

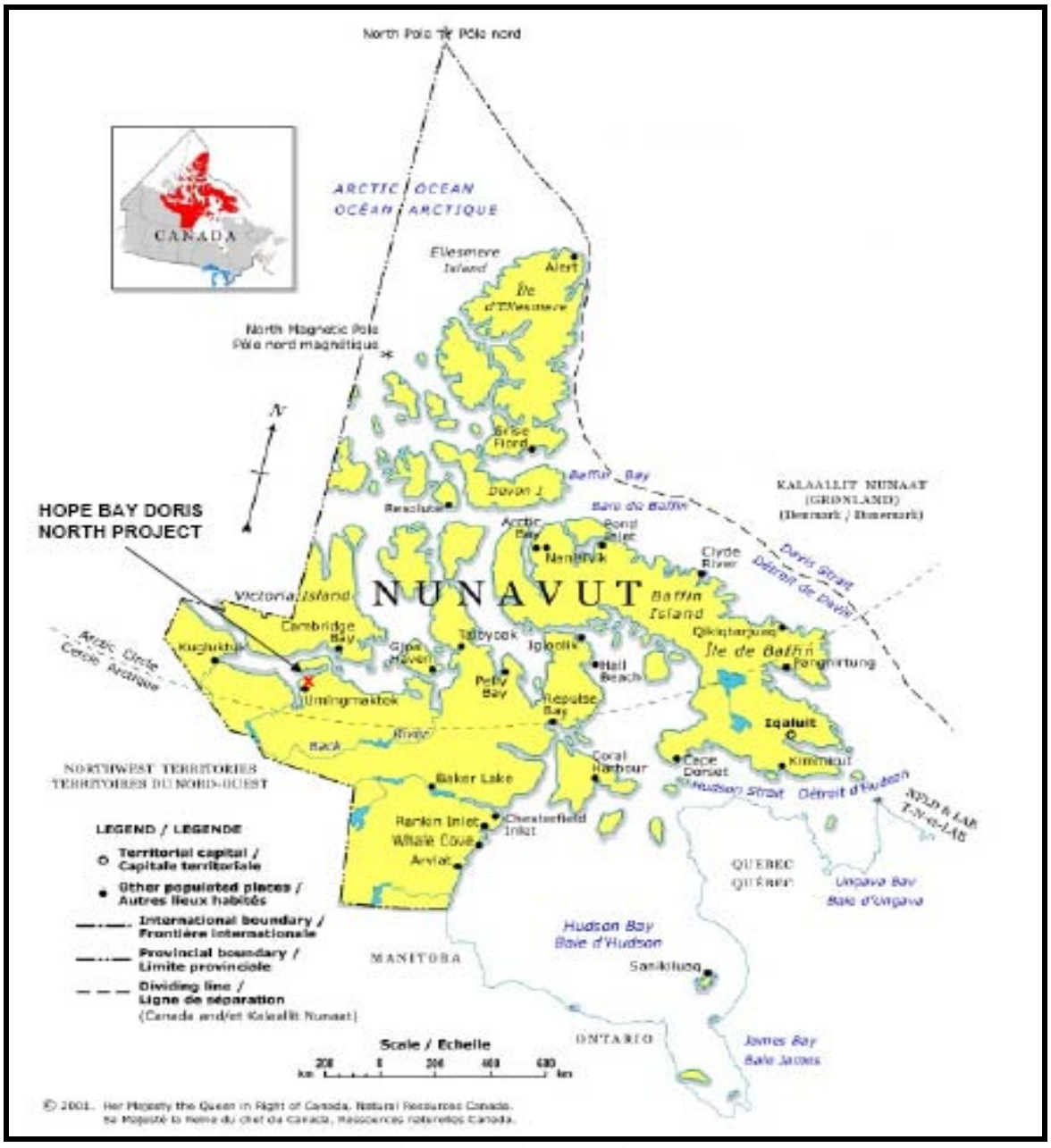

Figure 1. Project Location

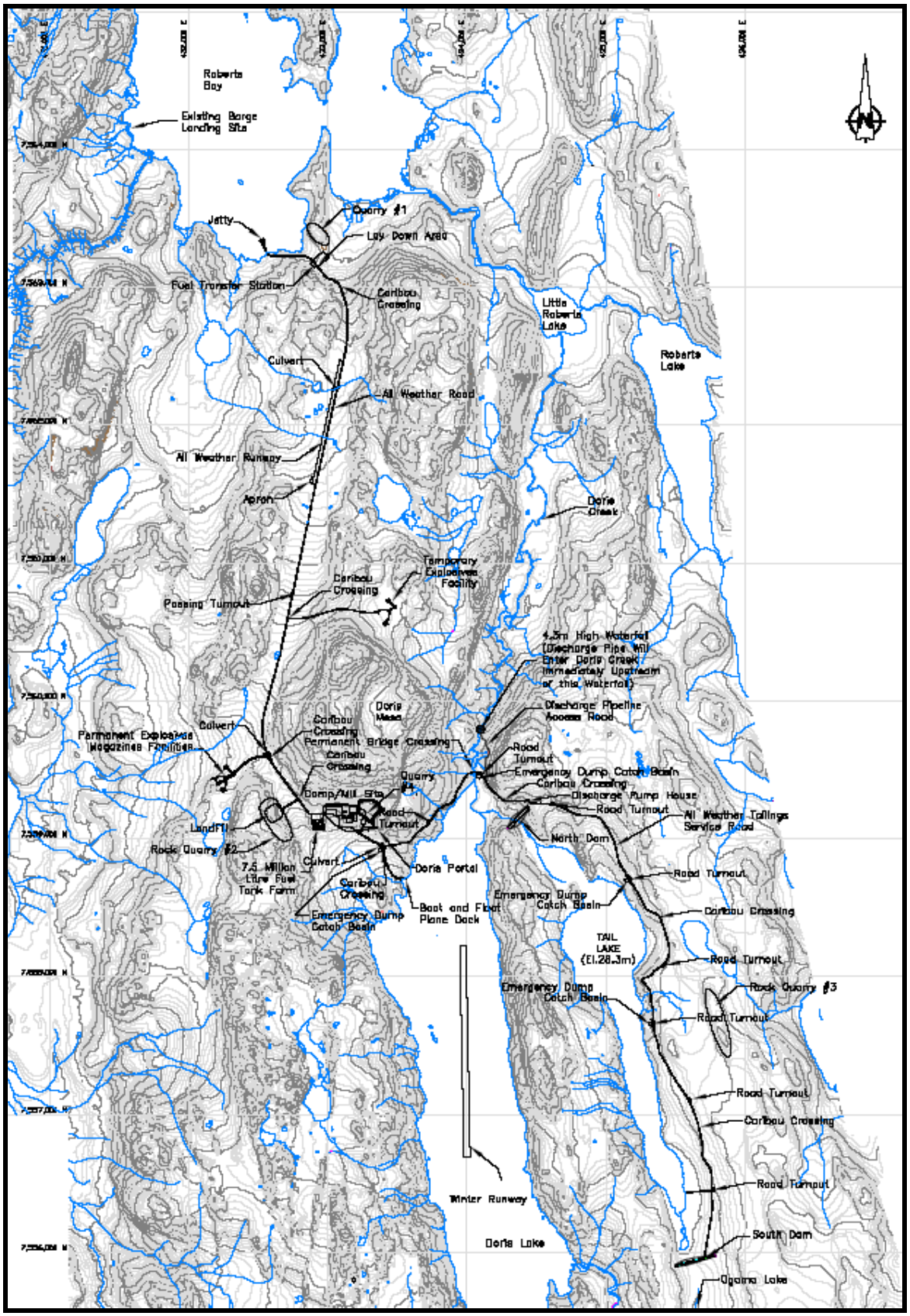

Figure 2. Project Site

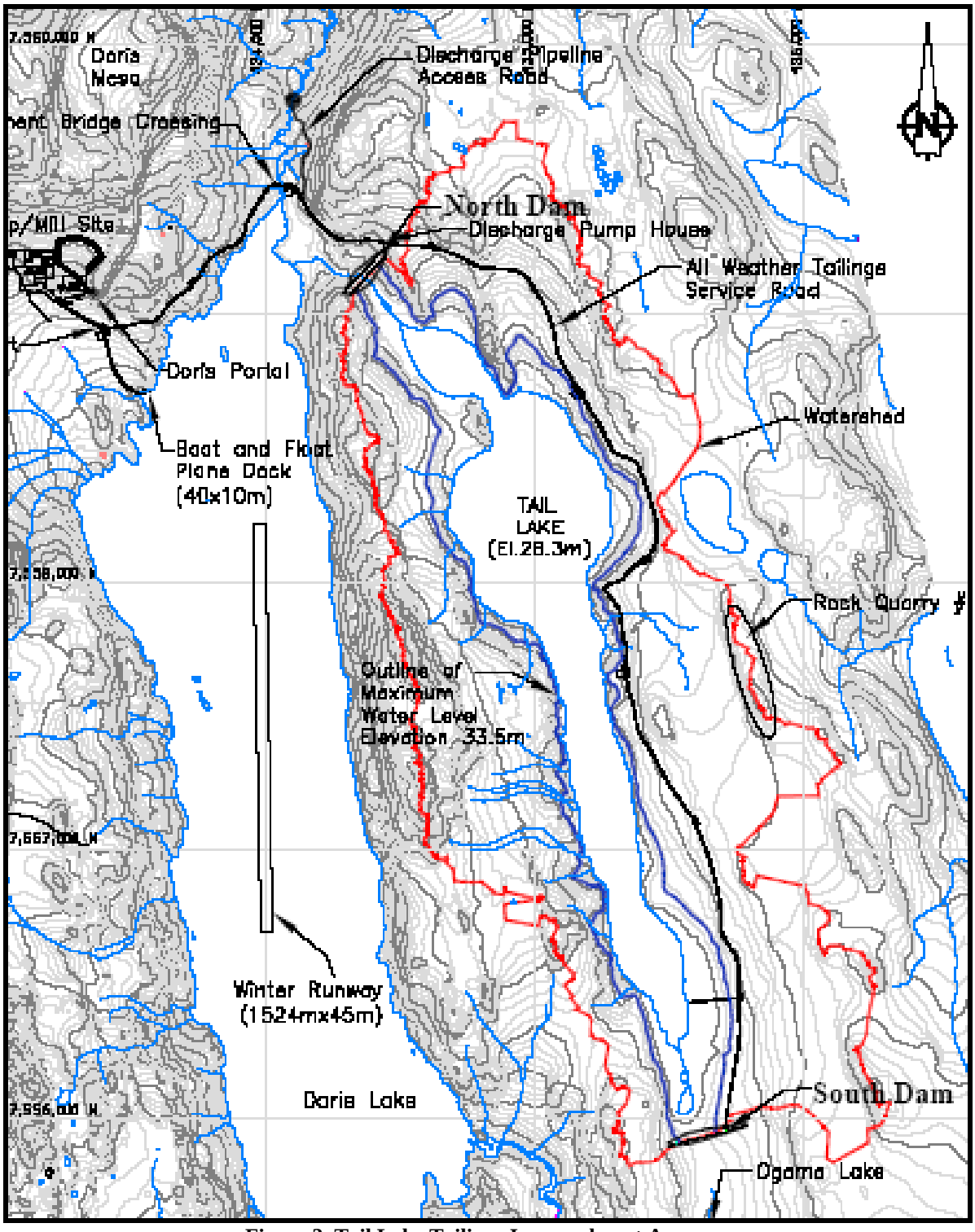

Figure 3. Tail Lake Tailings Impoundment Area.

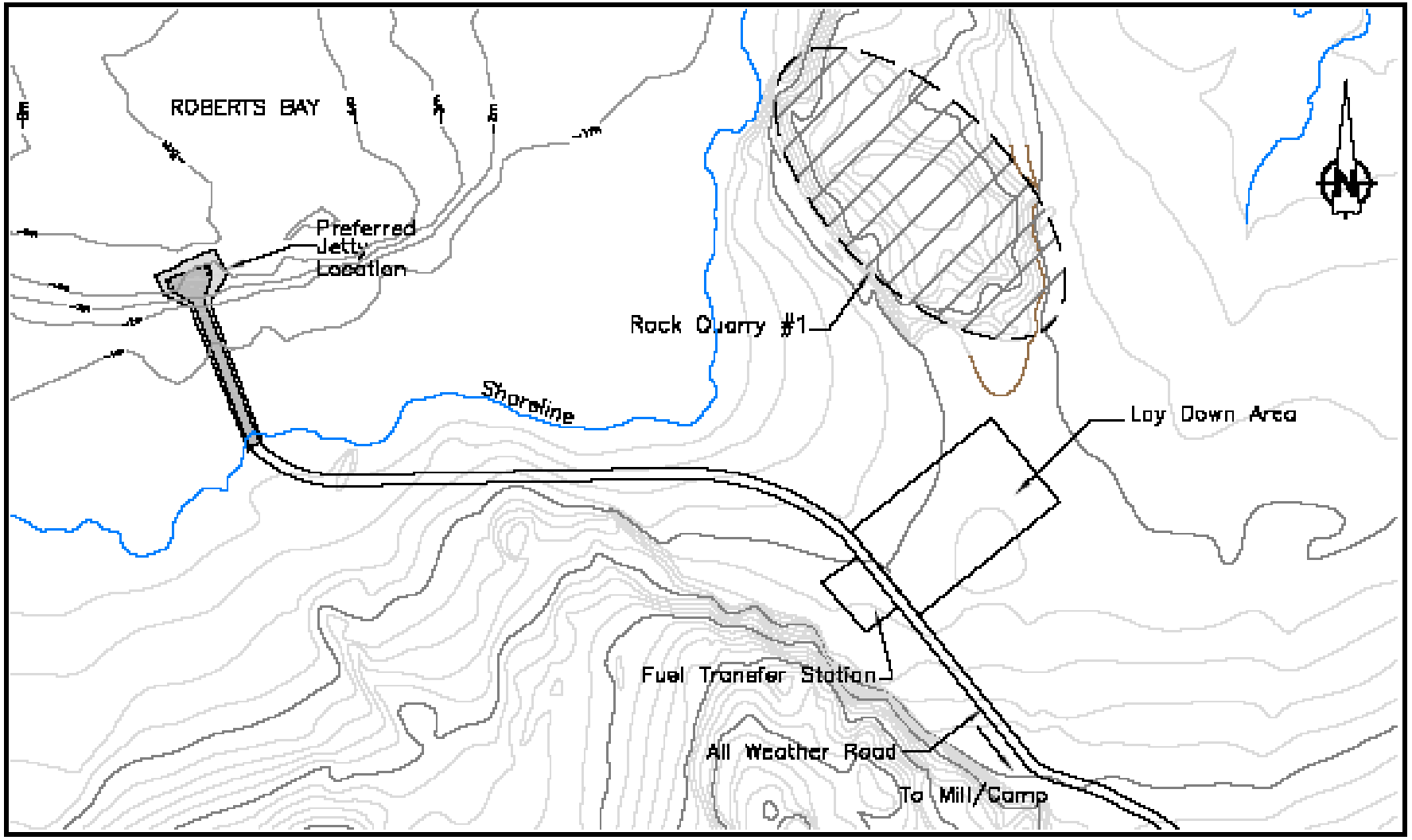

Figure 4. Jetty location in Roberts Bay

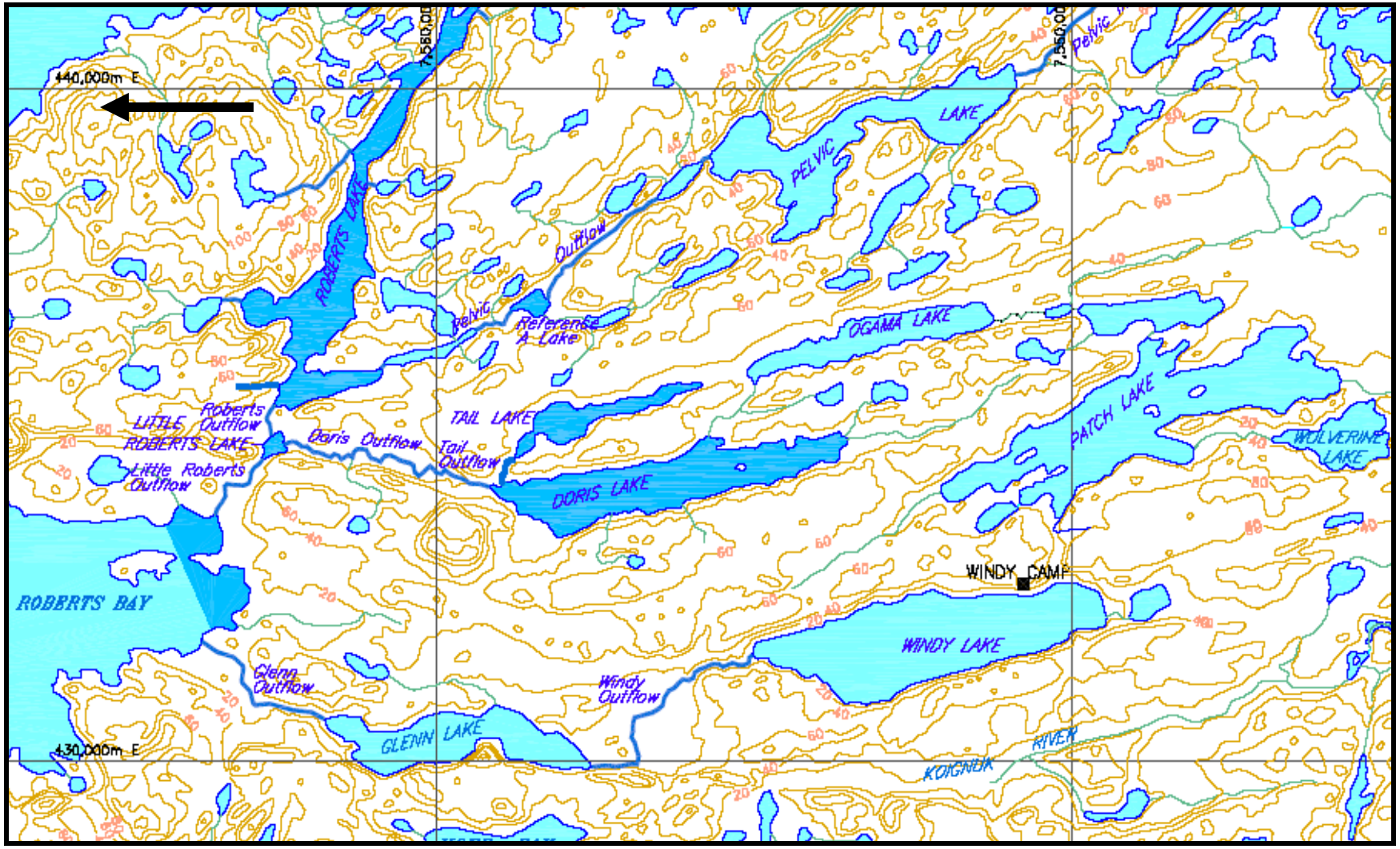

Figure 5. Project Lakes

1.4 Project Description

The Doris North Gold Project, proposed by MHBL, is located approximately 65 km to the east of Omingmaktok and 110 km south of Cambridge Bay on the Canadian mainland. The project proposal is the first gold mine in Nunavut and the first mine proposal to be located on Inuit Owned Lands with mineral rights.

The project consists of an underground mine with a single adit and ramp access and will have a small footprint of about 62 ha. The ore will be stockpiled and processed through a crushing and milling plant with a capacity of 668 tonnes per day. The gold product will be shipped off site in the form of dore bars. This Project is expected to operate for 24 months, process 458,000 tonnes of ore yielding approximately 306,830 ounces of gold.

The site is remote, with no roads that link it to any communities or facilities, and therefore primary access to the property for fuel, equipment and supplies will be by sealift via the Arctic Ocean. A 103-m jetty will be constructed in Roberts Bay as well as a laydown area.

The mill will be located approximately five kilometres south of Roberts Bay. A 4.8-km all-weather road will link the Roberts Bay site with the mill site where all other operational mine infrastructure will be located adjacent to the underground mine.

An all-weather airstrip will be constructed along the alignment of the main road between the mill site and Roberts Bay. During summer months the site will also be serviced by float planes and for that purpose a rock-filled dock will be constructed on the shore of Doris Lake. This dock will be linked to the mill site with an all-weather road.

During winter months an airstrip capable of handling larger aircraft will be constructed on the ice on Doris Lake and the site will be serviced from this airstrip.

Tailings produced during the milling process will be deposited in Tail Lake about five kilometres from the proposed mill location. Tailings deposition will be sub-aqueous, requiring the construction of two dams. An all-weather service road will be constructed along the east side of Tail Lake all the way to its southern end. The tailings pipeline will follow the roadway, and emergency tailings dump ponds will be constructed at strategic locations.

Mill tailings will be treated in a water treatment plant to destroy residual cyanide and precipitate heavy metals before the tailings are discharged into Tail Lake.

MHBL proposes that the water quality discharged by pumping from Tail Lake to Doris Creek will meet discharge standards established under the Metal Mining Effluent Regulations ("MMER") and that water quality within Doris Creek, downstream of the waterfall, will meet Canadian Council of Ministers of the Environment ("CCME") water quality guidelines for the protection of freshwater aquatic life.

Project construction is currently proposed to begin with the arrival of equipment by sealift in the fall of 2007, with additional supplies arriving by sealift in 2008. With this construction schedule, operations could begin at the end of 2008 and continue through to the end of 2010. The Project is expected to provide approximately 68 jobs during construction and 149 jobs during operations with approximately 40% Inuit employment[25].

With the completion of mining and ore processing, MHBL will shift from progressive reclamation to implementing a final abandonment and reclamation plan which is proposed to occur during the summer months of 2011 and 2012. Following the closure phase, the site will be managed during summer months to pump water from Tail Lake during the open water season. The north dam is proposed to be breached once water quality in Tail Lake meets CCME guidelines and the water level returns to predevelopment level.

[25] Miramar Hope Bay Limited, Final Hearing technical presentation handout, pg 50.

Finally, in looking forward, the Doris North Project (Doris north gold deposit) is located within a geological formation called the Hope Bay Belt which is about 80 km in length and known to contain at least two other mineralized zones owned by MHBL[26]. Regarding potential future developments, which are also subject to full impact assessments in the future, MHBL states the following:

> *The Doris North Project is only a small portion of the resources that we have found in the belt to date. We did a lot of work in 2005, and we expect that these resources will actually increase again as we re-measure them at the end of 2005. And these resources demonstrate the potential for large size and long-life production from the Hope Bay Belt in the future.*[27]

Photo 6. MHBL represented by David Long (front-centre with blue shirt) speaks to the Board.

1.5 Biophysical Environment

1.5.1 Baseline Conditions

The Project area is characterized by an abundance of cliffs and outcrops and is located in a region of continuous permafrost. The active layer is between 1.5 and 2.6 m deep and groundwater movement occurs in that zone during seasonal thaw. The area consists of

[26] Boston mineralized zone contains a total (measured, indicated and inferred) of about 1.6 million ounces of gold. Madrid mineralized zone contains a total (measured, indicated and inferred) of about 3.4 million ounces of gold, Miramar Hope Bay Limited, Final Hearing technical presentation handout, p. 17.
[27] See David Long, Miramar Hope Bay Limited, Transcript, Volume 1, January 30, 2006, p. 53, lines 1-8.

coastal lowlands with numerous lakes and ponds. Streams within the Project area are often frozen with negligible flow from November until May while peak flows occur in June during snowmelt.

Soils in the Project area are marine in origin consisting of clay, silt and sand. Overlying vegetation is characterized by shrub tundra vegetation with wet sites dominated by sphagnum moss and extensive sedge and cottongrass tussocks.

Photo 7. Cottongrass meadow north of proposed mine site in road corridor (Courtesy of MHBL FEIS Vegetation Report).

Three caribou herds are known to occur in the Project region including the Dolphin-Union, Ahiak, and Bathurst herds. The area is used seasonally by island and mainland caribou herds. Ahiak caribou use habitat within the Project area from March to September and calve to the east of the Project area along the Queen Maud Gulf coastline. Caribou from the Dolphin-Union herd can be found in the Project area most often from December to May. The calving grounds for the Dolphin-Union caribou herd are located on Victoria Island to the north. The Project area is located in the historical calving ground of the Bathurst herd, which is currently known to calve on the west side of Bathurst Inlet. Inuit believe the herd will eventually return to the east side[28].

[28] Miramar Hope Bay Limited, FEIS, Technical Report 16 on Caribou, p. 16-1.

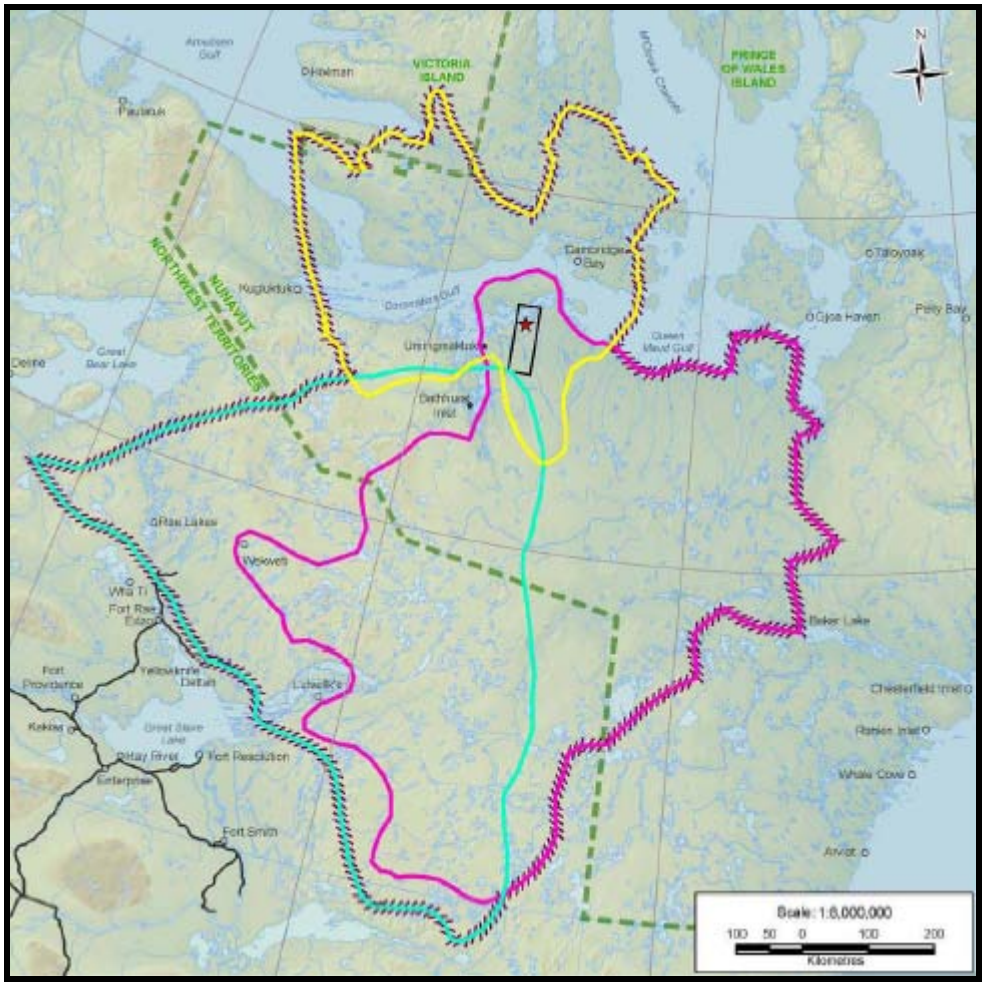

Figure 6. Annual range of caribou herds overlapping with the Project area (rectangular area). Yellow: Dolphin-Union herd. Purple: Ahiak herd. Blue: Bathurst herd. (Courtesy of MHBL FEIS Technical Report Chap. 16).

Wolf and fox dens have been seen in the Project area but not in the immediate vicinity of the mine site. Muskoxen are present throughout the region year round and grizzly bears are known to be present in the area as well.

Although not all are occupied, there are 113 known raptor nest sites in the Project area and species diversity includes peregrine falcon, gyrfalcon, golden eagle, rough-legged hawk, and ravens. Eleven (11) species of waterfowl have been observed with Canada geese being the most abundant.

Fish species that are found in Project lakes include Arctic char, broad whitefish, cisco, lake trout, lake whitefish, least cisco and ninespine stickleback. Only lake trout and

ninespine stickleback are known to exist in Tail Lake and no Arctic char have been found in Doris Lake.

Species of special concern which may be encountered in the Project area and either listed on, or being considered for addition to, a Schedule of the Species at Risk Act include the Dolphin-Union caribou herd, wolverine, grizzly bear, peregrine falcon, and short-eared owl.

1.5.2 Predicted Impacts

MHBL believes that the Project will have a minor impact on the existing environment at a regional level and a low to moderate impact at a site-specific level. The mine is not expected to have any impacts on the weather or climate of the area. Minor air quality and noise impacts are expected from engine exhaust, diesel generators, construction equipment, crushing, loading, and stockpiling ore.

Impacts on water are expected to be minor resulting from domestic and mill process water use, tailings disposal, water course crossings, and blasting. Using Tail Lake as a Tailings Impoundment Area ("TIA") will result in the complete loss of the fisheries resource in the lake. MHBL has developed a No Net Loss Plan to compensate for the loss of fish habitat in Tail Lake. Water quality discharged from the TIA will meet discharge criteria set by the Nunavut Water Board ("NWB") and the effects on fisheries resources downstream are expected to be minor.

The impacts on caribou and other wildlife are also not expected to be significant. Mitigation measures and impact predictions will be monitored through the WMMP.

The closest existing mines to the Project site are the Jericho mine[29] and the Lupin mine[30] located 230 km and 250 km respectively to the southwest. MHBL's CEA predicted that the effects of the Project in combination with other projects on caribou, grizzly bear and

[29] Jericho Diamond Mine (Tahera Diamond Corporation), Scheduled for full operation end of March 2006.
[30] Lupin Gold Mine (Echo Bay Mines). Closed. Filed Abandonment and Reclamation Plan with the NWB February 2005.

wolverines will not be significant due to the wide-ranging nature of these species, the mitigation strategies employed for the Project and incorporation of adaptive management strategies realized at other northern mines[31]. Additionally, direct habitat loss from the Project in combination with other projects was low for all Valued Ecosystem Components (VECs)[32].

Management, mitigation and monitoring of the biophysical environment will be achieved through finalizing the Environmental Protection Plan, Emergency Response and Contingency Plan, No Net Loss Plan, the Metal Mining Effluent Regulations Environmental Effects Monitoring program, WMMP, and Reclamation Plan. These plans will require periodic revision and are supplemented by the terms and conditions in this report and any additional requirements determined during the regulatory approval phase.

1.6 Socio-economic Environment

1.6.1 Baseline Conditions

MHBL looked at two overarching components of the socio-economic environment: Community Services and Infrastructure; and Employment and Economy.

The Kitikmeot region of Nunavut includes the Hamlets of Kugluktuk, Cambridge Bay, Gjoa Haven, Taloyoak, and Kugaaruk which is not considered to be a community affected by the Project. Additionally, the region also contains the settlements of Bathurst Inlet and Omingmaktok which is the closest community to the Project site.

[31] Ekati mine (BHP) and Diavik mine (Diavik Diamond Mines Inc) in the NWT, Jericho mine (Tahera Diamond Corporation) and Lupin mine (Echo Bay – now in closure phase) in Nunavut,
[32] Terrestrial VECs identified by Miramar Hope Bay Limited include caribou, grizzly bear, wolverine, upland breeding birds, waterfowl, and raptors; FEIS Technical Report 8 Selection of Environmental Components, Fig 8.2.

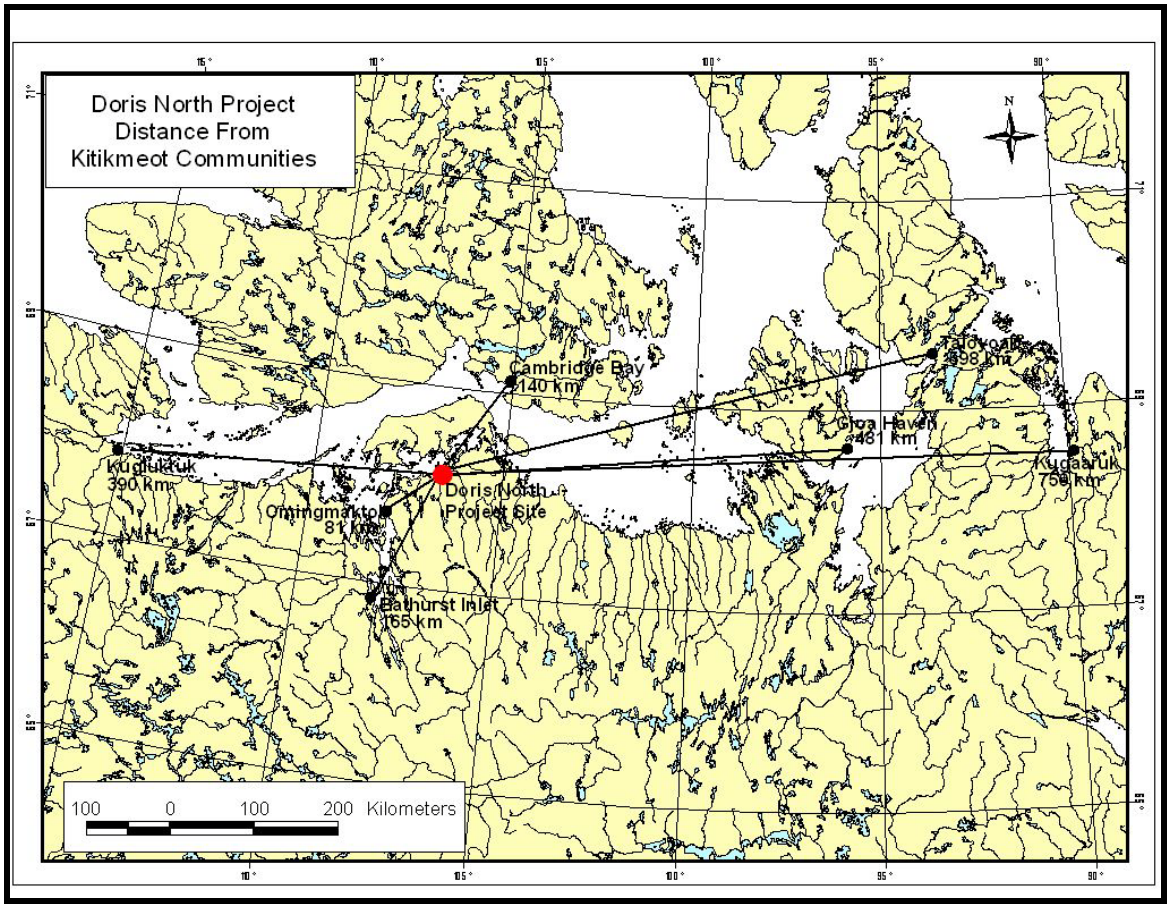

Figure 7. Proximity (in km) of Kitikmeot communities to the Doris North Project Site (Courtesy of NIRB's GIS Department).

The region had a population of 4,816 in 2001 with median age of 22 years and 90% of the residents are of Inuit descent. In 2001 as well, the unemployment rate was 19.9%. The economy of the region is composed of wages (obtained from government employment, the service sector including tourism, and exploration or mining industry), government transfer payments, and subsistence harvesting. Subsistence harvesting activities include hunting, fishing, trapping and gathering and are of central importance to Inuit culture.

In addition to high unemployment, the Kitikmeot region, like Nunavut overall, is experiencing social problems such as a high population growth rate and teen pregnancy rate, a shortage of health and social care professionals, a shortage of housing, pressing mental health concerns such as a high suicide rate, a high rate of sexually transmitted

diseases, and a high violent crime rate with most offences being fueled by alcohol consumption.

Despite the above concerns, there remains a strong relationship between the Inuit and the land, which is evident by the abundance of archeological remains in the region and the desire to protect them. Investigations conducted in the Project region recorded 142 archeological sites with 49 sites within 1 km of the proposed mine activities, and 4 sites in the mine footprint or directly adjacent to it. MHBL held an *Inuit Qaujimajatuqangit* (IQ (Traditional Inuit Knowledge)) workshop in Cambridge Bay in September 2003, where participants spoke of their connection with the land and its resources while highlighting the importance of maintaining the integrity of archaeological deposits. The IQ workshop also involved discussion on other aspects of the biophysical environment.

1.6.2 Predicted Impacts

MHBL expects the mine will have a positive socio-economic effect on the Kitikmeot region through job creation, business opportunities, and revenues to Government from taxes and royalties to Nunavut Tunngavik Incorporated.

MHBL does acknowledge the potential for adverse effects resulting from rotational schedules and increased income. Some potential effects could be alcohol abuse, family violence, marital problems, addiction, and child neglect. These effects may result in an increased demand for already strained services such as health care services, counseling for drug, alcohol and gambling addiction, and more pressure on safety and protection services provided by the RCMP.

MHBL has negotiated in draft form, an Inuit Impact Benefit Agreement (IIBA) with the Kitikmeot Inuit Association (KIA), which will be signed upon Ministerial approval of NIRB's recommendation. However, the IIBA does not cover all potential impacts on communities as a whole. Additional plans proposed by MHBL will assist in managing, mitigating and monitoring the socio-economic environment and include a Human Resources Plan, Education and Orientation Plan, Auditing and Continuous Improvement

Plan, Occupational Health and Safety Plan, Community Relations Plan, Inuit Employment Strategy, and Monitoring and Follow-up Plan.

2. PARTIES AT THE HEARING AND SUMMARY OF SUBMISSIONS

Most written submissions from Intervenors were developed according to NIRB's direction and grouped by the following Key Areas[33]:

1. The assessment of alternatives to the use of Tail Lake for tailings disposal;
2. Tail Lake water quality and water management strategy;
3. The design of the jetty and related issues including effects on fish habitat, shoreline erosion, and the seabed;
4. The WMMP including CEA;
5. The socio-economic impact of the Project on affected residents and communities of Nunavut; and
6. Other issues.

2.1 Nunavut Tunngavik Inc. (NTI) & Kitikmeot Inuit Association (KIA)

NTI is a private corporation established under the NLCA. It is responsible for advancing and protecting Inuit interests and for ensuring that the promises made under the NLCA are kept. For the Doris North Gold Project, NTI has negotiated exploration leases with MHBL and is also responsible to negotiate a Mineral Production Lease.

KIA is the Regional Inuit Association for the Kitikmeot region. KIA is responsible for all of the Inuit Owned Lands in the Kitikmeot and for the protection and management of water in, on or flowing through Inuit Owned Lands as stated in Article 20 of the NLCA. Kitikmeot Inuit are the primary users of the fisheries and wildlife of the Project area. KIA has negotiated an Inuit Impact and Benefits Agreement with MHBL under Article 26 of the NLCA.

Although NTI and KIA made separate presentations at the Final Hearing and are separate interveners in the process, they did combine to submit a joint written intervention[34]. In

[33] NIRB Letter from Stephen Lines, Technical Advisor, to Doris North distribution list, Re: Format of written submissions, November 29, 2005.

addition, KIA provided two written submissions of its own. The first was based on the joint NTI/KIA report prepared by Rescan Environmental Services Inc. but contained additional comments on socio-economics which are described below[35]. The second was a socio-economic report[36] which is also summarized in the socio-economic subsection below.

Assessment of Alternatives to Tail Lake for tailings disposal

NTI/KIA believe that sub-aqueous disposal of tailings in Tail Lake is the best overall alternative for tailings disposal.

Tail Lake Water Quality and Water Management Strategy

NTI/KIA found that the water management strategy is more conservative and explicitly deals with the scenario of failure of the base case management strategy and the need to practice zero discharge from Tail Lake for several years after tailings deposition ceases. However, NTI/KIA believe that the magnitude and duration of the Total Suspended Solids (TSS) concentrations that will actually occur in Tail Lake during the operations phase of the mine have been underestimated by MHBL's analysis.

Design of the Jetty and related issues

NTI/KIA accept that MHBL intends to build and maintain a short-lived structure. However, NTI/KIA do not agree with MHBL's claim that sediment will not accumulate along the west side of the structure. Nevertheless, NTI/KIA believe that the jetty is too small and too short-lived for it to create a significant impact on marine life in the Project area. NTI/KIA state that this issue must be revisited should the other ore deposits in the Hope Bay Belt be developed.

Wildlife Mitigation and Monitoring Plan including Cumulative Effects Assessment

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[34] *Technical Review Comments on the Final Environmental Impact Statement of the Hope Bay Doris North Project*. Final report prepared for the Kitikmeot Inuit Association and Nunavut Tunngavik Inc. by Rescan Environmental Services Ltd., Submitted January 18, 2006.

[35] KIA Submission to the Nunavut Impact Review Board, Final Hearing: Doris North Project, Submitted January 18, 2006.

[36] KIA Submission, Socio-Economic Components of the Final Environmental Impact Statement for the Doris North Gold Project, by RT Associates Ltd., Submitted January 19, 2006.

NTI/KIA found that MHBL provided sufficient information, analysis and interpretation of potential impacts to wildlife resulting from the Project. However, there are still a number of interpretations, conclusions and proposed mitigation and monitoring issues that the proponent should address. While none of these issues constitute fatal flaws according to NTI/KIA, they comment that the assessment, mitigation and monitoring of the proposed development could be enhanced by addressing them.

Photo 8. Representatives from KIA making their presentation to the Board.

Socio-economic effect of the Project

KIA wrote that the IIBA includes measures to enhance positive effects and help alleviate the potential adverse effects of the project on Inuit. KIA states that the IIBA includes measures to maximize Inuit employment, Inuit training, Inuit business opportunities, communication between KIA and MHBL, and financial assistance to help alleviate the negative social, cultural and health effects on Inuit employees, their families and communities. KIA does acknowledge that the IIBA cannot by itself deal with all socio-economic effects in the Kitikmeot region, and in order for the benefits of the IIBA to be optimized, Government programs in the areas of social services, health, justice and others in the Kitikmeot must be adequate and readily accessible.

KIA's socio-economic submission finds that the adverse socio-economic effects are likely to be "negligible to minor", and are outweighed by the benefits from the Project. KIA notes that MHBL has a very real opportunity to contribute to the building of

business capacity in the Kitikmeot Region, and to reduce currently high levels of unemployment in the Region.

Other issues

NTI/KIA did not have comments related to areas outside of the five Key Areas although the written submission outlines regulatory requirements MHBL will have to meet if the Project is approved.

2.3 Government of Nunavut (GN)

Representation from the GN was composed of the following five departments:

The Department of Environment's ("GN-DoE") role in the review is based on the Nunavut Environmental Protection Act. In addition, the GN-DoE administers the *Wildlife Act* which creates a GN-DoE authority to look at land-use activities and regulate land-use activities that may impact on wildlife populations.

The Department of Culture, Language, Elders and Youth promotes and protects culture and language. The division of Culture and Heritage focuses on the protection of archaeological and palaeontological resources.

The Department of Economic Development and Transportation promotes economic development within Nunavut and ensures safe and efficient transportation systems within Nunavut.

The Department of Education has a mandate for both education and training within Nunavut.

The Department of Community and Government Services ("GN-CGS") is responsible for programmes and services that support Nunavut's communities. CGS provides community development and training to enhance capacity to deliver municipal services

Assessment of Alternatives to Tail Lake for tailings disposal

GN had no written comments on the assessment of alternatives to Tail Lake for tailings disposal.

Tail Lake Water Quality and Water Management Strategy

GN's written submission[37] stated that there is concern for groundwater contamination and some uncertainty regarding groundwater discharge into Tail Lake from the underlying talik (unfrozen zone beneath the lake) but acknowledged that this is likely to be small and insignificant in the context of the water balance.

Regarding water quality, GN was concerned with the quantity of data on background concentrations of copper in the outflow of Doris Lake and potential restrictions on discharge rates from Tail Lake caused by elevated copper concentrations. Nevertheless based on the capacity of Tail Lake to retain water for periods of time when natural copper concentrations restrict discharge, and the commitment by MHBL to have on site laboratory testing equipment in order to manage discharge rates, GN was satisfied with the effluent discharge strategy proposed. GN had concern for MHBL's proposal that an emergency overflow spillway may not be required as part of the dam design, stating that the absence of such could result in failure of the structure.

Additional concern was related to the acid generating and metal leaching potential of rock used in construction. GN agreed that a monitoring program to verify the geochemical characteristics of all of the rock on a routine basis could resolve this concern.

Design of the Jetty and related issues

GN did not provide written comments on the design of the jetty or related issues.

Wildlife Mitigation and Monitoring Plan including Cumulative Effects Assessment

[37] Government of Nunavut written submission, Doris North Gold Project Review of Final Environmental Impacts Statement, Submitted January 18, 2006.

GN found that the greatest weakness is the lack of appropriate baseline data to provide baseline measures of natural variation of indicator variables and that it will be difficult for MHBL to refute any arguments that significant environmental change in the Project area, should it occur, is associated with mine operations.

Overall GN believes the WMMP can address some of the many uncertainties in the impact predictions for the Doris North project. However GN noted several weaknesses with the plan and has offered detailed advice for a revised WMMP.

Socio-economic effect of the Project

GN believes that the Project has the potential to make a positive impact on the regional economy of the Kitikmeot and its people. Of concern to GN is the lack of an integrated training and employment plan. GN is also interested in the establishment of a Socio-Economic Monitoring mechanism, along with the Community Relations Plan and the Community Investment Plan proposed by MHBL**.**

Other issues

GN had minor concerns for air quality and hazardous waste management surrounding the tank farm, the landfarm, and associated monitoring requirements.

2.4 Indian and Northern Affairs Canada (INAC)

INAC's regulatory trigger for the Project is the administration of Crown land under the *Territorial Lands Act*, required for the construction, operation and reclamation of the 103-m jetty in Roberts Bay.

Assessment of Alternatives to Tail Lake for tailings disposal

INAC's written submission[38] included two issues under this Key Area. However, as these issues, in NIRB's opinion, are more closely related to the Tail Lake water quality and management strategy they are summarized in that section below.

Tail Lake Water Quality and Water Management Strategy

INAC had a concern in its written submission regarding the effect of ice cover on Tail Lake and how this may affect MHBL's ability to decant water. INAC commented that the water balance calculations must consider the effect of ice cover on Tail Lake and that MHBL should consider the effect ice may have on water quantity and quality factors in relation to the potential release of decant water.

Photo 9. Representatives from INAC answer questions from NIRB staff.

Also of concern to INAC is potential Tail Lake shoreline erosion due to wave action and weathering. INAC believes this may increase suspended sediment in the lake water and may influence the amount of water that can be released. INAC noted that the FEIS provides a commitment and the conceptual basis for an adaptive management approach for shoreline erosion but that this plan requires further development for mine operations.

Regarding the dams, INAC commented that the stability and safety of the structures will depend on maintaining frozen foundation conditions throughout the design life and recommended that MHBL continue to collect climate data over the long term and provide

[38] Indian and Northern Affairs Canada Submission to the Nunavut Impact Review Board for the Doris North Project, Submitted January 18, 2006.

additional modeling and geotechnical investigation for final design. Additionally, INAC sought clarification on the criteria proposed by MHBL for determining when the north dam could be breached.

INAC also found that the values used for Mean Annual Precipitation and Mean Annual Runoff may not be accurate and that MHBL should provide a revised water balance. INAC's analysis also questioned the quality and quantity of baseline water quality data commenting that the limited data reduces the confidence of the general feasibility of the proposed discharge strategy.

INAC's submission also raised concern for materials such as quarried rock, waste rock, and tailings, which may generate acid or leach metals and how these should be characterized and handled.

Design of the Jetty and related issues

INAC had no written concerns regarding the jetty but stated specifics may arise during the regulatory phase when the abandonment and reclamation plan for the jetty is considered in detail.

Wildlife Mitigation and Monitoring Plan including Cumulative Effects Assessment

INAC was satisfied with the CEA presented by MHBL but noted, without proposing an alternative methodology, that habitat loss may not be the appropriate indicator of cumulative change for carnivores.

Socio-economic effect of the Project

INAC had concern for the socio-economic baseline data and assessment methodology and stated that MHBL's analysis was weak as the issues and mitigation measures were presented without providing analysis of the relationship between pre-mitigation effects, mitigation and residual effects. INAC found that this was particularly true for the cumulative effects analysis. INAC holds the opinion that, given the short duration of the Doris North Project, the risks involved with proceeding can be managed provided a

monitoring process is established. INAC recommends the establishment of a socio-economic monitoring committee and that project specific monitoring and follow-up requirements be implemented.

Other issues

INAC discussed the potential for future development of the Hope Bay Greenstone Belt and the use of Tail Lake for future phases. INAC commented that any future development should be considered a new project and thus subject to full assessment.

2.5 Environment Canada (EC)

EC is responsible for providing specialist information for the preservation and enhancement of environmental quality. EC will work with Fisheries and Oceans Canada to list the TIA on Schedule 2 of the MMER under the *Fisheries Act*.

Assessment of Alternatives to Tail Lake for tailings disposal

Prior to filing its written submission, EC was engaged in ongoing discussions with MHBL concerning the assessment of alternatives to Tail Lake for tailings disposal. These discussions led to MHBL providing EC with additional information on January 18, 2006. As stated in its submission[39], the additional information addressed the majority of the concerns EC had with this Key Area and the tailings disposal alternatives assessment was sufficient for the purposes of the environmental assessment process. However, EC did note that some clarification for the MMER Schedule 2 listing will be required.

Tail Lake Water Quality and Water Management Strategy

Similar to INAC, EC commented that changes to the permafrost regime in the vicinity of the north and south dams need to be monitored as part of a long term monitoring program of permafrost conditions at the site.

[39] Environment Canada's Submission to the Nunavut Impact Review Board for the Final Public Hearings on the Doris North Gold Mine Project, Submitted January 23, 2006.

EC stated that the water quality model for Tail Lake should be updated prior to mine startup to provide realistic estimates of operational parameters for the Tail Lake facility which could then be compared to field observations to determine whether the facility is operating as planned. Regarding Tail Lake effluent, EC recommended that the proposed limits be compatible with concentrations in the downstream receiving environment and asked that the proponent review guidelines from other jurisdictions for parameters which do not have CCME guidelines (such as chloride, TDS). Based on those EC suggests MHBL set management targets to maintain ambient conditions downstream for the protection of aquatic life.

EC provided additional comments on adaptive water quality management, including source control for ammonia and provided recommendations on aquatic effects monitoring.

Design of the Jetty and related issues

EC did not provide written comments on the design of the jetty. However, EC did provide suggestions to reduce the possibility of spills and mitigate the effects of any spills that may occur in the marine environment:

Wildlife Mitigation and Monitoring Plan including Cumulative Effects Assessment

EC had a number of significant issues related to migratory birds, and species at risk. EC identified what NIRB saw as major concerns with MHBL's baseline data gathered for migratory birds. EC wrote that the Hope Bay area is an important area for migratory birds and overall biodiversity and maintained that not enough baseline data had been collected. Further, due to the lack of baseline data, it is hard to determine whether or not the impact predictions made by MHBL are true, and that the impacts may actually be greater than predicted. As a consequence, EC stressed that MHBL must make sure that the WMMP is thorough and scientifically defensible so that impact predictions made can be confirmed and that any potential impacts can be identified early and mitigated. EC provided recommendations for the WMMP.

Socio-economic effect of the Project

EC had no comments regarding this Key Area.

Other issues

EC provided comments on MHBL's Spill Plan, and Mine Closure and Reclamation Plan saying that both lacked detail. EC also recommended that final water cover above tailings in Tail Lake should be 4m to allow for a factor of safety.

2.6 Department of Fisheries and Oceans Canada (DFO)

DFO is responsible for the management and protection of fish and marine mammals and their habitats. DFO applies the No Net Loss principle to maintain the productive capacity of habitats supporting fisheries resources. DFO's involvement in Schedule 2 of the MMER occurs if a fish bearing waterbody is proposed as a potential TIA.

Assessment of Alternatives to Tail Lake for tailings disposal

Partnered with EC, DFO was also engaged in discussions with MHBL concerning the assessment of alternatives to Tail Lake for tailings disposal. As such MHBL also provided DFO with additional information on January 18, 2006. As stated in its submission[40], the information provided a much clearer indication of their rationale for the choice of Tail Lake as the TIA. However, DFO's preferred option would be the selection of a tailings alternative that reduces or eliminates the impacts to fish and fish habitat for this project. Nevertheless DFO acknowledges that MHBL has developed a no net loss plan, including monitoring, which will compensate the habitat losses in Tail Lake with habitat gains elsewhere, thereby achieving DFO's no net loss objectives.

Once the Project has obtained environmental assessment approval, DFO will forward the Tail Lake option for Cabinet's consideration on whether to amend the Metal Mining Effluent Regulations to include Tail Lake in Schedule II.

Tail Lake Water Quality and Water Management Strategy

[40] Fisheries and Oceans Canada Final Intervention to the Nunavut Impact Review Board on the Doris North Gold Project, Submitted January 24, 2006.

DFO noted that MHBL presented impact predictions for impacts to fish and fish habitat from the altered flow regime due to construction and operation of the north dam for the TIA and that MHBL also presented fish habitat enhancement works that could be undertaken to offset the predicted impacts to fish habitat. DFO agreed that the enhancement works are acceptable to compensate for the predicted losses in habitat and requested additional monitoring be conducted in Doris Lake and Doris Creek. This monitoring would be to ensure the accuracy of impact predictions.

Design of the Jetty and related issues

DFO acknowledged MHBL's commitment to build rock spurs in Roberts Bay to offset any losses to fish habitat associated with the construction of the jetty. In its submission DFO asked that NIRB require MHBL to re-assess the length of jetty required to reach sufficient water depths and that the jetty be shortened to the extent possible. DFO has also requested longer term monitoring of the jetty in the post closure phase.

Wildlife Mitigation and Monitoring Plan including Cumulative Effects Assessment

DFO had no comments on this Key Area.

Socio-economic effect of the Project

DFO had no comments on this Key Area.

Other issues

Other aspects of the proposed development that were considered and discussed during the course of the DFO intervention included the loss of habitat in Tail Lake, the boat and float plane dock, the water intake structures, bridges and culverts, effects of suspended sediments on fish, MHBL's fishing policy, the use of explosives, habitat compensation monitoring, and navigation responsibilities transferred to Transport Canada.

2.7 Transport Canada (TC)

TC is responsible for transportation policies and programs and seeks to promote an integrated transportation system that is safe, secure, efficient, sustainable and environmentally responsible. The department has a responsibility to regulate transportation infrastructure, equipment and personnel.

TC provided specific comments in its written submission[41] for NIRB to consider during the environmental review of the Project. TC noted that the following restrictions may affect the Project as currently proposed:

- Any boulders or boulder clusters placed in the water body:
  - Must provide 1 m of navigation clearance above the normal summer water level; or
  - Must protrude above the normal summer water level by 1 m, and
  - Must provide for at least 1.5m wide navigation unobstructed clearance along the center line of the river; and
  - Must not be positioned in deep water sections thereby forcing recreation traffic into the shallow areas (i.e. near river banks).

- All temporary piles, false works, debris, etc. are to be completely removed from the waterway.
- There is also a possible requirement for lighting on the end of the jetty with a regulatory decision pending further information and drawings.
- Navigable Waters Protection Program representatives must be allowed unimpeded access to the site for inspection and/or monitoring purposes.

TC also commented that any in-water fish habitat or other mitigation measures proposed must be reviewed and authorized under the Navigable Waters Protection Act before installation and that additional measures could be imposed by TC during the regulatory phase.

2.8 Health Canada (HC)

HC is responsible for helping Canadians maintain and improve their health. To carry out this responsibility, HC supports activities that preserve and modernize Canada's health care system, enhance and protect the health of Canadians.

[41] Transport Canada's Submission to the Nunavut Impact Review Board for the Doris North Gold Project, Submitted January 18, 2006.

HC provided written comments in the following areas[42]:

Socio-economic effect of the Project

HC had concern for MHBL's choice of only two valued socio-economic components: Community Services and Infrastructure, and Employment and Economy. HC maintained that these two components did not adequately include the determinants of health, such as the spiritual and mental aspects of health. HC recommended that further assessment of effects to socio-cultural aspects, including health, be undertaken or additional components should be used in adaptive management for the social effects of the Project.

Photo 10. HC representative making her presentation to the Board

Other issues

HC provided written discussion on country foods and the risk assessment undertaken by MHBL. HC also mentioned the possibility of exposure to methylmercury should toddlers consume fish caught from Tail Lake and that MHBL needed to correct threshold values such as that used for mercury. HC commented that monitoring contaminants of potential concern in country foods harvested from the Project area would be useful to verify predicted levels of these contaminants

HC recommended an alternative method for predicting impacts associated with estimated levels of particulate matter.

2.9 Hatch Acres Incorporated (Hatch Acres)

Hatch Acres Incorporated (Hatch Acres) was retained as an independent consultant by NIRB to review a select number of documents that support the FEIS submitted by

[42] Letter from Health Canada to Stephanie Briscoe, NIRB Executive Director, and to Robyn Abernethy-Gillis, INAC Manager Environment, Re: Doris North Project Final EIS Technical Review, Submitted January 18, 2006.

MHBL. The review specifically focused on documents related to the geotechnical, geoenvironmental, hydrological, and hydrogeological aspects of the project.

Hatch Acres provided written comments on the following areas[43]:

Tail Lake Water Quality and Water Management Strategy

Hatch Acres raised a concern regarding the water quality data questioning the validity of data prior to 2004 due to differences in detection limits and quality control procedures. As well, clarification was sought on the water management strategy and how precipitated heavy metals from the mill process would be handled. Additionally, it suggests geochemical characterization of frozen pore water within the waste rock will need to be established, and its effects on the water quality into Tail Lake need to be addressed.

Regarding water balance, the submission requested clarification on MHBL's estimated groundwater inflow of 235 m^3 per day used in the water balance modeling given that the underground deposit is not directly located under Doris Lake, and the bedrock is completely frozen.

The submission also sought more information on breaching the north dam and on the foundation conditions for the north dam.

Design of the Jetty and related issues

Discussion about the effects of blasting residue from the quarried rock for the construction of the jetty was provided. Hatch Acres recommends MHBL use effective blasting techniques, which by minimizing blast misfiring will help reduce blast residue.

The submission also recommends bathymetric surveys be implemented to monitor potential sediment deposition and erosion around/near the jetty and that remedial

[43] Hatch Acres Incorporated, Review of Miramar Hope Bay Limited Supporting Documents for the Final Environmental Impact Statement (FEIS) Doris North Project – Nunavut Canada, Submitted January 17, 2006.

measures should be in-place to deal with potential impacts on the aquatic habitat and the local environment at Roberts Bay.

Other issues

Hatch Acres provided a strong discussion on the use of quarried rock and the importance of ensuring that rock used in construction does not generate acid or leach metals. The submission further emphasized that special attention must be given to the long-term impact these materials will have on the environment and discussed the ongoing concern with the validity of using surficial chip samples to represent rock from the quarries. In addition, Hatch Acres found that the rock material at the quarry sites was found to contain some quartz veins, which may be potentially acid generating after approximately 180 years.

Hatch Acres offered comments on the aquatic ecosystem, questioning whether lower invertebrates in Tail Lake affect the food chain system at Doris Lake, as they will be reduced or eliminated as a result of the Tail Lake usage as a TIA. Hatch Acres also questioned whether the population of Lake Trout in Little Roberts Lake will be adequate to support the level of intensive sampling required for the Environmental Effects Monitoring process. The submission recommends further studies to ensure that monitoring the effects on aquatic habitat will have adequate representative species stocks, including possibilities to include fish species from Roberts Bay.

2.10 Hamlet of Cambridge Bay

The Hamlet of Cambridge Bay provides services to community members including health and social service programs. The Hamlet of Cambridge Bay did not provide a written submission, however it did make a formal presentation to the Board during the technical portion of the Public Hearing. The Hamlet's position concerning potential socio-economic impacts on the people of Cambridge Bay and the Kitikmeot is summarized as follows:

Socio-economic effect of the Project

The Hamlet presented concern for the lack of regulatory requirements for Socio-Economic Agreements to address issues outside the scope of IIBAs.

Photo 11. Cambridge Bay Economic Development Officer (left) and Mayor make their presentation to the Board.

It recommended the formation of a Socio-Economic Monitoring and Mitigation Committee for all projects conducted in the region with the goal of consistent data collection and analysis to allow for proper monitoring and potential mitigation of issues. The Hamlet also recommended that NIRB, KIA, NTI, DIAND, GN and Cambridge Bay need formal partnerships to address the existing legislation, policies and procedures for project development to ensure that Hamlets are not left out of the process on future projects.

2.11 Kugluktuk Hunters and Trappers Organization (HTO)

The HTO of Kugluktuk has very limited capacity to undertake the technical reviews of development projects. Kugluktuk HTO provided written comments stating their concerns for wildlife, in particular the Caribou herds that use and inhabit the area. The written submission[44] acknowledges that today, as in the past, caribou are the most important subsistence animal to the Inuit of the Kitikmeot region. The submission states that concerns from the now closed Lupin gold mine have been brought to their attention and that developers in the Kitikmeot region should be made aware of the potential impacts on wildlife.

Specific comments were related to the tailings discharge and emphasis was placed on monitoring potential impacts on caribou. Furthermore, although not planned by MHBL,

[44] Kugluktuk Angoniatit Association, Hunters and Trappers Organization, Miramar Doris North Project, Submitted January 25, 2006.

the HTO noted that should ice-breaking ships be used to bring in supplies, it could interfere with the migration of the Dolphin-Union caribou herd. Finally, the HTO felt that the WMMP lacked detail and suggested that all interested parties be involved and that the results be conveyed to them.

On another matter, the HTO expressed its concern for how NTI may allocate the royalties it collects from the mine by stating:

> *"If Inuit royalties cannot or will not be invested in Inuit directly affected by the Doris North Mine, we can assume that our residents would find this mine development to be much less supportable. Moreover, HTOs' of our communities are simply not in a position to weigh potential royalty benefits against the environmental/wildlife and social costs of this project"*[45].

The HTO also commented on the IIBA negotiation process writing that it posed some concerns. It recognizes that the IIBA negotiation is clearly indicated in the NLCA, and that the KIA and MHBL have been bound to use this process, however it is unclear whether the process is producing the desired results.

2.12 The Public

NIRB values the input of affected residents and is privileged to hear from Elders, women and youth. Their input on every aspect of the Project, including traditional knowledge, helps the Board make informed decisions consistent with its primary objectives[46]. Due to the format of this Final Hearing and the success NIRB had in hearing comments from the public, only a select few comments are included in this report. However, all questions, comments, and answers by MHBL can be obtained by consulting the Final Hearing transcript[47].

[45] Kugluktuk Angoniatit Association, Hunters and Trappers Organization, Miramar Doris North Project, Written submission pg. 3.
[46] NLCA Section 12.2.5.
[47] Day 5 of the Doris North Final Hearing transcript documents the community portion of the Final Hearing. Other questions and comments from the public can be found throughout the entire transcript.

Photo 12. Community members question MHBL one on one during the community portion of the Final Hearing.

The Hamlet of Kugluktuk made a presentation during the community session[48]. The Hamlet commented that the IIBA is the only socio-economic agreement but that it focused only on beneficiaries and not the community as whole. It further commented that KIA is not representative of municipal governments who provide community services such as the wellness program which is already under funded and not meeting the needs of the community. Other major issues raised by the Hamlet include not receiving information on current mines which is necessary for planning and that training programs are required for Kugluktuk to take full advantage of employment opportunities.

Some comments from community members on the Key Areas are as follows:

Mr. Newman questioned the quality of water in Tail Lake after mine operations[49].

Mr. Atatahak questioned the use of Tail Lake for potential future developments[50].

Mr. Enogaloak commented on the design of the road from Roberts Bay to the mine site saying that it should not be high so caribou can cross easily[51].

Mr. Puqiqnak commented on low-level flying and the associated impacts he observed while out in the field working at the Roberts Bay silver mine[52].

[48] Exhibit No.27, Hamlet of Kugluktuk Presentation.
[49] Question by Mr. Newman on Feb 3, 2006, Final Hearing. See pp 854 of the transcript.
[50] Question by Mr. Atatahak on Feb 3, 2006, Final Hearing. See pp 891 of the transcript.
[51] Comments made by Mr. Enogaloak on Feb 3, 2006, Final Hearing. See pp 852 of the transcript.

Mr. Qingnatuq was concerned with caribou and their interaction with Tail Lake[53].

Mr. Kapolak asked if MHBL would limit activities if caribou are in the area[54].

Mr. Alookee commented that MHBL needs to visually monitor Tail Lake to ensure caribou are not drinking from it[55].

Mr. Koikok spoke of the need for employment and for mining companies and communities to work together[56].

Photo 13. Elders questioning MHBL during the community portion of the Final Hearing.

Mr. Hiqiniq from Gjoa Haven asked that MHBL support its Inuit workers by giving them guidance whether or not they speak English[57].

Ms. Kapolak raised a concern that there is still a problem with drugs at the MHBL camp[58].

Ms. Klengenberg commented that it was good to hear employment opportunities are coming[59].

[52] Comments made by Mr. Puqiqnak on Feb 3, 2006, Final Hearing. See pp 858 of the transcript.
[53] Comments made by Mr. Qingnatuq on Feb 3, 2006, Final Hearing. See pp 868 of the transcript.
[54] Comments made by Mr. Kapolak on Feb 3, 2006, Final Hearing. See pp 881 of the transcript.
[55] Comments made by Mr. Alookee on Feb 3, 2006, Final Hearing. See pp 900 of the transcript.
[56] Comments made by Mr. Koikok on Feb 3, 2006, Final Hearing. See pp 850-851 of the transcript.
[57] Comments made by Mr. Hiqiniqk on Feb 3, 2006, Final Hearing. See pp 862 of the transcript.
[58] Comments made by Ms. Kapolak on Feb 3, 2006, Final Hearing. See pp 884 of the transcript.
[59] Comment made by Ms. Klengenberg on Feb 3, 2006, Final Hearing. See pp 886 of the transcript.

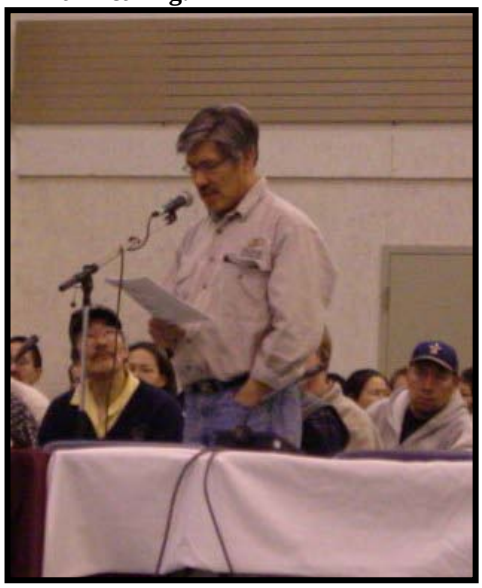
Photo 14. Ms. Bella Kapolak from Bathurst Inlet questions MHBL during the technical portion of the Final Hearing.

Mr. Kogvik of Gjoa Haven commented on the fish population in Tail Lake[60].

Mr. Kamookak also questioned MHBL on the population of fish in Tail Lake and then asked about post-closure monitoring of the Project site[61].

Mr. Novoligak questioned MHBL on hazardous materials transportation to the site[62].

Photo 15. Mr. Attima Hadlari from Cambridge Bay, questions MHBL during the Technical portion of the Final Hearing.



Overall, the community members supported the Project and many thanked MHBL for the consultation they had undertaken with the communities.

[60] Comments made by Mr. Kogvik on Feb 3, 2006, Final Hearing. See pp 851-852 of the transcript
[61] Questions by Mr. Kamookak on Feb 3, 2006, Final Hearing. See pp 855-857 of the transcript.
[62] Question by Mr. Novoligak on Feb 3, 2006, Final Hearing. See pp 853 of the transcript.

3. ANALYTICAL CONSIDERATIONS

3.1 Issues to be decided

The function of the Board is to gauge and define the extent of the regional impacts of the Project proposal, including a review of the ecosystemic and socio-economic impacts of the Project, to determine if the Project should proceed, and if so, under what terms and conditions.[63] In carrying out this function, the primary objective by law is at all times the protection and promotion of the existing and future well-being of the residents and communities of the Nunavut Settlement Area, and to protect the ecosystemic integrity of the Nunavut Settlement Area.[64]

The reporting parameters for the Board's determination are found in section 12.5.6 of the NLCA:

> After reviewing the project proposal, NIRB shall issue a report to the Minister and the proponent containing:
>
> (a) its assessment of the project and its impacts;
>
> (b) its determination as to whether or not the project should proceed based on its assessment under (a); and
>
> (c) in the event the project were to proceed, terms and conditions reflecting the primary objectives set out in Section 12.2.5.

3.2 Burden and Standard of Proof

The burden of persuading the Board that the Project should proceed in the Board's judgment, rests upon MHBL. The Board does not believe that the Inuit, or any other party, has the burden to persuade the Board that MHBL has not satisfactorily assessed the anticipated ecosystemic or socio-economic impacts and environmental effects of the Project, or that the steps to avoid and mitigate or compensate for adverse impacts are not

[63] See section 12.2.2(b), (c), and (d) of the NLCA.
[64] See section 12.2.5 of the NLCA; see also section 12.5.5.

sufficient. Rather, it is the responsibility of MHBL, in whose interest the application has been filed, to prepare an impact statement in accordance with the NIRB issued guidelines and Minister's direction such that the Board may conduct a full review of the matters relevant to its mandate.[65]

The standard of proof in this Hearing requires a careful balancing of all of the evidence presented in writing and at the Hearing. The Board will forward this project to the Minister for approval only if MHBL, more than anyone else challenging the Project, convinces the Board that it is consistent with the Board's mandate to approve the Project.

3.3 Jurisdiction of the Board

The Board has jurisdiction over the review of this Project pursuant to Article 12, Part 5 (Review of Project Proposals by NIRB) and Part 12 (Application) of the NLCA.[66] When a review is required under Part 5, section 12.10.1 of the NLCA prohibits the issuance of licenses or approvals required to allow a project to proceed until after the review has been completed and a NIRB project certificate is issued.

3.4 Environmental Assessment Guidelines

In accordance with section 12.5.2 of the NLCA, NIRB provided the Proponent with the EIS Guidelines for the Project.[67] Significantly, the accompanying letter set out for the

[65] See sections 12.5.1 and 12.5.2 of the NLCA.

[66] In a letter to NIRB dated April 22, 2005 (as amended May 6, 2005), pursuant to paragraph 12.4.7(b) of the NLCA, The Honourable Andy Scott, then Minister of Indian Affairs and Northern Development, referred the Doris North Gold Mine Project to the Board for a review under Part 5 of Article 12 of the Nunavut Land Claims Agreement.

[67] *EIS Guidelines*, October 15, 2002. These EIS Guidelines were issued by NIRB for the first review of the Doris North Gold Project. In a letter to Miramar dated May 27, 2005, NIRB confirmed the use of these EIS Guidelines for this second review, stating:

> NIRB understands that, since last year, Miramar has undertaken work on a new Draft Environmental Impact Statement (DEIS) with the assumption that the original guidelines from October 15, 2002 were applicable. Furthermore, NIRB is informed that Miramar intends on submitting the DEIS this June, 2005. With this in mind NIRB finds that requiring a second guideline development process at this stage would unnecessarily extend the review period. Moreover, the previous guidelines are very comprehensive and if fully considered along with NIRB's decision of August 2004, would direct Miramar towards the submission of a complete DEIS for all areas including especially the previous information deficiencies.

Proponent the 10 Minimum EIS Requirements published by NIRB in the *Guide to the Preparation of Environmental Impact Statements*.[68]

The EIS 10 Minimum Requirements are provided to ensure that the Proponent conducts a full environmental review of the Project. This ensures that the Board will have the information necessary to conduct its review in accordance with the primary objectives

[68] 1. Continue your consultations with locally affected persons; distribute any information that you collect, and resolve any disagreements especially with locally affected persons. Eventually, all comments from the public must be summarized, documented, and presented in the final EIS.
2. We are assuming you now have a proper definition of the project. If there are any connected projects to Doris (e.g. ice or other roads and mines), these should be discussed together in the EIS.
3. Include a statement of the need for, and the purpose of the project, based on the precautionary principle and sustainable development.
4. We expect your EIS to indicate a comprehensive impact assessment approach, including but not limited to discussing environmental effects that are likely to result from the project in combination with other projects or activities that have been or will be carried out. Following the broad parameters of NLCA section 12.5.2 (a) - (i), the EIS should eventually focus on adverse impacts or effects and their mitigation. By mitigation, we expect the analysis to include how the impact could be avoided, minimized, cured, eliminated, or even compensated. See e.g., NLCA section 12.5.2(f). By anticipated impacts (see NLCA sections 12.5.2 (b-c)) we mean short and long-term direct and indirect, positive and negative, and cumulative impacts as set out below. Socio-economic, archaeological and cultural impacts are included too.
5. Cumulative effects analysis (CEA). A project proposal causes a cumulative effect if, when added to other projects in the region, or projects reasonably foreseeable in the region, will cause an additive effect.
6. Significan[t] effects analysis. Not all impacts are significant and do not have to be studied. Therefore, you should advise the Board which impacts are significant, based first from the project setting (how unique is the area of the project, for example), and second, based on how *severe* the impacts will be, taking into account public health, land use plans, protected areas, habitat, or species, public concern, etc. Ultimately, the Board will decide which effects are significant and report to the Minister accordingly.
7. Alternatives to the project. This 'Alternatives assessment' comes from numbers 2 and 3 above and must include listing the "no-go" alternative, as well as the proponent's "preferred" alternative. This requirement goes well beyond a study of the alternative means of carrying out the project that might be economically and technically feasible and the environmental effects of those alternative means. The "no-go" alternative is not only a potentially stand-alone option (i.e. the no-build may be the best option), it also serves as a baseline for comparison with other development alternatives that might reasonably be proposed in the circumstances of the Doris mine.
8. The ability of renewable resources affected by the Doris project to sustain current and future generations in Nunavut and Canada.
9. A discussion of monitoring or post-project analysis (PPA). See NLCA section 12.7.2. The purposes of the PPA is:
   (a) to measure the relevant effects of projects on the ecosystemic and socio-economic environments the Nunavut Settlement Area;
   (b) to determine whether and to what extent the land or resource use in question is carried out within the predetermined terms and conditions;
   (c) to provide the information base necessary for agencies to enforce terms and conditions of land or resource use approvals; and
   (d) to assess the accuracy of the predictions contained in the project impact statements.
10. An assessment of any significant adverse ecosystemic or socio-economic trans-boundary effects.

established for the Board by section 12.2.5 of the NLCA.[69] Consistent with these primary objectives, section 12.5.5 requires the Board to take into account all matters relevant to its mandate, including the following:

> (a) whether the project would enhance and protect the existing and future well-being of the residents and communities of the Nunavut Settlement Area, taking into account the interests of other Canadians;
>
> (b) whether the project would unduly prejudice the ecosystemic integrity of the Nunavut Settlement Area;
>
> (c) whether the proposal reflects the priorities and values of the residents of the Nunavut Settlement Area;
>
> (d) steps which the proponent proposed to take to avoid and mitigate adverse impacts;
>
> (e) steps the proponent proposes to take, or that should be taken, to compensate the interests adversely affected by the project;
>
> (f) posting of performance bonds;
>
> (g) the monitoring program that the proponent proposes to establish, or that should be established, for ecosystemic and socio-economic impacts; and
>
> (h) steps which the proponent proposes to take, or that should be taken, to restore ecosystemic integrity following project abandonment.

As the Board has stated in previous decisions, while the matters in the Board's mandate are listed separately, the Board is of the view that they are interrelated.[70] This is consistent with section 12.2.5 of NLCA and the definition of "ecosystemic" in section 12.1.1 of the NLCA.[71] These sections require the Board to look at the management of Nunavut's resources in a way that recognizes its ecosystemic relationships. This requires considering the interdependency between the different parts of the environment: air, land,

[69] Section 12.2.5 of the NLCA states:

> In carrying out its functions, the primary objectives of NIRB shall be at all times to protect and promote the existing and future well-being of the residents and communities of the Nunavut Settlement Area, and to protect the ecosystemic integrity of the Nunavut Settlement Area. NIRB shall take into account the well-being of residents of Canada outside the Nunavut Settlement Area.

[70] See Jericho Diamond Project, File #00MN059, NIRB Final Hearing Report, February 2004, pp. 47-49; see also Doris North Gold Project, File #02MN134, NIRB Final Hearing Report, August 2004, pp. 30-31.

[71] Section 12.1.1 of the NLCA defines "ecosystemic" as "means relating to the complex of a natural community of living organisms and its environment functioning as an ecological unit in nature;"

water, wildlife and people.[72] Moreover, while the unique circumstances of this second review has resulted in this Hearing focusing on the five deficiencies identified by the Board in its first review of the Project, the Board agrees with the Minister's statement regarding the need for a review of the Project as a whole:

> *The previous Part 5 review of this Project was concluded on December 6, 2004, with my decision to accept the Board's determination that the Project should not proceed. The decision was based on the fact that the proponent had not provided adequate information on five significant environmental assessment categories. As a result, a major objective of this review should be to address the information deficiencies, as outlined in the Board's August Final Hearing Report. However, it is essential that this new information is not reviewed in isolation and that the potential effects of the Project as a whole are considered.*[73]

In accordance with the Minister's instruction, the Board in this Final Hearing Report will consider the five deficiencies identified in the first review, as well as other specific issues arising from the Hearing, followed by a reconsideration of the full range of issues and the multiple aspects of the review mandate that are required as per the 10 Minimum EIS Requirements. The Board believes this approach is necessary to ensure the Board fulfills its obligation to fully consider the effects of the Project as a whole.

In reaching its decision, the Board notes that the record from the Doris #1 Review forms part of this review.[74] Furthermore, the Board heard that many commitments were expressed by MHBL in response to the parties' review of the FEIS, and MHBL made further commitments through the course of this Hearing. These commitments have been incorporated into this Final Hearing Report as terms and conditions 1 and 2, and as Appendix A: MHBL Commitments from the Final Environmental Impact Statement Review Process; and Appendix B: MHBL Commitments from the Final Hearing.[75] The Board has considered the fulfillment of these commitments in its deliberation and relies

[72] See Jericho Diamond Project, File #00MN059, NIRB Final Hearing Report, February 2004, pp. 47-49; see also Doris North Gold Project, File #02MN134, NIRB Final Hearing Report, August 2004, pp. 30-31.
[73] Letter to NIRB dated April 22, 2005 (as amended May 6, 2005) from The Honourable Andy Scott, Minister of Indian Affairs and Northern Development.
[74] There were no objections to the record of Doris Review #1 being filed in this proceeding. See Transcript, Volume 1, January 30, 2006, pp. 27-28, lines 16-25.
[75] Marked as Exhibit 37.

on these commitments in reaching a positive decision to the Minister under section 12.5.6(c) of the NLCA.

4. KEY AREA ANALYSIS AND CONCLUSIONS

4.1 Assessment of Alternatives to the use of Tail Lake for Tailings Disposal

The FEIS incorporates a significantly improved assessment of alternatives for tailings disposal relative to the 2003 FEIS submitted for Doris Review #1.[76] DFO described the improvement:

> *…the alternatives assessment for Tail Lake, this alternatives assessment that was presented in this EIS is, I must say, much improved over previous versions. 21 tailings disposal options were considered, and Tail Lake has been presented by Miramar Hope Bay as the preferred alternative for tailings disposal for the Doris Project.*[77]

While the DFO expressed a general preference for a tailing alternative that minimizes or eliminates impacts to fish habitat, the DFO submitted that MHBL has presented a no net loss plan that will offset the impacts to fish habitat for the Tail Lake Option.[78] The Board also heard from KIA that, based on its review of the alternatives assessment and its experience with land-based tailings disposal at the Lupin gold mine site, it recommends to NIRB that the

> *"subaqueous -- or disposal of tailings in Tail Lake is the safest and most manageable long-term alternative for tailings disposal"*[79].

Subject to the discussion of future phases of development in the following paragraph and the Tail Lake water quality and water management issues discussed in the next section, the Board accepts the use of Tail Lake for tailings disposal as the preferred alternative for the Project at this time. In doing so, the Board notes that the Proponent is prohibited from using Tail Lake for this purpose until Tail Lake is added to Schedule 2 of the MMER.

[76] This includes the supplementary document "Integrated Tailings Alternatives Assessment" prepared by SRK Consulting and filed with NIRB by Miramar on January 18, 2006.
[77] Tanya Gordanier, DFO, Transcript, Volume 4, February 2, 2006, p. 614, lines 17-24.
[78] See Tanya Gordanier, DFO, Transcript, Volume 4, February 2, 2006, p. 617-618, lines 22-1.
[79] Geoff Clark, Environmental Resource and Development Officer, KIA, Transcript, Volume 2, January 31, 2006, p. 323, lines 5-7.

The Board will require the Proponent to work closely with the DFO and EC to ensure that the tailings disposal alternative assessment is revised to incorporate and meet all of the information requirements for scheduling Tail Lake on Schedule 2 of the MMER.[80]

When considering the assessment of tailings disposal alternatives, the Board accepts that the scope of the Project before the Board is a two year mine. However, the Board cannot ignore the reality that a decision taken today inevitably affects the consideration of alternatives for tailings disposal for future phases of development of the 80 km long Hope Bay Belt. The Board heard from the Proponent that the use of Tail Lake for the tailings disposal has the:

> *"…added benefit of being able to contain all the tailings associated with anticipated future development phases, effectively eliminating the need to develop new sites in the future."*[81]

However, in response to questioning by the DFO, the Proponent agreed that the preferred alternative for the tailings disposal would likely change:

> *"its likely that if a detailed assessment of that large facility was done, that moving towards subaerial deposition would be the preferred alternative for that scenario."*[82]

While the Proponent stated the Tail Lake basin could still be used, clearly some of the advantages of the subaqueous tailing disposal cited in the current alternative assessment would be lost. The Board's concern is supported by the evidence of the Proponent:

> *It should be pointed out that the criteria, the rational, and the selection for selecting subaqueous deposition for the Doris North Project should not be carried forward and applied to any future development because it's a much larger scale, it's an entirely different thing. To proceed with subaqueous tailings disposal for any development in the belt would require deposition in a very large lake, and of the lakes evaluated, probably the only lakes that could contain this volume of tailing would be*

[80] For an excellent overview of the process and requirements to add a tailings impoundment area to Schedule 2 of the MMER, see the presentation to the Board by Collette Spagnuolo, EC, Transcript, Volume 3, pp. 558-561, lines 13-19.
[81] Exhibit 1: MHBL Presentation – Technical Session, p. 27.
[82] Maritz Rykaart, Miramar, Transcript, Volume 2, p. 219, lines 9-13.

> *something bigger than Doris Lake, so we're talking about a very large lake to proceed on the same basis for the entire belt study.*[83]

This is problematic. The Board shares with the Proponent that

> *"one of the central ideas is to minimize overall cumulative disturbance by having one infrastructure centre, one tailings facility that could be used for each of the phases."*[84]

However, looking into the future leaves the Board with two key questions now. First, if the Tail Lake alternative's advantage of a "walk-away closure within a time frame that is consistent with the Project life"[85] is going to be lost with subsequent phases of development, is a better alternative to save Tail Lake and proceed with the best subaerial deposition alternative now? Secondly, if KIA, as landowner, remains opposed to subaerial deposition, leading MHBL to this Board again seeking to use a second, larger water body for tailings disposal, is it a better alternative to consider a larger lake now?[86] The result of a phased approach to environmental assessment is that there is not enough information about future phases for a clear answer.

In light of the importance of Tail Lake, as the key impact feature for this Project, and the potential for changes to Tail Lake as the tailings impound area that may be caused by sequential development of the Hope Bay Belt, the Board will require MHBL to keep the

[83] Maritz.Rykaart, Miramar, Transcript, Volume 2, p. 219, lines 23-10
[84] David Long, Miramar, Transcript, Volume 1, January 30, 2006, p. 52, lines 14-17.
[85] Exhibit 1: MHBL Presentation – Technical Session, p. 27.
[86] In their joint written submission to NIRB, KIA and NTI stated:

> KIA and NTI prefer sub-aqueous disposal of mine tailings in Tail Lake. The two key factors for KIA and NTI are, first, the guarantee that tailings will be sequestered under water in perpetuity and hence will never pose a threat of generating acid rock drainage – a guarantee that is not possible with land-based tailings. The second factor is that the use of Tail Lake allow for greater flexibility in adaptive management of tailings than does land-based storage.

Submission of KIA and NTI: Technical Review Comments on the Final Environmental Impact Statement of the Hope Bay Doris North Project, January 2006, pp. 2-3.

Further, Geoff Clark, KIA, commenting on the reclamation of subaerial tailings disposal at the Lupin mine site stated:

> …KIA has some concerns about whether or not this will be a good long-term reclamation plan for the site. So as a result, Inuit would be extremely cautious about allowing a land based tailings facility again in the Kitikmeot and certainly would not allow one on Inuit-owned land.

Transcript, Volume 2, January 31, 2005, pp. 322-323, lines 24-3.

Board informed annually of development plans for future phases of the Hope Bay Belt that may result in a better option or different decision for tailings disposal, also, to ensure that any change to MHBL's preferred alternative must come back to the Board for immediate Article 12 analysis. The overall goal is to minimize the damage to the environment by minimizing the effects decisions being made today have on the alternatives for tomorrow. Further, and as part of the annual updates on development plans for future phases, NIRB requires the Proponent to file a regional land use development "concept" for the Hope Bay Belt with NIRB, KIA, and the NPC, whose jurisdiction it is of course to consider such matters.[87] A regional land use concept would also facilitate the development of precautionary thresholds to assist with monitoring and detecting potentially significant changes in the region.[88]

The Board notes that the other side of scoping this Project "narrowly" is that only the approval of the Doris North mine is before the Board at this Hearing. As MHBL has properly acknowledged, all subsequent phases of the development of the Hope Bay Belt *must* come to NIRB for an Article 12 environmental assessment.[89]

4.1.1 Summary of Key Area Conclusion

The Board accepts the use of Tail Lake for tailings disposal as the preferred alternative for the Project at this time. The Board requires MHBL to work closely with DFO and EC to ensure all the requirements for scheduling Tail Lake as a TIA on Schedule 2 of the MMER are met. The Board requires MHBL to file annual updates on development plans for future phases including a development land use concept. The Board further maintains that any change to MHBL's preferred alternative must come back to the Board for immediate Article 12 analysis and that all subsequent phases of the development of the Hope Bay Belt must come to NIRB for an environmental assessment.

[87] See Article 11 of the NLCA.
[88] The benefits of a regional land use plan to setting thresholds and managing cumulative effects was discussed by Mike Setterington, GNDOE, Transcript, Volume 3, February 1, 2006, p. 430, lines 3-12.
[89] David Long, Miramar, Transcript, Volume 1, January 30, 2006, p. 51, lines 10-19.

4.2 Tail Lake Water Quality and Water Management Strategy

The Board accepts that the water quality analysis and water management strategy provided by MHBL in the FEIS is substantially more complete than was the case in Doris Review #1. The Board agrees with MHBL that the increased empirical data and improvements in the methods for testing the background water quality, the inclusion of additional source loads such as total suspended solids particularly arising from potential shoreline erosion, and a wider range of sensitivity analysis to incorporate the impact of upset condition, has resulted in a more rigorous and robust assessment of the proposed water management strategy and related uncertainties.[90]

MHBL stated three objectives for its water management strategy:

> *The first objective is to meet MMER criteria before any discharge takes place in any way whatsoever. The second primary objective of the water management control strategy is to meet CCME guidelines in Doris Creek downstream of the waterfall at all times, both during operation and post-closure. Finally, it is an objective of the water management strategy to ensure that the water level in Tail Lake remains as low as practically possible.*[91]

MHBL also provided NIRB and the parties with a consolidation and clarification of the application of CCME Guidelines as they apply to different phases of the water management strategy.[92] In the Board's view meeting the three objectives of the water management strategy, as clarified by MHBL, is critical to the protection of the environment and thus a requirement for approval to proceed with the Project.

The Board understands MHBL's position that the result of the assessment on water quality and the proposed water management strategy is that "First, and foremost, the water management control strategy is an adaptive management plan."[93] Given the uncertainties in the water management strategy, as demonstrated by KIA's concerns

[90] See Maritz Rykaart, Miramar, Transcript, Volume 1, January 30, 2006, pp. 78-79, lines 8-11.
[91] See Maritz Rykaart, Miramar, Transcript, Volume 1, January 30, 2006, p. 80, lines 9-19.
[92] See Exhibit 4: MEMO (January 18th) from MHBL to NIRB re: Clarification of Application of CCME Guidelines.
[93] See Maritz Rykaart, Miramar, Transcript, Volume 1, January 30, 2006, p. 80, lines 24-25.

regarding total suspended solids,[94] EC[95] and GN-DOE[96] concerns surrounding the uncertainty of copper concentrations and related restricting of discharge, INAC's concerns regarding the effect on the shoreline permafrost thaw and related erosion,[97] and the effect on water quality,[98] and the importance of continuous monitoring as an essential element of an effective adaptive management plan, the Board will require the continuation of a full time Monitoring Officer to review subsequent plans in order for the Project to proceed at this time.[99] Further, the Board requires MHBL to file with the NWB, as part of the water licence application, a revised water balance and water quality model based on data previously gathered and new field data that is to be collected in 2006.

Based upon the authority of section 12.7.1 of the NLCA, the mandate of the Monitoring Officer for the Project will be to monitor the Project as it proceeds, analyze the success of the terms and conditions as the Project becomes operational and through to closure and reclamation, give direction to MHBL on the mine's environmental monitoring and adaptive management program from the context of NIRB's decision, and direct MHBL on its reporting obligations for major environmental impacts, especially wildlife, fish, and aquatic ecosystems.

The responsibilities of the NIRB Monitoring Officer are to determine if MHBL's management and regulatory controls are functioning properly, that the terms and conditions are being met, and that the mine's systems are operating as promised. The

[94] See the presentation by Geoff Clark, KIA, Transcript, Volume 2, January 31, 2006, pp. 324-325, lines 2-14.
[95] See written submission of EC: Environment Canada's Submission to the Nunavut Impact Review Board for the Final Public Hearings on the Doris North Gold Mine Project, January 2006, pp. 8-9.
[96] See written submission of GN: Doris North Gold Project Review of the Final Environmental Impact Statement, January 2006, p. 11.
[97] See Carl McLean, INAC, Transcript, Volume 3, February 1, 2006, pp. 484-485, lines 7-2.
[98] See Mike Atkinson, GN, Transcript. Volume 2, January 31, 2006, pp. 385-386, lines 23-15.
[99] Section 12.7.1 states "The terms and conditions contained in: (a) a NIRB project certificate issued pursuant to Section 12.5.12 or Section 12.6.17…may provide for the establishment of a monitoring program for that project which may specify responsibilities for the proponent, NIRB or Government". Currently, the Jericho Monitoring Officer has a full workload and it may be necessary to seek additional assistance.

results of this information will be used to not only assist regulators, but also NIRB in reviewing applications or issuing approvals for future development.

In carrying out these responsibilities, the Monitoring Officer will need to:

- Review licenses and approvals;
- Discuss and interview mine staff; and
- Work with regulatory authorities in the inspection of the mine, road, jetty, hazardous materials management, waste and waste rock stockpiles, Doris Lake (fresh water), Tail Lake, wildlife plans, data collection and management, and the use of monitoring stations and laboratories.

The Monitoring Officer's further assignments, subject to direction from NIRB, include: proposing, coordinating and suggesting studies; assessing the study results and undertaking action to follow-up; deciding on site visits and changes to the monitoring program; and recommending to NIRB any changes to the terms and conditions of the Project Certificate. To support the Monitoring Officer, regulators should file an annual report with NIRB's Monitoring Officer concerning their activities and undertakings with MHBL and the Project.

In addition to regular reporting requirements for other agencies, results from water quality monitoring are to be reported on an annual basis at a minimum once prior to discharge, once during peak discharge, once following the cessation of discharge, and within 48 hours of upset conditions. The above monitoring information shall be submitted to NIRB through the Monitoring Officer. Information gathered by NIRB's Monitoring Officer is public information that will be shared with the proponent and regulatory authorities

To improve the quality of baseline climate data available for water quality and other management purposes, the Board will require MHBL to install a weather station to collect site specific data on air temperature, precipitation, evaporation, and runoff, the design and location of which shall be selected in consultation with EC. The Board will also require that the on-site laboratory, which MHBL has committed to using to monitor, on a real time basis, water quality within both Tail Lake and Doris Creek before and after

discharge,[100] be certified to highest standards possible taking into consideration the remote location of the laboratory.[101] This includes standards relating to the calibration of equipment to ensure it is reading properly.

Further, the Board requires that the results of monitoring of Tail Lake and Doris Creek water quality, above and below the waterfall, be verified three times during discharge by an independent, third party laboratory, with sampling either carried out independently or supervised by the Monitoring Officer. The Board is of the view that these extra cautions are warranted for a gold mine because of the risks, including cyanide and precipitate heavy metals, inherent in the process of extracting gold from the ore.

Considering the mitigation measures proposed by MHBL, including treating high-risk areas compromising approximately 20% of the shoreline of Tail Lake with geotextile and rip-rap protection, and a commitment to continual monitoring of shoreline erosion and taking corrective action as part of the adaptive management plan, the Board is satisfied that MHBL has adequately taken the effect on total suspended solids within Tail Lake into account in the water quality modeling.[102] Similarly, the Board is satisfied that the redesign of the dam to follow the Ekati-style dam design and incorporate conservative slope control and freezing criteria into the design, combined with the shorter anticipated life span of the dam resulting from the revised water quality assessment and water management strategy, are sufficient to resolve the issues the Board had with the tail lake containment strategy as presented at Doris Review #1.[103]

4.2.1 Summary of Key Area Conclusion

The Board finds that more information has been provided on water quality and water management and is satisfied with the preliminary design of the dams. However, the

[100] See Maritz Rykaart, Miramar, Transcript, Volume 1, January 30, 2006, p. 81, lines 14-25.
[101] The Board requires a Canadian standard of accreditation as a Mineral Analysis Testing Laboratory from the Standards Council of Canada, or a demonstrably equivalent certification.
[102] See Maritz Rykaart, Miramar, Transcript, Volume 1, January 30, 2006, pp. 89-92, lines 10-3.
[103] See Maritz Rykaart, Miramar, Transcript, Volume 1, January 30, 2006, pp. 93-94, lines 4-20.

Board will require the continuation of a full time Monitoring Officer, specific reporting on water quality monitoring, the installation of a weather station, accreditation for the on-site laboratory and third party water quality verification. MHBL must also submit, as part of their water licence application, a revised water balance and water quality model based on additional data collected in 2006.

4.3 Design of the Jetty and Related Issues

As a result of the analysis set out in the FEIS, MHBL has selected a 103-m long continuous rock-filled jetty constructed directly on the marine sediments as the preferred design alternative for a jetty at Roberts Bay.[104] The jetty is required to allow barges to moor and off-load supplies for use at the mine site. Based on the geotechnical work to confirm foundation conditions, the modeling and analysis of near-shore marine processes, and the assessment of the effects of the preferred design alternative on fish habitat set out in the FEIS, the Board, subject to the requirements set out below, is now satisfied with MHBL's proposed jetty design.

The Board accepts the proposed length of 103 m for the jetty unless there is a compelling reason to change the length of the jetty, based on new evidence at the regulatory phase. The Board's agreement with the jetty design is also subject to the commitment made by MHBL to monitor the fish habitat through the operation and post-closure and provide fish compensation as required and to monitor the bathymetry around the jetty to continue to investigate the true effect of near-shore marine processes.[105] Furthermore, as recommended by NRCan, to increase the confidence in the management plan and provide data for potential future phases of the project which may extend the life of the jetty, the Board requires the installation of thermistor cables and temperature loggers beneath the jetty to monitor the effects of the jetty on shallow water permafrost regime.[106] As a further precaution in case of a spill, the Board also requires that containment booms and berms be used to control spills whenever fuel and/or waste is being transferred between

[104] See David Long, Miramar, Transcript, Volume 1, January 30, 2006, p. 100, lines 5-12.
[105] See Maritz Rykaart, Miramar, Transcript, Volume 1, January 30, 2006, p. 101, lines 1-10.
[106] See Robert Johnstone, NRCan, Transcript, Volume 4, February 2, 2006, p. 692, lines 2-14; see also p. 699, lines 8-18.

barges and the shore.[107] Further, MHBL shall apply the safest containment measures available for all fuel and hazardous materials storage areas.

On the matter of consultation, a further requirement of approval is that before the jetty is reclaimed or abandoned, local Elders, KIA and NTI are to be consulted on the plan and included in the decision- making related to the depth to which the jetty is dismantled, or if it should be dismantled at all. The final closure and reclamation plan for the jetty, like the decommissioning of the mine itself, must come back to NIRB for Article 12 approval.

4.3.1 Summary of Key Area Conclusion

The Board is satisfied with MHBL's proposed jetty design. However, MHBL must monitor fish habitat and provide fish compensation. MHBL must also monitor the bathymetry around the jetty and must install thermistor cables and temperature loggers to monitor the effect of the jetty on the permafrost regime. The Board also requires strict spill control measures be implemented when transferring between barges and the shore. MHBL must include local Elders, KIA and NTI in decision-making for the abandonment options for the jetty and the final closure and reclamation plan, like the decommissioning of the mine itself, must come back to NIRB for Article 12 approval.

4.4 The Wildlife Mitigation and Monitoring Plan including Cumulative Effects Assessment

Section 12.12.5 of the NLCA requires decisions made by NIRB to be designed, implemented and interpreted in a manner consistent with Articles 5 and 7 of the NLCA. The objectives of Article 5 include the creation of a wildlife management system that is governed by and implements the principles of conservation set out in section 5.1.5:

[107] The Board notes Miramar's statement that containment booms will be available and berms will be used for fuel transfers from a barge to fuel trucks. See Brian Labadie, Miramar, Transcript, Volume 2, January 31, 2006, pp. 214-215, lines 16-12.

The principles of conservation are:

> (a) the maintenance of the natural balance of ecological systems within the Nunavut Settlement Area;
>
> (b) the protection of wildlife habitat;
>
> (c) the maintenance of vital, healthy, wildlife populations capable of sustaining harvesting needs as defined in this Article; and
>
> (d) the restoration and revitalization of depleted populations of wildlife and wildlife habitat.

These principles are reflected in section 4.24 of the EIS Guidelines, which require MHBL's FEIS to provide detailed environmental management and mitigation plans to prevent or mitigate all the potential impacts of the Project on wildlife, including caribou and their habitats, grizzly bears and other scavengers and wildlife potentially attracted to the site, as well as other birds and wildlife species and their habitats. The wildlife management and mitigation plans are also required to discuss the negotiation of an agreement or agreements with the concerned communities that would permit them to participate fully in the planning, execution, and evaluation of mitigation measures.

In the Doris Review #1, the Proponent acknowledged that a WMMP had not been developed or filed.[108] The Board is pleased to see that this critical omission has been rectified in the current FEIS,[109] and that the Proponent has designed the WMMP based on current adaptive management programs that have been in place and used effectively at the Ekati and Diavik mines.[110]

While the Board accepts that, subject to the commitments made by MHBL as set out in Appendix A and Appendix B, the WMMP set out in the FEIS is sufficient for environmental assessment purposes, the Board heard concerns from many community members about the potential harm to wildlife from contamination at the mill site and the

[108] See Doris North Gold Project, File #02MN134, NIRB Final Hearing Report, August 2004, p. 37.
[109] In addition to the FEIS, Miramar filed Exhibit 2: MEMO from Golder to MHBL Re: GNDOE Comments on Revised Wildlife Mitigation and Monitoring Plan.
[110] See Corey de la Mare, Miramar, Transcript, Volume 1, January 30, 2006, p. 105, lines 16-20.

tailings deposition in Tail Lake.[111] The concerns were about Siksiks and waterfowl such as Loons which land on and dive into Tail Lake, and the potential for cumulative effects on carnivores such as grizzly bears, as well as concerns about wildlife drinking contaminated water from Tail Lake. The Board not only understands but underscores

[111] Mr. Puquqnak stated:

> When you did your presentation this morning, and there's going to be tailings deposited into Tail Lake, and there's going to be sewage that's going to be dumped in there as well, and there's going to be two dams built on the north end and the south end of Tail Lake, and from what we hear, there's going to be fish that are going to be taken out of there prior to the mine being opened. I know that the animals – the rest of the animals or the wildlife in the surrounding area will go to the lake to take a drink of water. I know it doesn't sound like much of a concern to the developers, but it is to us.

Transcript, Volume 3, February 1, 2006, pp. 498-499, lines 23-10.

Mr. Qirqqut stated:

> …we have concerns over a tailings pond. It makes me hesitate because there's wildlife in that area, and there's animals that migrate through that area. There's wolves, wolverines, and grizzly bear that begin to -- that migrate through that area…I'm in support of that [the mine being built], but the only concern I have is with regards to the tailings pond. It scares me a bit because I am concerned of the wildlife.

Transcript, Volume 3, February 1, 2006, pp. 501-502, lines 16-7.

Paul Waye, Kugluktuk HTO, stated:

> Kugluktuk residents participated in the Lupin gold mine through employment from the start of that project. Over the years of operations at Lupin, community members that were employed have stated verbally that the tailings of the processed gold were a major factor in caribou getting sick.
>
> During the spring and summer months as the herd pass through the mining footprint, caribou would go to the unbarricaded tailing ponds to drink the water. Undocumented numbers got incapacitated from cyanide-laden waters and would seek refuge from predators such as the grizzly bears and wolves at the mine site. Once the sick caribou were removed, chased out of the campsite, these particular animals were predated on by wolves and grizzly bears, thus passing up the food chain the contaminants that had accumulated in the caribou.
>
> With this in mind, issues and concerns have been brought to the attention of the local HTO in Kugluktuk. The developers in the Kitikmeot region have to be made aware of the potential impacts on wildlife.

Transcript, Volume 4, February 2, 2006, pp. 765-766, lines 8-3.

Simon Qingnatuq, resident of Taloyoak, stated:

> I'm concerned about the environmental impact on the Tail Lake. As we all know, thousands of caribous go through the area where the project is going to be running, and you know, you have thousands of caribous going up north in the springtime, and in the fall, they head back south. My concern is, you know, caribous dying off from the contamination.
>
> And, you know, talk about Tail Lake, like the mining companies, you'll set up Inukshuks so that carious could stop going into the disposal site. Me, I'm not in favour of that.
>
> As a hunter, I know as a matter of fact that caribous will drive into Inukshuks, and even if you try to stop them, if the caribous go, they won't stop for the Inukshuk

Transcript, Volume 5, February 3, 2006, pp. 868-867, lines 18-7.

with great prominence the cultural importance Inuit place on protecting wildlife for future generations:

> *…[W]e need to discuss wildlife because those are utilized by Inuit, by our ancestors, and those will be utilized by those after we're gone.*[112]

The Board's strong views on the WMMP were mirrored by several Elders and in KIA's closing statement:

> *Matters relating to impact on wildlife have been addressed to KIA's satisfaction. KIA is, however, concerned that insignificant provision has been made for ongoing Inuit environment [sic] in the implementation of the wildlife monitoring and mitigation plan.*
>
> *KIA has listened to the Elders in this hearing. While they generally support the Doris North Project, they remain concerned about the protection of our land and wildlife. KIA recommends that NIRB include a requirement in this project certificate for periodic involvement of Elders and HTOs representatives in reviewing the implementation and the result of the wildlife monitoring and mitigation plan.*

To alleviate these concerns, the Board will require increased monitoring for wildlife at the mill site and Tail Lake, and increased mitigation of potential adverse effects to wildlife from contamination at Tail Lake and the mill site. The Board also requires increased monitoring and reporting back through NIRB's Monitoring Officer, any interaction between humans and wildlife at the mine site and the implementation of appropriate mitigation measures.

The Board understands MHBL's position that structures built around Tail Lake carry greater risk to wildlife than benefit.[113] Furthermore, the Board believes that an effective wildlife monitoring plan requires a balance of scientific knowledge and Traditional Knowledge. Therefore, the Board finds that as a condition of approval for the Project, MHBL must engage in consultation with Elders and Kitikmeot HTOs to review the results of wildlife monitoring and develop mitigation measures, including measures to

[112] Mr. Koikok, Inuit Elder, Transcript, Volume 4, February 2, 2006, p. 642, lines 5-7.
[113] See David Long, Miramar, Transcript, Volume 2, January 31, 2006, p. 312, lines 11-18.

discourage wildlife and birds from coming into contact with Tail Lake and contaminated areas of the mill site. NIRB will also provide the Nunavut Wildlife Management ("NWMB") with a copy of this decision, and requires MHBL to contact the NWMB for whatever advice and direction that Board considers appropriate.

Further, to ensure the fish and wildlife are adequately protected from contaminated water, the Board will require MHBL to ensure that water discharged from Tail Lake to the receiving point in Doris Creek (i.e. above the waterfall) is as protective of the receiving environment as possible. The specific water quality discharge criteria shall be set by the NWB and shall be site specific where possible.

Given the importance of the WMMP to the protection of wildlife and data collection on species such as migratory birds, and considering the revisions the Proponent has committed to and Board requires, the Board will require MHBL to submit an updated WMMP to NIRB within three (3) months of the issuance of a Project Certificate and will require annual updates to the WMMP based on data collected. As part of NIRB's approval process, NIRB's Monitoring Officer will consult with the NWMB and the parties on the revised Plan. Further, the Proponent, in consultation with KIA, GN-DoE, and NIRB, is to immediately begin the development and implementation of studies to determine the baseline population of wolverine and grizzly bear in the regional area.

4.4.1 Summary of Key Area Conclusion

The Board finds that the WMMP is sufficient. However, a revised plan, taking into consideration comments made by intervenors and those of this report, must be submitted to NIRB within three (3) months of the issuance of a Project Certificate. Also, to ensure fish and wildlife are protected from contaminated water, discharge from Tail Lake must be as protective of the receiving environment as possible and site specific water quality criteria must be established and set by the NWB where possible. MHBL must also begin to undertake further baseline data collection on the populations of both wolverine and grizzly bears.

4.5 The Socio-economic impact of the Project on Affected Communities of Nunavut

The Board is pleased to hear evidence that the Hamlet of Cambridge Bay is satisfied with the position of MHBL with regard to socio-economic issues and looking forward to the Project proceeding.[114] This is in direct contrast to the evidence of the hamlets during the Doris Review #1, and clear evidence to the Board of the value to project proponents to consult effectively with affected communities as a critical element of the environmental assessment process.[115]

The Board also heard the Hamlet of Cambridge Bay's concerns regarding the lack of regulatory requirements for socio-economic agreements to address socio-economic issues outside of the scope of the IIBA.[116] Accordingly, the Board requires, within six (6) months of the issuance of a Project Certificate, a Hope Bay Belt Socio-Economic Monitoring Committee ("SEMC") be formed to supplement, not duplicate areas covered by the IIBA. In order to ensure consistent data collection and tracking of data trends in a comparable form to be shared at the regional level and to minimize the duplication of efforts, the composition of the SEMC should include the same membership as the Kitikmeot Socio-Economic Monitoring Committee approved by the Minister and already in development for Tahera's Jericho Diamond Mine. Additionally, the SEMC must include the affected communities of Cambridge Bay, Kugluktuk, Gjoa Haven, Taloyoak,

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[114] See Chris King, Hamlet of Cambridge Bay, Transcript, Volume 4, February 2, 2006, p. 777, lines 20-24.

[115] David Long, Miramar, stated:

> The last concern [in Doris Review #1] respected socio-economics. A number of hamlets said to the Board that they had not been adequately consulted about the potential for increased demand for their services and other potential effects on their communities. We had also not laid out in any detail our ongoing community consultation plans and the mitigation of potential effects.
>
> We have addressed this. We conducted extensive consultation with the hamlets to identify their concerns and to develop plans and programs to address these concerns. We hired Alex Buchan as a Community Relations manager. He's a resident of the Ktitkmeot, and we opened an office in Kugluktuk…

Transcript, Volume 1, January 30, 2006, pp. 48-49, lines 13-1.

[116] See Chris King, Hamlet of Cambridge Bay, Transcript, Volume 4, February 2, 2006, p. 778, lines 6-12.

and NIRB's Monitoring Officer, and consider Bathurst Inlet and Omingmaktok.[117] In consultation with these parties and immediately upon the SEMC's formation, MHBL shall provide the terms of reference for a socio-economic monitoring program to the SEMC for consideration and subsequent direction by NIRB. The terms of reference are to include the role of MHBL in data collection and analysis; the key socio-economic indicators to be monitored; the reporting requirements; and the funding formula. The Board notes that MHBL has committed to the formation and funding of an SEMC,[118] and INAC,[119] KIA,[120] and GN[121] have agreed to work with MHBL and participate in the SEMC.

Furthermore, the SEMC shall report on the key indicators as set out in the terms of reference to NIRB a minimum of every six months. NIRB will review the report to determine if the work of the SEMC should increase or decrease and to determine if changes to the socio-economic terms and conditions of the Project Certificate are warranted pursuant to section 12.8.2 of the NLCA.[122] This is consistent with an adaptive management approach of reviewing impacts and adjusting performance in response to impacts, and NIRB may consider changing the focus of the SEMC's work accordingly.

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[117] The Board acknowledges HC's view that it does not have the resources or the ability to fully participate on the SEMC and that it will provide expert advice to INAC as the Federal lead on the SEMC. See Carolyn Dunn, HC, Transcript, Volume 4, February 2, 2005, pp. 725-726, lines 24-4.

[118] See Heather Duggan, Transcript, Volume 1, January 30, 2005, p. 129, lines 17- 21; see also Transcript Volume 2, January 31, 2006, p. 291, lines 23 to 26.

[119] INAC also offered to assist with funding the SEMC. See Carl Mclean, INAC, Transcript, Volume 3, February 1, 2006, pp. 488-489, lines 5-8; see also pp. 493-494, lines 26-5; see also Exhibit 34: Response from INAC Re: Socioeconomic Monitoring Committee.

[120] Donald Havioyak, KIA stated:

> KIA's willing to participate in the socio-economic monitoring committee as long as this committee is based on the Kitikmeot region and does not duplicate the functions provided for the four in our IIBA with Miramar, and as long as it does not interfere with the IIBA implementation.

Transcript, Volume 5, February 3, 2006, p. 910, lines 12-17.

[121] Mike Atkinson, GN, stated:

> …with the support of INAC and with commitment from Miramar to support the process and take responsibility for monitoring the socio-economic impact of the Doris North Project, the GN can commit to taking a lead in establishing terms of reference for the socio-economic monitoring committee.

Transcript, Volume 5, February 3, 2006, pp. 921-922, lines 26-6; see also Exhibit 35: Response from GN Re: Socioeconomic Monitoring Committee.

[122] Pursuant to section 12(8)(2)(b) of the NLCA, NIRB may on its own account, reconsider the terms and conditions of a project certificate if it is established that (a) the terms and conditions are not achieving their purpose, or (b) the circumstances relating to the project or the effect of the terms and conditions are significantly different from those anticipated at the time the certificate was issued.

4.5.1 Summary of Key Area Conclusion

The Board was pleased to hear evidence that the Hamlet of Cambridge Bay is satisfied with MHBL regarding socio-economic issues and looking forward to the Project proceeding and the Board agrees with that. However, because there is no regulatory requirement for those socio-economic issues which fall outside of the scope of the IIBA, the Board requires that MHBL work with the SEMC to monitor and address those issues.

4.6 Other Issues

4.6.1 Noise

The Board is of the view that more data is required on the effects of noise from blasting, drilling, and low level flights, in the wildlife monitoring and mitigation plan. This will require the use of sound level meters at sites in and around the mine site and local study area, both before construction for baseline data and during operations.

The Board will require the environmental effects of blasting and drilling to be kept to a minimum, and these activities cannot occur if they any way affect migrating caribou, birds, or local carnivores. In order to reduce the effects of low level flights and protect birds and wildlife, and in particular caribou, as a condition of the Project Certificate MHBL must establish a noise abatement plan that requires several things. First, in consultation with GN-DoE, EC and HC, the establishment of strict standards for noise levels; second, using equipment and vehicles with the best noise attenuation devices; third, when practical, using fences or berms around noisy machinery or sites; fourth, flight corridors will need to be restricted over sensitive areas with known concentrations of wildlife and birds whenever possible, and with the exception of take off and approach for landing, a minimum flight altitude of 300 metres above ground level is required when flights to and from the Project site are passing near these sensitive areas.

Further, the Board notes MHBL's commitment to comply with EC's recommendation that for point to point flying a minimum elevation of 610 metres be used when flying

over areas with a high likelihood of concentrations of migratory birds or species at risk, and a 1,000 metre vertical and 1.5 kilometre horizontal distance from any observed concentration of migratory birds or species at risk whenever logistically and practically reasonable.[123] The Board encourages MHBL to extend the 300 metre requirement and the 610 metre commitment to all of its flights for the exploration of the Hope Bay Belt. As expected, any federal law vis a vis flight altitudes or matters of aviation safety take precedence over monitoring, noise concerns, or environmental studies.

4.6.2 Air Quality

The air quality monitoring program set out in Appendix 6(b) of the FEIS provides for on-site meteorological monitoring of dust and dust components, including total suspended particulates and particulate matter at 2.5 microns and less and 10 micrograms and less respectively. To ensure air quality data is available at the mill site, the Board requires an on-site air quality monitoring station, the design and location of which shall be selected following consultation with EC and HC. The results of air-quality monitoring are to be reported every six months to NIRB through the Monitoring Officer, and from there to all of the parties.

4.6.3 Closure and Reclamation

At the Hearing, the reclamation and closure plan was described by EC as "conceptual in nature", and EC noted that the FEIS states the closure and reclamation plan is a "living document that will be refined as times goes on."[124] This description was expressed by EC in the context of an inquiry into when a more detailed closure and reclamation plan would be available, particularly given the Project is only operational for two years. The Board shares EC's desire for a more detailed closure and reclamation plan. At the Hearing MHBL stated:

> *We would anticipate that the next phase or the next growth in that [closure and reclamation] plan would be at the regulatory level, that a*

[123] See Appendix B: Miramar Commitments from the Final Hearing, p. 3.
[124] Collette Spagnuolo, EC, Transcript, Volume 2, January 31, 2006, pp. 225-226, lines 22-5.

> *much higher level of detail would be required in support of a water license. So that would be the next phase or the next level of detail, and that coincides at that point in time where detailed engineering is starting to come together, and it would incorporate that detail into it.*[125]

Given the short life of the Project, the Board believes that a complete closure and reclamation plan must be presented by MHBL when the application for a water license is made to the NWB. Accordingly, a term and condition of the Project Certificate is that MHBL must file a complete closure and reclamation plan with the NWB as part of the initial licensing process. Given the short mine life, any delay in filing a complete closure and reclamation plan as required by the NWB, is not acceptable to NIRB. Moreover, the Board reminds MHBL that the closure of the mine is subject to NIRB review.[126] The Board's expectation in approving the Project now is that ultimately the Project site will be restored, as much as possible, to the same condition as its present state. Future Inuit must be able to see the land as it is today, without significant changes to the landscape.

5. CONSIDERATION FOR THE PROJECT AS A WHOLE: THE 10 MINIMUM EIS REQUIREMENTS

> *And to some people, gold is very precious and valuable, but not so much for the Inuit and our Elders. Gold is not valuable for us, but what's valuable to us is our land, water, the wildlife, the environment, and of course the people.*
>
> Helen Tologanak, born and raised in Cambridge Bay[127]

In accordance with the Board's mandate under the NLCA and the Minister's instructions for this review, both of which were set out earlier in this Report, the Board must ensure this review fully considers the Project as a whole. The Board believes that all of the issues and the multiple aspects of the review mandate are clearly reflected in NIRB's 10 Minimum EIS Requirements, and accordingly these requirements provide a sound framework for considering the Project as a whole.

[125] Larry Connell, Miramar, Transcript, Volume 2, January 31, 2006, p.226, lines 6-14.
[126] Section 1.1.1 of the NLCA defines "project proposal" as "means a physical work that a proponent proposes to construct, operate, modify, decommission, abandon or otherwise carry out, or a physical activity that a proponent proposes to undertake or otherwise carry out, such work or activity being with the Nunavut Settlement Area, except as provided in Section 12.11.1;"
[127] Transcript, Volume 5, February 3, 2006, p. 875, lines 14-18.

5.1 Statement of Consultation Principles and Practices

The Board agrees with MHBL that "Since August 2004 MHBL has increased the rigour and methodological approach used in the stakeholder consultation."[128] The Board notes the extensive consultation with representatives of the four affected communities, Cambridge Bay, Kugluktuk, Gjoa Haven and Taloyoak,[129] to identify their concerns and incorporate the results of this consultation into the issues addressed by the FEIS,[130] has resulted in support for the Project proceeding from the two Hamlets participating at the Hearing.[131] Further evidence before the Board of effective consultation principles and practices is that KIA and MHBL achieved agreement in principle on an IIBA on January 23, 2006,[132] and a water compensation agreement for the use of Tail Lake for tailings disposal was initialed on the same date.[133] The Board also accepts as evidence of MHBL's ongoing commitment to community consultation the hiring of a Kitikmeot resident as Community Relations Manager,[134] and MHBL's commitment to the SEMC.[135] While the Board finds there is room for improvement in MHBL's consultation with Elders and Kitikmeot HTOs with regard to the wildlife monitoring and mitigation, the Board believes this deficiency will be addressed through required terms and conditions including the WMMP set out earlier in this decision. Moreover, the Board notes the general support for the Project from individuals representing affected communities at the Hearing.[136]

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[128] Doris North Project, Technical Report, October 2005, p. 7-2.
[129] See Table 7.1 Public Consultation Undertaken by MHBL Related to the Doris North Project, Doris North Project, Technical Report, October 2005, pp. 7-3 to 7-14.
[130] See for example Chapter 25: Community Services and Infrastructure, Doris North Project, Technical Report, October 2005.
[131] See Chris King, Hamlet of Cambridge Bay, Transcript, Volume 4, February 2, 2006, p. 777, lines 20-24; see also Paul Waye, Transcript, Volume 5, February 3, 2006, pp. 947-948, lines 26-2.
[132] See Donald Havioyak, KIA, Transcript, Volume 2, January 31, 2006, p. 317, lines 23-24.
[133] See Donald Havioyak, KIA, Transcript, Volume 2, January 31, 2006, p. 319, lines 15-17.
[134] See David Long, Miramar, Transcript, Volume 1, January 30, 2006, p. 48, lines 24-25.
[135] Heather Duggan, Transcript, Volume 1, January 30, 2005, p. 129, lines 17- 21; see also Transcript Volume 2, January 31, 2006, p. 291, lines 23-26.
[136] In order to ensure affected communities were represented at the Final Public Hearing, held in Cambridge Bay, NIRB invited and sponsored individuals from each of six communities to attend the Hearing. These representatives attended the full Hearing. On Friday, February 3, 2006, Miramar made a presentation to the community (see Exhibit 28: MHBL Presentation – Community Session). Following the presentation the Board solicited comments and questions from the community (see Transcript, Volume 5,

5.2 Definition of Project

MHBL's FEIS provided NIRB with a detailed description of the Project, including: the mineral resource and land tenure; planned phases of development; all aspects of the required infrastructure at the mine and related infrastructure such as the proposed roads and air strip, and the beach landing area and jetty at Roberts Bay; the operation of the project; project closure and post-closure; human resources; health and well-being; training and development; employment rewards; capacity building and procurement; accidental events; and other projects and activities in the region.[137] The FEIS also provided the Board with a conceptual plan and rationale for the staged future development potential of the Hope Bay Belt, including development of the Boston, Doris Central, and Madrid deposits.[138]

While the interrelationship between the Project before the Board today and the potential future phases of development create a challenge for the Board in assessing the preferred alternative for tailings disposal, overall the Board is satisfied that MHBL has met the minimum requirements for providing a definition of the project.

5.3 Statement of Project's Purpose

The Board agrees with the KIA[139] and the GN[140] that there is a need for this Project. The Project will provide the Kitikmeot region with the first commercial mining development

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February 3, 2006, pp. 850-902). During this time, the Board heard many individual statements of support for the Project. For example, Martina Kapolak , resident of from Bay Chimo, stated:

> I would like to thank the Nunavut Impact Review Board for inviting us to this Doris North Project hearing and letting us raise our concerns. Thank you. I'd like to support this project after hearing all the delegations and discussions. Thank you.

Transcript, Volume 5, February 3, 2006, p. 885, lines 9-14.

[137] See Chapter 4: Project Description, Doris North Project, Technical Report, October 2005.

[138] See Chapter 5: Hope Bay Belt Potential, Doris North Project, Technical Report, October 2005.

[139] In a written submission to NIRB, KIA stated:

> In particular, we noted that the proponent has a very real opportunity to contribute to the building of business capacity in the Kitikmeot Region, and to reduce currently high levels of unemployment in the Region….

Submission of KIA: Review of the Socio-economic Components of the Final Environmental Impact Statement for the Doris North Project, RT Associates Ltd., December 21, 2005, p. 1.

Further, Donald Havioyak, KIA, stated:

on Inuit owned surface and subsurface land. The economic benefits that will accrue to the region include increased training and employment,[141] and increased opportunities to develop Inuit business capacity.[142] The IIBA provides for cash payments to KIA on behalf of the Kitikmeot Inuit in order to fund programs intended to protect Inuit heritage and culture.[143] NTI will also receive royalty revenues of 12% of net profits, with a minimum royalty of 1.8%, and mineral production lease rent of $16,000.00 annually.[144] This is in addition to any Federal tax revenues generated to fund Federal and Territorial supplied services to the region. The Board also accepts that the Project is economically viable for MHBL, particularly with the current high gold prices offsetting increases in costs such as fuel and generating increased cash flow,[145] and that it is technically feasible taking into account the demands of operating in and protecting the Arctic environment.[146]

5.4 Anticipated Impacts Analysis

With regard to the Minimum EIS Requirements numbers 4 through 6, which require analysis of anticipated impacts, cumulative effects, significant effects respectively, the

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> The Doris North Project represents an important opportunity for the Inuit of Nunavut and particularly Inuit in the Kitikmeot region. This is the first new gold mine in over 20 years, and it would be the first mine ever developed on Inuit-owned surface and subsurface lands.
>
> As the KIA and NTI presentation have indicated, the Doris North Project will generate significant financial, social benefits for Inuit for the Kitikmeot region and for Nunavut.

Transcript, Volume 5, February 3, 2006, p. 908, lines 11-20.

[140]For example, in the GN's written submission to NIRB, GN stated:

> The Doris North Project as proposed in the Final Environmental Impact Statement (FEIS) has the potential to make a positive impact on the regional economy of the Kitikmeot region and its people. There are clearly opportunities for local residents and businesses to participate in the project, and to obtain training and employment.

Submission of GN: Government of Nunavut Submission to the Nunavut Impact Review Board, January 2006, p. 6.

[141] Miramar's evidence is that it estimates the Project will create 68 jobs during one year of construction and 149 jobs for two years of operations, with an estimated 40% of these jobs to be held by Inuit. Miramar stated it will also be providing training and working with government agencies and organizations to develop a workforce. See Heather. Duggan, Miramar, Transcript, Volume 1, January 30, 2006, p. 118, lines 26-21.

[142] Miramar's evidence is that the IIBA requires preferential treatment for Inuit employees, and preference for Inuit business and Inuit contractors. See Heather Duggan, Miramar, Transcript, Volume 1, January 30, 2006, p. 121, lines 13-17.

[143] See Donald Havioyak, KIA, Transcript, Volume 2, January 31, 2006, p. 318, lines 5-8.

[144] See Keith Morrison, NTI, Transcript, Volume 2, January 31, 2006, p. 365, lines 13-22; see also Exhibit 9: NTI Presentation

[145] Brian Labadie, Miramar, Transcript, Volume 2, January 31, 2006, p. 272, lines 9-24.

[146] See Appendix 4.C: Technical Summary of Feasibility Study – 2003, Chapter 4: Project Description, Doris North Project, Technical Report, October 2005.

Board agrees with the statements of many of the parties that the current FEIS is significantly improved over the previous FEIS submitted in 2003.[147] The FEIS includes an analysis of the effects of 23 project activities on 17 valued environmental components ("VEC") selected based on western scientific data and TK gathered through the community consultation process discussed in Requirement 1 above.[148] The VECs include the atmospheric environment, water quality, four species of fish, caribou, grizzly bear, wolverine, breeding birds, waterfowl, raptors, near shore marine processes, heritage resources, environmental health, community services and infrastructure, and employment and economy. Each VEC was separately analyzed, giving consideration to: the existing environment; environmental effects analysis, including environmental design, mitigation and optimization; and residual environmental effects, including the monitoring and follow-up programs, cumulative environmental effects, and the assessment of the significance of residual effects.[149]

While the parties raised issues primarily related to base line data and modeling,[150] overall the parties participating in the Hearing agreed that the outstanding assessment matters

[147] For example, see Robert Johnstone, NRCan:

> It is the opinion of our reviewers in the areas of their expertise that the final environment impact statement is considerably improved over [sic] previous EIS submitted in 2003. As well, the proponent has addressed a number of concerns that were raised by NIRB in their decision report in our areas of expertise, as well as issues that were raised in the – from the draft EIS by our reviewers.

Transcript, Volume 4, February 2, 2006, p. 686, lines 5-13.

Tanya Gordanier, DFO:

> We would also like to thank Miramar Hope Bay Limited for working very hard to provide us with a much-improved environmental impact statement, including the alternatives assessment for review.

Transcript, Volume 5, February 3, 2006, p. 932, lines 20-23.

Donald Havioyak, KIA, stated:

> In general, KIA has noted improvement in the quality of the final environmental impact statement compared to the previous one reviewed in 2004.

Transcript, Volume 2, January 31, 2006, p. 316, lines 18-20.

[148] See Chapter 8: Selection of Valued Economic Components, Doris North Project, Technical Report, October 2005.

[149] See Chapter 9: Environmental Assessment Methodology; see also Chapters 10 through 26, Doris North Project, Technical Report, October 2005.

[150] For example, INAC stated that the lack of comprehensive baseline data at the community level made it difficult to conduct a detailed analysis of the potential socio-economic impacts from the Project, however, INAC went on to say that this lack of data was noted at previous hearings and not unique to this Project. Moreover INAC stated that given the short time frame for the Project it may be reasonable to proceed in

could be adequately responded to by the Proponent's meeting its commitments and by terms and conditions being placed on the Project Certificate.[151] Based on the evidence before the Board, the Board agrees with the parties on matters of impact prediction.

5.5 Cumulative Effects Analysis

As stated in Requirement 4 above, an assessment of cumulative effects was provided in the FEIS for each VEC. The Proponent's cumulative effects analysis considered the potential for interaction with 11 projects and 6 exploration activities in Nunavut and the Northwest Territories.[152] In the Board's view, the VECs most susceptible to cumulative effects are the wildlife VECs. For wildlife, the three key effects considered in the FEIS are direct habitat loss, changes in abundance, and change in behavior and movement.[153]

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absence of the baseline data provided the Miramar continue to collect base line data leading up to construction and comprehensive monitoring is carried out to provide early indications of impacts. See Carl Mclean, INAC, Transcript, Volume 3, February 1, 2006, p. 486, lines 12-19; see also p. 487, lines 14-25.

[151] Donald Havioyak, KIA, stated:

> Certainly there is more work to do, but, Madam Chair, in KIA's view, the evidence before the Board is clear: This project should proceed to the regulatory process. KIA urges NIRB to recommend to the Minister of INAC under paragraph 12.5.6 of the Nunavut Land Claims Agreement that the Doris North Project should be approved.

Transcript, Volume 5, February 3, 2006, pp. 915-916, lines 22-2.

Paul Waye, Kugluktuk HTO, stated:

> The Hamlet of Kugluktuk encourages the Board to render a positive review and recommend that the project be forwarded to the regulatory process.

Transcript, Volume 5, February 3, 2006, pp. 947-948, lines 26-2.

Mike Atkinson, GN, stated:

> In summary, the Government of Nunavut is supportive of the project moving forward and will work with the proponent, Inuit organizations, and communities to address outstanding issues and mitigate unforeseen impacts should they occur.

Transcript, Volume 5, February 3, 2006, p. 922-923, lines 24-2.

Carl Mclean, INAC, stated:

> INAC is confident that the comprehensive public review conducted by Miramar under Part 5 of the Nunavut Land Claims Agreement will protect and promote the existing and future well-being of the residents and communities of Nunavut.

Transcript, Volume 5, February 3, 2006, p. 929-930, lines 26-4.

[152] See section 4.12.1 and Appendix 4.B: Cumulative Effects Assessment Project Activity Selection of Chapter 4: Project Description, Doris North Project, Technical Report, October 2005. For Wildlife Cumulative Effects Assessment see Table D6.1, Supporting Document D6, Doris North Gold Mine Project, Wildlife Cumulative Effects Assessment, Golder Associates, 2005, p. 2.

[153] Supporting Document D6, Doris North Gold Mine Project, Wildlife Cumulative Effects Assessment, Golder Associates, 2005, p. 4.

The comments of the parties set out in requirement 4 above applies equally to the assessment of cumulative effects, and the Board is satisfied that the Proponent included in the CEA the past, present and reasonably foreseeable future projects.

5.6 Significant Effects Analysis

With the exception of the loss of fish habitat discussed in Requirement 8 below, on the evidence, and again, consistent with the view of the parties as set out in Requirement 4 above, the Board accepts that no significant effects are anticipated for this Project.

While monitoring programs are discussed in greater detail in requirement 9 below, in the context of discussing monitoring for significant, cumulative effects on wildlife, the Board agrees with INAC that it is important to establish significance thresholds as early warning triggers.[154] Based on the evidence of GN,[155] the Board accepts MHBL's position that there is not a "magic number" signaling when a population is in trouble.[156] With the future development of the Hope Bay Belt in mind, the Board wishes to reiterate its encouragement for the Proponent to work toward tabling a regional development concept for the Hope Bay Belt. Similarly, the Board expects the SEMC to develop monitoring protocols for this Project that will allow for consistency of data collection with projects such as Tahera's Jericho Diamond mine in order to facilitate the collection and analysis of regional data.

5.7 Project Alternatives

[154] Heide Klein, INAC, Transcript, Volume 2, January 31, 2006, pp. 203-204, lines 24-8.
[155] Mike Setterington, GN, stated:

> Cumulative effects thresholds and management, action thresholds are certainly a key item that should be monitored for in a monitoring program, and it would be ideal if we had those thresholds to present to proponents at development projects, and typically those kinds of thresholds would be made available through land-use plans, and currently there is no land-use plan in the West Kitikmeot region, so those threshold values aren't available.
>
> And further to that, there has been – it's a fairly new concept too of thresholds, and the literature, some literature is out there, but it's fairly sketchy and fairly broad values, and sometimes it's a best-guess estimate from the experts.

Transcript, Volume 3, February 1, 2006, p. 430, lines 3-18.
[156] See Nathan Schmidt, Engineering Consultant, Miramar, Transcript, Volume 2, January 31, 2006, p. 204, lines 2-5.

Through the FEIS MHBL provided the Board with alternative assessments for the Project, including an assessment of a "no-go" alternative.[157] The Board agrees with MHBL that the economic benefits discussed above support proceeding with the Project, *provided* the mitigation and monitoring measures, compensation measures for water quality and fish habitat, and the plans for closure and reclamation, allow for the Project to be constructed, operated, and reclaimed without significant negative effects on the ecosystem, wildlife habitat, or Inuit harvesting activities.[158] The Board, based on the analysis in this Final Hearing Report, is satisfied that the requirements necessary to proceed without significant negative effects on the ecosystem, wildlife habitat, or Inuit harvesting activities, have either been met or will be met through MHBL's commitments and the terms and conditions set out below.

The Proponent assessed several alternative ways of carrying out the Project, including; an assessment of alternatives to Tail Lake for tailings disposal, alternative dam designs, alternative water management plans in the operation of Tail Lake, and alternative jetty designs.[159] Other alternatives that were considered in the FEIS include assessment of alternative mining methods, ore processing options, cyanide detoxification treatment process alternatives, mine waste rock management alternatives, process water recycling options, and transportation alternatives for both bulk supplies and personnel.[160] Subject to the terms and conditions as set out below, and in particular the need to monitor the impact future phases of development may have on the selection of Tail Lake as the preferred alternative for tailings disposal as discussed above, the Board is satisfied that the alternative ways of carrying out the Project were adequately assessed and that the preferred alternatives for this Project are appropriate. NIRB has included a condition to be notified if any further alternatives assessment is done, where the conclusion may no longer favour Tail Lake. This assessment may be necessary if the Proponent moves

[157] See Miramar FEIS, October 2005, pp. 3-1 to 3-2.
[158] See Miramar FEIS, October 2005, pp. 3-1 to 3-2.
[159] See Miramar FEIS, October 2005, pp. 3-2 to 3-8; see also Chapter 3: Analysis of Alternatives, Doris North Project, Technical Report, October 2005. Additional information on the assessment of tailing alternatives was also submitted in the supplementary document "Integrated Tailings Alternatives Assessment" prepared by SRK Consulting and filed with NIRB by Miramar on January 18, 2006.
[160] See Chapter 3: Analysis of Alternatives, Doris North Project, Technical Report, October 2005.

forward with development of the rest of the Hope Bay Belt, or, if there is a change to the values or ranking of the current alternatives assessment.

5.8 Sustainability Analysis

The Proponent provided a sustainability analysis for each renewable resource affected by the Project.[161] In the Board's mind, the renewable resources that sustain current and future generations in Nunavut and Canada that are most likely to be negatively affected by the Project are wildlife, and particularly caribou and fish.

Of particular concern to the Board is that the use of Tail Lake for tailings disposal will result in the loss of a 77 hectare lake with self-sustaining populations of lake trout and ninespine stickleback.[162] The Board agrees with the DFO that the permanent loss of Tail Lake is a substantial impact given the short two-year mine life.[163] The fish will be gone. The Board believes there will also be a loss of fish habitat as a result of construction of infrastructure such as the tailing containment dams, float plane and boat docking, watercourse crossings and the jetty at Roberts Bay.[164]

However, the Board accepts the evidence of the DFO that MHBL has offset these habitat losses by committing to several fish habitat compensation initiatives, and a long-term monitoring program that will assess the stability of the compensation work and determine if the work is achieving the no net loss principle.[165] The Board further notes that in order for Tail Lake to be used for tailings disposal, the Governor-in-Council must add Tail Lake to Schedule 2 of the MMER and this will require a regulatory impact analysis statement.[166]

[161] See section X.3 Residual Environmental Affects in each of Chapters 10-23 and, 25-26, and section 24.5 for Chapter 24 Environmental Health, Doris North Project, Technical Report, October 2005.
[162] See Tanya Gordanier, DFO, Transcript, Volume 4, February 2, 2006, p. 617, lines 10-13.
[163] See Tanya Gordanier, DFO, Transcript, Volume 4, February 2, 2006, p. 617, lines 18-21.
[164] See Chapter 12: Arctic Char, Chapter 13: Lake Trout, Chapter 14: Lake Whitefish, and Chapter 15: Ninespine Stickleback, Doris North Project, Technical Report, October 2005.
[165] See Tanya Gordanier, DFO, Transcript, Volume 4, February 2, 2006, pp. 624-625, lines 22-5.
[166] For an excellent overview of the process and requirements to add a tailings impoundment area to Schedule 2 of the MMER, see the presentation to the Board by Collette Spagnuolo, Environmental Assessment Specialist, EC, Transcript, pp. 558-561, lines 13-19.

With regard to the effects of the Project on the health of fish and wildlife, including caribou, the Board is satisfied with the Proponent's assessment that the impact of the Project is expected to be minimal, particularly given the short two-year life of the Project, the relatively small footprint of an underground mine, and the mitigation measures provided for in the FEIS and the Proponent's commitments as incorporated into the terms and conditions of the Project Certificate. The Board's confidence in this determination is further increased by the terms and conditions related to the Wildlife Monitoring and Mitigation Plan and the water quality adaptive management plan.

5.9 Monitoring and Post-Project Analysis

The Board is satisfied with the Proponent's monitoring plans as described in the FEIS, subject to the Proponent's commitments which have been incorporated as terms and conditions of the Project Certificate and the Board's terms and conditions including: the continuation of a NIRB Monitoring Officer[167], additional requirements for water quality monitoring, an increased role for Elders, HTOs and the NWMB in the wildlife monitoring and mitigation plan, the terms of reference for the SEMC, and additional requirements for monitoring air quality and noise at the Project sites. Further, given the short life of the Project, as a term and condition of the Project Certificate the Board also requires the Proponent to submit a complete closure and reclamation plan to the NWB at the beginning of the regulatory approval phase.

Monitoring at an early stage is important, but so is the need to look into the future, in other words, to see if the mine's impact predictions are accurate. Such things as trends, actual wildlife impacts, water quality impacts, test results, thermistor readings, control measures, and so on, will be of great interest to NIRB; the Board will follow the results to see if the mine's impact and pollution prevention measures have worked; NIRB intends to compare the monitoring and test results with the proposed modeling and predictions to see if differences exist and how big these differences really are.

[167] NIRB will do its best to use the NIRB Monitoring Officer appointed for Tahera's Jericho project to additionally monitor Doris North. However, given the current workload it may be necessary to seek additional assistance.

5.10 Transboundary Impact Analysis

There is no evidence before the Board that the Project has trans-boundary effects, therefore the Board finds this requirement is not relevant to the review of this Project.[168]

6. CONCLUSION OF THE BOARD

Pursuant to section 12.5.6(c) of the NLCA, the Nunavut Impact Review Board is recommending to the Minister that the Doris North Gold Project proposal be approved, subject to the Project Specific Terms and Conditions that follow. The basis for recommending approval is that the Board believes, as do the parties, that the project will infuse a much needed economic boost to the area, through employment in the Kitikmeot Region and the building of Inuit business capacity, as well as through the IIBA and other sources of revenue to KIA and NTI, and that the mitigation measures to be adopted will serve to protect the Kitikmeot environment, and in particular the sensitive Hope Bay Belt.

Given the importance of hunting and fishing to the Inuit in the Kitikmeot region, NIRB is sensitive to concerns about the impacts of the Project on wildlife and fish and fish habitat. The Board requires MHBL to live up to its promises to protect the environment including where necessary to submit improved plans for the design, operation and reclamation of infrastructure, and to monitor and mitigate the significant impacts associated with this project, including adapting its management of the Project accordingly.

7. SUMMARY OF PROJECT SPECIFIC TERMS AND CONDITIONS

The Board believes MHBL's Doris North Gold Project should be approved, and proceed subject to the following 35 Terms and Conditions. The Board wishes to stress that where monitoring is mentioned, this includes baseline monitoring where needed (to support or identify any variations over currently available data that can be studied before the project commences); effects monitoring (measure the effects of project construction and

[168] The Board notes that Miramar has considered the cumulative effects of the Project on the Bathurst Caribou Herd which crosses territorial boundaries (see Chapter 16: Caribou, Doris North Project, Technical Report, October 2005), and that the economic benefits will accrue elsewhere in Canada (see Chapter 26: Employment and Economy, Doris North Project, Technical Report, October 2005).

operation and verifies impact predictions); and compliance monitoring (checking performance against the Project Certificate). The issues of monitoring frequency, procedure, analysis, review of results, and compliance requirements, are subject to future direction from the NIRB Monitoring Officer in consultation with other regulatory authorities. MHBL should also note that the commitments made by MHBL over the course of the review of the FEIS and this Hearing, as set out in Appendix A and Appendix B of this Final Hearing Report, have been explicitly incorporated into the Terms and Conditions of the Project. Where there is a conflict between a subsequent Term and Condition in this Final Hearing Report and one or more of the commitments made by MHBL, the Term and Condition prevails. Where there is a conflict between a commitment made by MHBL in Appendix A or B and a regulatory requirement not covered by the Terms and Conditions of this report, the regulatory requirement prevails.

In addition to complying with the Terms and Conditions, the Board stresses to MHBL that there is a general legal requirement to comply with all of the legislative and regulatory requirements established under Federal and Territorial law. Furthermore, the Board expects that MHBL will comply with all terms and conditions of surface leases and licenses, including any additional environmental protection requirements and reclamation security requirements imposed by KIA as the surface rights holder.

Finally, NIRB's Monitoring Officer identified in the Terms and Conditions below will cooperate and coordinate as much as possible with regulatory authorities to avoid duplication of monitoring obligations.

TERMS AND CONDITIONS

Proponent's Commitments:

1. The commitments in this Final Hearing Report as Appendix A: MHBL Commitments from the Final Environmental Impact Statement Review, are incorporated herein and must be met.

2. The commitments in this Final Hearing Report as Appendix B: MHBL Commitments from the Final Hearing, are incorporated herein and must be met.
3. MHBL must obtain all required federal and territorial permits and other approvals and shall comply with such permits and approvals.

NIRB's Commitments:

4. NIRB will require a full time Monitoring Officer to monitor the Project as it proceeds and to analyze the success of the Terms and Conditions as the Project becomes operational, and beyond, to closure and reclamation.

The Assessment of Alternatives to Tail Lake for Tailings Disposal:

5. MHBL shall report on January 1st of each calendar year to NIRB on MHBL's development plan for future phases of the Hope Bay Belt, including identifying development plans that may affect the selection of Tail Lake as the preferred alternative for tailings management.
6. MHBL shall immediately notify NIRB of any further alternatives assessments of the Tail Lake tailings impound area, if that analysis concludes that Tail Lake may no longer be the preferred option for tailings disposal.
7. MHBL shall meet immediately with Environment Canada and the Department of Fisheries and Oceans Canada to ensure the information required for Schedule 2 of the Metal Mining Effluent Regulations can be processed according to law.

Tail Lake Water Quality and Water Management Strategy:

Monitoring:

8. MHBL will fund and install a weather station at the mine site to collect atmospheric data, including air temperature and precipitation. The design and location of this station shall be developed in consultation with Environment Canada officials.

9. MHBL will fund and install an on-site laboratory for continuous and real-time monitoring of water quality contained within Tail Lake and Doris Creek after discharge. This will be done prior to the commencement of operations. The laboratory shall be certified to Canadian standard of certification for Mineral Analysis Laboratories by the Standards Council of Canada, or a demonstrably equivalent certification standard, with standards to include the calibration of water quality monitoring instruments. MHBL shall file proof of application to become accredited, upon the request of the NWB or NIRB's Monitoring Officer.
10. Upon the commencement of operations, MHBL shall ensure that the monitoring of Tail Lake and Doris Creek water quality, above and below the waterfall, be verified and reported to NIRB three times during discharge by an independent, third party laboratory. The sampling must be carried out independently or supervised in which case MHBL must provide the sampling and delivery of samples to the independent, third party laboratory, with copies of the results directly to the NWB and NIRB's Monitoring Officer.
11. Monitoring information collected under this approval shall contain the following information:
    a. The person(s) who performed the sampling or took measurements;
    b. Date, time, and place of sampling or measurement;
    c. Date of analysis;
    d. Name of the person who performed the analysis;
    e. Analytical methods or techniques used; and
    f. Results of any analysis.
12. The results and records of any monitoring, data, or analysis shall be kept for a minimum of the life of the project including closure and post closure monitoring. This time period shall be extended if requested by NIRB, DFO, EC or the NWB.

General

13. MHBL shall collect additional water quality data for the 2006 field season and incorporate it into a revised water quality model to be submitted to the NWB as part of the water licence application. Miramar will meet discharge criteria on a

site specific basis set by the NWB where possible, for the protection of the receiving environment at the point of discharge.

14. MHBL shall collect additional precipitation, evaporation and runoff data and incorporate it into a revised water balance to be submitted to the NWB as part of the water licence application.
15. MHBL shall not permit the water discharged into Doris Creek to exceed the criteria set by the NWB.
16. MHBL shall take all reasonable steps to prevent any Tail Lake discharge in violation of the Project Certificate or regulatory approvals that may have any likelihood of negatively affecting the environment including wildlife, fisheries, aquatics, and human health. If such a situation is encountered, MHBL shall take immediate action to remedy the violation. If requested by the NWB, MHBL shall accelerate testing or monitoring to determine the nature of any such discharge and its impact or harm to the environment.
17. MHBL shall report any upset, exceedances, or compliance problem not only to regulatory agencies as required by law, but shall also report the same to NIRB's Monitoring Officer.
18. MHBL shall submit to the NWB, as part of the water licence application, a program detailing the methodolgy for testing quarried rock for acid generating and metal leaching potential. The sampling, testing and analysis must be done by a professional geologist registered in Nunavut.

<u>Design of the Jetty and Related Issues:</u>

19. MHBL shall install thermistor cables and temperature loggers in the jetty foundation. MHBL shall monitor the effects of the jetty on shallow water permafrost through operations and report the results of the monitoring collection to NIRB's Monitoring Officer.
20. MHBL shall ensure the use of containment booms and berms to control potential spills whenever fuel and or waste is transferred between a barge and the shore. MHBL shall ensure spill kits are at hand at these locations at all times.

21. MHBL shall consult with local Elders, KIA and NTI to determine ***if*** the jetty should be dismantled. The final Closure and Reclamation Plan, if it proceeds, must explain the consultation process used for the jetty and provide a summary of the issues identified during consultation.

Wildlife Mitigation and Monitoring Plan including Cumulative Effects Assessment:

22. MHBL, in consultation with GN-DoE and KIA, shall immediately begin the design and implementation of baseline data collection methods to establish both the wolverine and grizzly bear population of the Hope Bay Belt region. Any baseline data results shall be reported to NIRB's Monitoring Officer.
23. MHBL shall designate one of its employees as a primary wildlife contact for the mine, who will work with NIRB's Monitoring Officer and regulatory officials in communicating on-site activities and to fulfill reporting requirements.
24. As part of the training for MHBL's on-site wildlife specialist, MHBL shall provide training to that person in areas of bear encounters and safety, effects of noise on wildlife, recording wildlife sightings, waste management, records management, and reporting to NIRB's Monitoring Officer and regulatory officials.
25. MHBL shall file a monitoring plan focused on assessing and mitigating interaction between humans and wildlife at the mine site, including associated infrastructure such as the TIA, roads, and activity at the waterfall. A quarterly report must be sent to NIRB's Monitoring Officer on interactions that have occurred, any effect the interaction may have had on humans and wildlife, and mitigation measures taken to avoid similar interactions in the future.
26. MHBL shall consult with local Elders, Kitikmeot Hunting and Trapping Organizations, the Nunavut Wildlife Management Board, GN-DoE, and NIRB's Monitoring Officer to review and discuss the results of wildlife monitoring and develop mitigation measures, including measure to discourage wildlife and birds from coming into contact with Tail Lake and contaminated areas of the mill site. MHBL shall incorporate a plan for this consultation into a revised Wildlife Monitoring and Mitigation Plan.

27. MHBL shall update and revise the Wildlife Mitigation and Monitoring Plan to reflect these terms and conditions and shall submit the revised Wildlife Mitigation and Monitoring Plan to NIRB. NIRB may consult with relevant Government departments and the Nunavut Wildlife Management Board prior to approving the revised Wildlife Mitigation and Monitoring Plan. The Wildlife Mitigation and Monitoring Plan must be submitted within three (3) months of the issuance of a Project Certificate and it must be approved by NIRB prior to the commencement of construction. MHBL must also submit an updated plan on an annual basis which must also be approved by NIRB.

The Socio-Economic Impact of the Project on Affected Communities of Nunavut:

28. Within six (6) months of the issuance of a Project Certificate, a Hope Bay Belt Socio-Economic Monitoring Committee ("SEMC") shall be formed to supplement, not duplicate areas covered by the Inuit Impact Benefit Agreement negotiated for this project. In order to ensure consistent data collection and tracking of data trends in a comparable form to be shared at the regional level and to minimize the duplication of efforts, the composition of the SEMC should include the same membership as the Kitikmeot Socio-Economic Monitoring Committee approved by the Minister. Additionally, the SEMC must include the affected communities of Cambridge Bay, Kugluktuk, Gjoa Haven, Taloyoak, and NIRB's Monitoring Officer, and consider concerns from Bathurst Inlet and Omingmaktok. In consultation with these parties and immediately upon the SEMC's formation, MHBL shall provide the terms of reference for a socio-economic monitoring program to the SEMC for review and subsequent direction by NIRB. The terms of reference are to include the role of MHBL in data collection and analysis; the key socio-economic indicators to be monitored; the reporting requirements; and the funding formula.

Noise:

29. MHBL shall develop and implement a noise abatement plan to protect people and wildlife from mine activity noise, including blasting, drilling, equipment, vehicles

and aircraft. The noise abatement plan will be developed in consultation with GN-DoE, EC and HC, and includes: restrictions on blasting and drilling when migrating caribou, birds or local carnivores may be affected; the establishment of strict standards for noise levels; use of equipment and vehicles with the best noise attenuation devices; when practical, the use of fences or berms around noisy machinery or sites; flight corridor restrictions over sensitive areas with known concentrations of wildlife and birds whenever possible; and requiring with the exception of take off and approach for landing, a minimum flight altitude of 300 metres above ground level when flights to and from the mine site are passing near sensitive wildlife and bird areas. The noise abatement plan will also incorporate the use of sound meters to monitor sound levels at sites in and around the mine site and local study area. The location and design of the sound meters shall be selected in consultation with EC and set up immediately upon issuance of the Project Certificate for the purpose of obtaining baseline data, and during and after operations. The final noise abatement plan shall be filed with NIRB's Monitoring Officer within six (6) months of the issuance of the Project Certificate.

Air Quality:

30. MHBL will install and fund an atmospheric monitoring station. This station and its location shall be developed in consultation with EC and HC air quality officials and focus on particulates of concern generated at the mine site. The results of air-quality monitoring are to be reported every six (6) months to NIRB through the Monitoring Officer, and from there to all of the parties.

Closure and Reclamation:

31. A complete Closure and Reclamation Plan prepared in accordance with the NWB requirements shall be filed by MHBL at the time MHBL makes application to the NWB for a water license for the mine.

Environment, Health and Safety Management System

32. Prior to the commencement of operation MHBL shall have a complete Environment, Health and Safety Management System in place which includes the following: Wildlife Mitigation and Monitoring Plan; Environmental Protection Plan; Emergency Response and Spill Contingency Plan; Occupational Health and Safety Plan; Reclamation Plan; Education and Orientation Plan; Human Resources Plan; Inuit Involvement Plan; Community Relations Plan; Monitoring and Follow-up Plan; and Auditing and Continuous Improvement Plan. When complete, these Plans shall be forwarded to NIRB's Monitoring Officer.

Fuel and Hazardous Materials

33. MHBL shall ensure that areas used to store fuel or hazardous materials are contained using the safest methods practically available.

Planned Changes:

34. If it becomes necessary, MHBL shall give notice of any planned changes to the mine facility, including Tail Lake and its operation, to the regulatory authorities and NIRB through its Monitoring Officer, immediately.

Duty to Comply:

35. MHBL shall comply with all terms and conditions and any noncompliance constitutes a violation of the approval and is grounds for NIRB's reconsideration and recommendation to the Minister under Article 12, Part 8 of the NLCA.

LIST OF APPENDICES

APPENDIX A

List of Commitments from the Final Environmental Impact Statement

Air Quality

1. Use of an aggressive fuel conservation effort;
2. Use of a brine solution for dust suppression in the underground mine;
3. Use of coarse rock in roads, airstrip, building pads and laydown areas to minimize dust during construction;
4. Driving at designated speeds on site roads;
5. Application of water to roadways to reduce dust from ore and waste rock haulage and grading to a minimum;
6. Installation of dust covers, sonic sprays, etc. to suppress dust generation from equipment in the crushing facility;
7. Installation of a dust scrubber on the smelting off-gas stream;
8. Submerged release of tailings deposition to avoid tailings dust emissions;
9. Installation of a waste oil burner unit equipped with a settling tank and filter system for particulate removal from the waste oil;
10. Regular servicing of all mobile and stationary engines to maintain efficiency;
11. Proper equipment maintenance; and
12. Adherence to all permits, authorizations and approvals.

Noise

1. Buildings, structures and material stockpiles will act as physical barriers to noise particularly for outdoor exposed equipment;
2. Most powered equipment will be enclosed in insulated buildings;
3. Proper equipment maintenance;
4. There will be noise monitoring in the mill for occupational health and safety;
5. The on-site Environmental Manager will also conduct routine inspections of the Project operations and look for possible mitigation opportunities.
6. Adherence to all permits, authorizations and approvals

Water Quality

TSS

1. Installing silt curtains in localized areas of permafrost degradation; and
2. Applying geo-textile materials or rip rap to areas where slumping is observed to stabilize the shoreline.

Runoff

3. Identifying and using quarry rock that has a low acid generation and metal leaching potential;
4. Implementing industry best practice methods for explosives use, which will limit residual nitrite and nitrate present in quarried and waste rock;

5. Completing winter construction of the roads and building pads, which will mitigate the risk of sediment release during construction; and
6. Implementing industry best practices for sediment control and storm water management during and after construction to collect surface runoff, and discharging runoff to the tailings containment area, where the sediments would have the opportunity to settle out.

Permafrost

1. Additional thermistors will be installed during construction.
2. Reading of these thermistors will be included in routine site monitoring programs to ensure that the condition of the permafrost in close proximity to the key mine activity centres is being monitored to ensure that the permafrost integrity is being maintained through the planned design and mitigation strategies.

Vegetation (Chapter 4)

1. Avoiding, or reducing, impacts to vegetation units during project planning by re-using previously disturbed areas, where possible;
2. Avoiding, or reducing, impacts to rare species;
3. Implement dust suppression methods (*i.e.*, spraying with water) on the airstrip and roads during the snow/ice free period;
4. Apply water to roadways to reduce dust from ore and waste rock haulage and minimizing grading;
5. Install dust covers and sonic sprays to suppress dust generation from equipment in the crushing facility;
6. Install a dust scrubber on the smelting off-gas stream;
7. Re-contouring closure landforms and placing materials to ensure that the final topography and site conditions are similar to other vegetation units of the same type in the region;
8. Allow areas to revegetate during operations (*e.g.*, progressive) and promoting natural vegetation regeneration throughout the mine life; and,
9. Using adaptive management approaches to ensure that advances in revegetation research are included in final closure planning efforts.

Jetty

1. Constructing the jetty of clean, crushed rock that has been certified as having low acid generation potential and low metal leaching potential; and
2. Use of silt curtains, as required to reduce suspended sediment to a level to meet the federal CCME (1999) water quality guidelines.
3. The construction will be timed (*i.e.*, early July) to avoid the spawning migrations of capelin during the end of July (Supporting Document F4); and
4. Monitoring measures are outlined in Chapter 6 of the Technical Report. Construction activities will be monitored on terms and conditions of permits and approvals.

Caribou

1. Integration of *Inuit Qauajimajatuqangit* into monitoring programs;
2. Restricting the mine surface footprint to a small and confined area of 53 ha;
3. Minimizing the amount of clearing;
4. Reduce noise by use of muffled exhaust systems;
5. All diesel powered equipment will meet emission guidelines;
6. Minimum flying altitude of 300 m above ground level for cargo and passenger aircraft outside of the Project area;
7. Vehicles restricted to designated roads and prepared work areas (*i.e.*, recreational use of off-road vehicles is prohibited);
8. Implement dust suppression methods (*i.e.*, spraying with water) on the airstrip and roads during the snow/ice free period (chemical dust suppressants will not be used);
9. Install dust covers and sonic sprays to suppress dust generation from equipment in the crushing facility;
10. Install a dust scrubber on the smelting off-gas stream;
11. Conducting pre-project surveys to identify wildlife sensitive locations and protected areas for avoidance;
12. Reclaiming areas during operations (*e.g.*, progressive) and promoting natural vegetation regeneration throughout the mine life;
13. Wildlife awareness and sensitivity training for on-site personnel;
14. Participation in the Bathurst Caribou Management Committee;
15. Implement caribou crossing locations along the road based on local information from the Hunters and Trappers Associations and KIA, among others;
16. Give caribou the right-of-way (*i.e.*, all vehicles must stop when wildlife are on the road or approaching);
17. Allowing natural encroachment of vegetation on and near roads, airstrip and the active mine site;
18. Use of Inukshuks or other initiatives determined through consultation with Elders to deter Caribou from site.
19. Establishing and enforcing speed limits;
20. Implementing procedures for the safe removal of caribou from hazardous areas (*e.g.*, roads and airstrip);
21. Warning drivers when caribou are moving through the area.

Grizzly Bear

1. Integrate *Inuit Qaujimajatuqangit* into education, monitoring and response programs;
2. Education and reinforcement of proper waste management practices to all workers and visitors to the site;
3. Implement appropriate waste management protocols, including burning all food wastes in an oilfired incinerator;
4. Eliminate attractants (*e.g.* food waste, oil products) at the landfill site;

5. Separation of food waste and non-food waste at source;
6. Appropriate fencing around the landfill area;
7. Burn waste oil in waste-oil furnaces or taken off-site for recycling;
8. Designate contained areas for worker lunch and coffee breaks;
9. Educate people on the risk associated with feeding wildlife and careless disposal of food garbage; and,
10. Ongoing review of the efficacy of the waste management program and adaptive improvement.

Breeding Birds & Waterfowl

1. Conduct land clearing for site infrastructure (*e.g.*, building pad construction and roads) outside of the breeding season;
2. Prevent nesting on mine infrastructure and man-made structures;
3. If a nest site is established and eggs are present, avoid the nest as much as possible and monitor for nest success.

Raptors

1. Incorporate *Inuit Qaujimajatuqangit* into operations and monitoring programs;
2. Prevent raptors from nesting on mine infrastructure;
3. If a nest is established within the mine footprint and eggs are present, avoid the nest as much as possible and monitor for nest success.
4. Establishing and enforcing speed limits;
5. Reporting all accidental deaths or injury to raptors as a result of vehicle or aircraft collisions, so that mitigation can be adaptively managed.

Archaeology

1. All construction activity in the vicinity of the remains will cease immediately.
2. The project archaeologist and Territorial Archaeologist will be contacted. Then the potential significance of the remains will be assessed; and mitigative options will be identified.
3. If the significance of the remains is judged to be sufficient to warrant further action and they cannot be avoided, the project archaeologist in consultation with the Territorial Archaeologist, will determine the appropriate course of action.
4. In the case of human remains, the RCMP will be contacted. In addition, a Coroner and/or physical anthropologist may be involved, if necessary. If the remains are determined to be archaeological, representative of local communities as well as the Inuit Heritage Trust will be consulted to determine how to handle the remains.
5. An education program will ensure that all personnel involved in exploration and development activities are aware that heritage resources are protected by law and that if any archaeological, historic or human remains are uncovered during any such activities, these remains must be reported and disturbance must cease until the remains are dealt with appropriately. The Territorial Archaeologist of the

Government of Nunavut will be notified and a qualified archaeologist will assess the incident.

Health Services

1. All employees will undergo a pre-employment medical. This will ensure that the site medical staff are able to provide the best care and treatment to employees as the site is remote from full medical services;
2. Qualified medical personnel will be available at site twenty-four hours a day and seven days a week. They will be able to treat minor illnesses. As employees will spend half of their time at site, this should relieve some burden from the local health facilities;
3. Emergency response and contingency plans are in place for medical evacuation if required;
4. Alcohol and drug education will be provided to all employees and the site will continue to be an alcohol and drug free operation;
5. Miramar will continue to follow health guidelines, procedures and protocols for camp food. Waste handling and storage will meet all appropriate territorial regulations and standards to avoid any health concerns for employees;
6. Communication and cooperation processes have been put in place with medical personnel in the camps, the Nunavut HSS, the Yellowknife hospital, appropriate monitors and inspectors, and regional health authorities. The new health Centre that opened in Cambridge Bay in 2005 will also provide a higher level of service;
7. All Project contractors and subcontractors are bound to the guidelines, procedures and protocols developed by Miramar;
8. Miramar will provide government inspected country food periodically at the mine site. During operations the medical staff will be able to provide information on diet and nutrition;
9. To avoid employee injury, Miramar will ensure that safety is the highest priority for the Project;
10. Miramar will ensure transportation equipment is regularly inspected for safety; and
11. Miramar will take safety into account when planning contractor delivery schedules.

Safety and Protection Services

1. Miramar will liaise with the RCMP and produce regular updates on project activities and plans that could influence RCMP workloads, communications between camp management and RCMP, and efficiency of RCMP response to calls for service from the camps and from project-related community calls; and
2. Miramar will conduct criminal record checks prior to hiring employees to screen out those convicted of crimes of violence such as sexual assault.
3. Miramar will provide counseling and life skills training workshops.

Social Services

1. In order to support the emotional health of employees and avoid burden on community facilities, Miramar will make available a number of methods of communications for workers with their families such as telephone and Internet.
2. Miramar plans to keep family groups or community groups of workers together for support while away from home;
3. Miramar will conduct an extensive orientation program to ensure that all workers are given full training, understand Miramar policies and procedures and have support to adjust to camp life; includes full safety training;
4. Miramar will provide a workplace where individuals are treated in a fair, equitable and respectful manner to attract and retain good workers and reduce stress on employees;
5. Miramar will provide an issues resolution process for employees to be able to resolve any grievances and issues to avoid undue stress and pressure;
6. As much as possible, Miramar will encourage opportunities for Inuit to speak and maintain their own language while at the same time operating in the language of the camp as long as safety of the employee, others or job performance are not compromised;
7. Alcohol and drug education will be provided to all employees and the site will continue to be an alcohol and drug free operation; and
8. Miramar will provide to all employees a free and confidential Employee and Family Assistance Program (EFAP) that will provide emotional, psychological and mental health counseling for employees and their immediate families for work stress, marital and family issues.

Employment

1. Provide the support of a Manager, Community Relations to support community liaison and facilitate workers integration into the work force;
2. Provide a workplace where individuals are treated in a fair, equitable and respectful manner in order to attract and retain workers;
3. Provide free flights to mine employees travelling to and from work between the four key communities and the mine site. The flights will not go through Yellowknife. MHBL will consider fights to other communities as appropriate to attract and retain Inuit workers;
4. Raise the level of understanding about the type of employment opportunities in the mining industry so that the key communities can make informed choices and about employment and career opportunities;
5. Provide hamlets, and education and training institutions within the four key communities with list of potential jobs, education/training requirements and certificates and transferable skills to other jobs for which individuals might be qualified;
6. Work with hamlets and training institutions to develop skills assessment and community databases of potential mine site trainees and workers, taking into consideration privacy and other applicable legislation;

7. Work with employment personnel in the key communities to develop a strategy that helps each hamlet retain sufficient skilled individuals to effectively manage the Hamlets;
8. Miramar will strictly enforce the Harassment Policy that states that harassment of any kind is not tolerated, will be investigated and discipline may include termination;
9. Miramar will provide an issues resolution process to ensure the employees grievances and issues are dealt with in a timely and appropriate manner so they do not consider leaving the company;
10. Provide ongoing support for employees of the four key communities and other northern hires that recognize cultural differences at the worksite;
11. Identify and communicate project employment opportunities early in project development;
12. Raise the level of understanding about the type of employment opportunities in the mining industry so that the key communities can make informed choices and about employment and career opportunities;
13. Communicate employment opportunities and skill requirements to interested organizations, government agencies and communities, in an open, transparent and timely fashion in cooperation with each hamlet, the KIA, and the appropriate government departments and agencies by postings in public places, on the Internet, and in local and government agencies and departments;
14. With KIA collaboration, design and implement an Inuit recruitment strategy to ensure that every effort is being made to recruit employees from Nunavut and particularly the four key communities;
15. Require contractors and subcontractors to structure Inuit and northern employment policies and plans, complete with reporting and monitoring systems, to comply with the Miramar's benefits plans and agreements, and their commitments to employ workers from the four key communities and other northern communities;
16. Establish on-the-job support systems and resources to help develop worksite and life skills;
17. Require employees to be age 18 for employment during construction and operations (except specific student programs). This is governed by Miramar employment policies and the Mines Act with regard to underground mining. This will deter youth from leaving school to work on the Project; and
18. Work proactively with contractors, unions, communities, educational institutions and government agencies to develop and recruit qualified workers.

Economy

1. A commitment has been made to facilitate workshops for workers and their families regarding money management, budgeting and retirement planning so that workers can make informed choices about how they spend their money.

Education and Training

1. Work with employment personnel in the four key Hamlets to develop a strategy that helps each Hamlet retain sufficient skilled individuals to manage the Hamlet effectively;
2. Establish on-the-job support systems and resources to help develop worksite and life skills;
3. Before construction, continue to promote awareness among residents and secondary school students in the four employment impact communities about employment and career opportunities, and also the education and qualifications needed to access these opportunities;
4. Work with school organizations, elementary and secondary schools, and students within the four key communities in the environmental assessment area to promote employment and career opportunities associated with the project, while emphasizing the need to complete high school to qualify for these and other post-secondary learning and career opportunities;
5. Work with training institutions, school organizations and government agencies to share industry-specific needs to allow them to develop appropriate *curricula*, if required;
6. Continue annual Summer Camp for students to the Kimberlite Career and Technical Centre in Yellowknife to get exposure to trades and technology options;
7. Provide youth within the four key communities in the environmental assessment area with exposure to the mining industry through periodic classroom visits by mine personnel as well as providing summer employment and job shadowing for students;
8. Waive formal educational requirements, where appropriate, to reduce barriers for potential Inuit employees;
9. Support some trades training on-site where appropriate with the short life of mine;
10. Continue to provide scholarships in each of the key communities to encourage further education;
11. Ensure on-the-job training manuals take into account cultural differences and language skills, perhaps through a greater use of pictures and diagrams to encourage Inuit workers into the mine; and
12. Work with KIA, Department of Education (who are piloting the Nunavut Community Skills Database), hamlets and training institutions to develop skills assessment and community databases of potential mine site trainees and workers, taking into consideration privacy and other applicable legislation.

<u>Business Opportunities</u>

1. Provide an annual business opportunities forecast to local businesses to identify foreseeable procurement requirements;
2. Where possible, provide lead time, and identify project components of the construction and operations phases for the four key communities and other northern businesses to help them develop the ability to qualify and effectively compete for contracted work;
3. Endeavour to pre-qualify the four key communities, and offer feedback and assistance in understanding how to fill gaps in their qualifications;

4. Provide information on bidding procedures, subcontracting and joint venture opportunities, to help the four key communities and other northern businesses effectively pursue business opportunities;
5. Facilitate northern sourcing by structuring work packages and sub-packages, where appropriate, to better align with the capacities of qualified northern businesses (*e.g.*, bid packages of varying sizes or broken down sufficiently so as to encourage Inuit participation);
6. Require bidders on major contracts to submit, as part of their bid, a local content plan that specifies how they will optimize the participation of the four key communities and other northern businesses in executing their work;
7. Give particular emphasis to local content plans when evaluating bids, and subsequently awarding work and supply packages for the Project;
8. Ensure that awarded contracts are monitored by the IIBA Implementation Committee and actual contact awards are reviewed to track Inuit content;
9. Monitor implementation of local content plans to ensure that procurement contractor commitments are met, and adhere to terms in the benefits and access agreements;
10. For Inuit owned businesses, waive bonding until a successful contractor is selected;
11. Continue open communications with the four key communities and other northern businesses about Project requirements, including timing, and specification of goods and services required by the Project;
12. Supply information about the four key communities and other northern businesses to potential contractors, in support of local content plans; and
13. Provide feedback to unsuccessful bidders from the four key communities and other northern communities to help them bid more successfully in the future.

APPENDIX B

List of Commitments from the Final Hearing

ADDITIONAL COMMITMENTS

MIRAMAR HOPE BAY LTD.: DORIS NORTH PROJECT

NIRB HEARING, January 30 to February 3, 2006

DFO

- Miramar will commit to place as much tailings as feasible underground as backfill. To assist in achieving that objective, Miramar will conduct a mine and process engineering study, and from that study will develop protocols for prioritizing the types of materials to be placed underground, and for determining the quantities of the various types of materials that will be placed underground. In determining the feasibility of placing tailings underground, and in prioritizing the types of materials and determining the quantities of materials to be placed underground, Miramar will give considerable weight to the need to minimise the impact of tailings on fish habitat.

- Miramar will monitor stage and discharge in Doris Outflow both upstream and downstream of the decant discharge point to provide information that can be used in assessing the accuracy of the impact predictions relating to fish habitat downstream.

- Miramar commits to re-assessing the length of the jetty, at the regulatory phase and prior to construction, to determine if it can be shortened while reaching sufficient water depths. Miramar will do this re-assessment after conducting more detailed bathymetry as part of the final design.

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- To confirm that the ninespine stickleback habitat associated with the wetland along the shoreline where Tail Outflow enters Doris lake is not adversely affected by the project, Miramar will undertake a detailed survey of the willow habitat along this section of shoreline prior to construction. This will provide a basis for comparison with monitoring to be conducted during operation and closure phases of the project. If unforeseen effects on the shoreline habitat of Doris Lake in this area are identified, additional mitigation or compensation measures will be identified and discussed with DFO, prior to implementation.

- Miramar will consider, as part of the No Net Loss Plan, fish passage in the design of the weir proposed in Doris outflow to ensure that fish passage is not impeded.

- Miramar commits to monitor the jetty for a two-year period after lowering to assess the stability, effects of changes in current patterns, and fish use of the area.

DFO/EC

- Miramar commits to preparing a single comprehensive summary of the tailings alternatives assessment, in consultation with DFO and EC, to be used in the regulatory phase for scheduling under MMER.

EC

- Miramar has committed to monitoring of permafrost in the vicinity of the North and South dams, monitoring thermistors as long as they are operational, and monitoring seepage conditions to ensure design criteria are met. These monitoring measures will be further defined in the regulatory phase.

- Miramar will update the modelling of water quality and water management prior to start-up as further defined in the regulatory phase, and in particular under the Water Licence.

- Miramar commits to consultation with EC about further development of the WMMP for songbirds, shorebirds, sea ducks, and waterfowl, particularly with respect to assessing the validity of the impact predictions in the FEIS, and to take into account, in consultation with EC, the recommendations contained in the Environment Canada written submission of January 18, 2006.

- Miramar commits to collecting further baseline data on the sea ducks that occur in Roberts Bay area, and on waterfowl, in consultation with EC.

- Miramar commits to the collection of further baseline data on migratory birds (sea ducks, shorebirds, waterfowl and other water birds) in Roberts Bay, including the location of spring staging areas (June) and moulting areas (August). MHBL has committed to collecting these data in 2006.

- EC recommends that for point to point flying a minimum elevation of 610 m be used when flying over areas with a high likelihood of concentrations of migratory birds or species at risk, and 1,000 m vertical and 1.5 km horizontal distance from any observed concentrations of migratory birds or species at risk. Miramar is willing to document (outline on a map and post in camp) known concentration areas of migratory birds or species at risk during each year of monitoring and follow these guidelines, when logistically and practically reasonable.

- Miramar will provide a tool or table that shows the correlation between the land classification cover types in the Local Study Area and the land cover types in the Regional Study Area.
- Miramar will include protection and mitigation measures for sea birds in the spill contingency response plan.
- Miramar will include monitoring and mitigation measures specific for short-eared owls (a species of special concern).
- Miramar will address the potential issue of nest predators (e.g., foxes) using mine infrastructure as potential den sites, in the WMMP, and propose mitigation to limit predators from using mine infrastructure as den locations.
- Miramar will acknowledge the biodiversity potential of the Hope Bay Belt in the WMMP.
- Miramar will contribute information regarding project-related effects obtained from the WMMP to the appropriate regional authorities so that the information can be added to the knowledge base regarding mine-related effects and can be used in regional land-use planning (related to INAC comments, and annual submission recommendations from GN, DOE, and EC).
- Miramar will gather assistance from community elders to determine appropriate locations of caribou crossings along the proposed roads (incorporate IQ).

EC / INAC

- Miramar will commit to review internal aspects of the water quality model relating to source release rates prior to the regulatory phase, to verify predictions and correct as necessary.

GN

- Miramar will update the Hazardous Materials Management Plan as part of its water license application to further clarify issues, such as design and operation of the landfarm to remediate any hydrocarbon contaminated soils, the treatment of collected snowmelt and precipitation runoff collected within the diesel fuel tank farm containment berm to remove any oil prior to release.
- GN DOE made 10 recommendations regarding the methods and design of different components in the WMMP. MHBL will consult with the GN DOE, as well as EC, in determining the most appropriate methods and measured variables for monitoring during construction, operation and closure prior to final submission of the WMMP.
- Miramar will monitor re-vegetation success post-closure. Miramar will develop a monitoring method that is linked to other post-closure monitoring.
- Miramar has committed to collecting caribou calf:cow ratio information during both aerial surveys and ground-based surveys.
- Miramar will work with the GN DOE, as well as EC, on further consideration of the timing and frequency of the caribou aerial surveys in the WMMP.
- Miramar will discuss further with the GN DOE the merits of conducting an initial population estimate for wolverine using hair-snagging techniques and DNA analysis.

Health Canada

- Miramar commits to the collection and analyses of fish tissue samples for precautionary testing to confirm that the fish are edible by humans, immediately prior to and during the fish out of Tail Lake

INAC

- Miramar commits to do all necessary site studies, thermal modelling and sensitivity analyses to ensure dam safety and stability, during the regulatory phase and prior to construction.

- Miramar commits to developing a detailed Water Quality Data Analysis and Management Plan to include procedures for: initial start-up and ongoing calibration of analytical equipment; collection, preservation, storage and handling of samples; analytical procedures (e.g., standard methods); checking for outliers; internal reporting and accountability for analytical data and follow-up actions.

- Miramar commits to continue collecting baseline water quality data and considering the additional data in confirmation of the proposed water management strategy as part of the regulatory phase (in particular, the Water Licence application).

- Miramar commits to continue to develop the adaptive management plan to prevent and mitigate shoreline erosion as part of the regulatory (water licence) process.

- Once the Doris North Mine is in operation Miramar will initiate additional kinetic and static test work to further characterize the acid generating – metal leaching potential

of mine rock and tailings with the objective of providing additional data for adaptive management should conditions change or the mine life be extended.

INAC / Hatch Acres

- Miramar will carry out additional work prior to the start of construction to verify that the quarried rock to be used for construction will be non-acid generating. QA/QC procedures will be in place during construction to verify that the rock used is geochemically stable.

KIA

- Miramar will commit to revisit the TSS calculations and reassess as necessary.

NRCan

- Miramar will commit that spill containment measures will be put in place to prevent ammonium nitrate spilled during handling from being lost to groundwater or surface water runoff.
- Miramar will consider doing additional shoreline characterization of shoreline materials around Tail Lake, including possibly drilling, test pitting, observations or geophysical testing as determined necessary to complete the final detailed designs.
- Miramar is committed to do all necessary and reasonable monitoring after closure to ensure compliance to regulatory permits

- Miramar will consider doing additional dam foundation characterization including possibly drilling, test pitting, observations or geophysical testing as determined nescessary to complete the final detailed designs.

NIRB, Doris North Final Hearing, List of Commitments as Understood by Proponent

Socio-Economic Commitments

Requesting Agency	Commitment Requested	Miramar Response
Nunavut Impact Review Board (NIRB)	Request that the Human Resource Plan be finalized.	Commit to have a further developed plan in place prior to construction including an issues resolution process for employees.
NIRB	Request that the Occupational Health and Safety Plan be finalized.	This plan is already well advanced as guided by the WCB. Will make further improvements to specific procedures related to the work site prior to commencement of operations.
NIRB	Request that the Inuit Employment Plan be finalized.	Inuit Employment Plan is in a draft form; more work will evolve with the KIA through and during operations.
NIRB	Request that the Community Relations Plan be finalized.	CRP is a draft. We commit to further develop the plan in consultation with communities. MHBL will include a community issues resolution procedure by the end of 2006.
NIRB	Request that the Employee and Family Assistance Program be finalized.	EFAP will be tendered and contracted prior to the start of construction.
NIRB	Request that the Education and Orientation Plan be finalized.	This plan focusses on preparing potential employees and their families for employment at DN. This will be further developed and in place for major recruitment prior to construction. Workshops will be designed and delivered in the communities.

NIRB, Doris North Final Hearing, List of Commitments as Understood by Proponent

Socio-Economic Commitments

Requesting **Agency**	**Commitment Requested**	**Miramar Response**
NIRB	Request that the Drug and Alcohol Policy be finalized.	Drug and Alcohol Policy is currently being implemented at Windy Lake Exploration Camp and Vancouver corporate office. It will be implemented for the Doris North project as the first employee/contractor is hired.
NIRB	Request that the Wellness Strategy be finalized.	Wellness Strategy is in draft form. It has been vetted through impacted communities that possess a Community Wellness Coordinator. It will continue to be developed with community service providers prior to construction and through the life of the mine.
Health Canada (HC)	Would prefer to see more S/E VECs.	The 2 S/E VECs are adequate as sub catagories within the VECs have also been established.
Indian and Northern Affairs Canada (INAC)	Start compiling targeted collection of specific baseline data.	Function of Socio-Economic Monitoring Committee agreed to on public record and in FEIS.
INAC	SEMC will identify and track key indicators, address the lack of baseline data, allow for the analysis of trends and input this into the adaptive management process, and be used as a template for consistent future environmental assessment.	Point 1 - SEMC will track key indicators. Point 2, SEMC may not be able to address the lack of baseline data, this is conditional on other agencies. Point 3&4 given and agreed.

NIRB, Doris North Final Hearing, List of Commitments as Understood by Proponent

Socio-Economic Commitments

Requesting Agency	Commitment Requested	Miramar Response
INAC	Develop a local business incentive policy and communicate it prior to construction.	The IIBA contains provisions related to contracting preference. These preferences include some consideration for businesses within the impacted communities that are not specifically Inuit owned. MHBL essentially has a local BIP in place. Bidding procedures will be communicated to businesses prior to the commencement of operations per existing commitments within the FEIS.

NIRB, Doris North Final Hearing, List of Commitments as Understood by Proponent Socio-Economic Commitments		
Requesting Agency	**Commitment Requested**	**Miramar Response**
Kitikmeot Inuit Association (KIA)	The development of an Integrated Employment and Training Strategy be attached as a condition of a project certificate.	An integrated Employment and Training Plan, to be effective, would require the approval and support of a number of agencies probably including but not limited to: Department of Education, Kitikmeot Economic Development Commission, IIBA Implementation Committee, and possibly a number of program deliverers including Nunavut Arctic College. To make such approval and agreement as a condition of a project certificate would in effect, give any of these agencies a veto on the development of the Doris North Project, which is not acceptable. Moreover, a Nunavut Mine Training Initiative and the creation of a Kitikmeot Mine Training Center, both of which MHBL is involved. The initation of either of these would have a dramatic impact on the delivery of mine related training within the impacted communities. If an Integrated Employment and Training plan were to be required, in effect, we will be required to double plan. We would rather commit to providing reasonable and appropriate support to both a comprehensive Nunavut Mine Training Initiative and a potential Kitikmeot Mine Training School up to and including the use of Boston Camp as a work practicum area.

NIRB, Doris North Final Hearing, List of Commitments as Understood by Proponent

Socio-Economic Commitments

Requesting Agency	Commitment Requested	Miramar Response
Government of Nunavut (GN)	Proponent along with the KIA, affected communities and the GN develop a Terms of Reference for SEMC.	This will be a job for the committee once formed.
GN	Terms of Reference include the structure of the committee and its membership	As above.
GN	Terms of Reference include the key indicators to be monitored by the committee.	As above.
GN	Terms of Reference include the reporting requirements of the committee on an annual basis.	As above.
GN	Terms of Reference include the methodology of collecting the data.	This will be a job for the committee once formed.
GN	Further Development of the Community Relations Plan before construction is required to ensure clarity and confidence in issue resolution. Approval of the plan should be sought from the affected communities prior to construction.	Agreed
GN	A clear, measurable Community Investment Plan be developed, against which the Proponent's success can be measured.	Not applicable as the Plan is the company's choice to allocate donations. These are voluntary charitable donations and should not be regulated.

NIRB, Doris North Final Hearing, List of Commitments as Understood by Proponent

Socio-Economic Commitments

Requesting Agency	Commitment Requested	Miramar Response
GN	Contracting workshops be coordinated with local Chambers of Commerce and Community Economic Development Agencies on the identification of opportunities and the development of the capacity to properly take advantage of these opportunities.	Miramar has committed to do deliver workshops within the FEIS. It is believed that Chamber of Commerce is not active in this region; will work with Economic Development agencies as available.
GN	Develop a policy on how local businesses will be considered in the bid process. The policy must be clearly communicated to the communities prior to construction. The Proponent as part of this policy should be required to provide feedback to unsuccessful local bidders to indicate where they were unsuccessful to allow them to learn and adjust future bidding.	Miramar has committed to do this. We have internal experts in procurement and bid preparation. Details of the preferencial treatment of regional and Inuit business etc. are already in place through the IIBA.
GN	The Proponent will develop an Employment and Training Plan in consultation with the Government of Nunavut. This consultation will ensure that the trades training is linked to Nunavut and national standards and that other projects may benefit from new program initiatives.	MHBL is in consultation with the Government of Nunavut on employment and training matters. Specifically, the development of a comprehensive Nunavut Mine Training initiative. MHBL is commited to work within this initiative and provide reasonable and appropriate support up to and including the provision of the Boston Camp as a work practicum area for potential mine trainees.

NIRB, Doris North Final Hearing, List of Commitments as Understood by Proponent

Socio-Economic Commitments

Requesting Agency	Commitment Requested	Miramar Response
GN	The Employment and Training Plan shall include how the proponent will comply with the relevant legislation such as Apprenticeship, Trades and Occupations Certification Act.	Miramar does and will continue comply with all relevent legislation on all properties.
GN	The Employment and Training Plan shall include clear and measureable targets for regional employment.	Miramar will focus on the agreed affected communities. Miramar does not believe that the development of employment targets is a productive means for promoting local employment in this project. Recent experience with other developers near the impacted region demonstrates that employment targets tend to promote the advancement of local hires without due consideration for their training in skills. Miramar instead is committed to hiring as many qualified persons as possible from impacted communities.
GN	The Employment and Training Plan shall include a method of accurate monitoring and reporting on employment at the project during the various stages.	Employment and Training data are offered by Miramar to be included as a regular component of the Socio-Economic Monitoring Committee dataset. It is not necessary to outline this information in a separate suggested plan.
GN	It is recommended that the Proponent prepare the Wellness Strategy in greater detail prior to construction.	Agreed it will be on-going document up to and including the operations.

NIRB, Doris North Final Hearing, List of Commitments as Understood by Proponent

Socio-Economic Commitments

Requesting Agency	Commitment Requested	Miramar Response
GN	The Wellness Strategy should include the specific action to be taken, including how specific programs under the Strategy will be communicated to and made available to employees and their family members.	This will be part of the further development as the Project nears construction.
GN	The Wellness Strategy should include what indicators will be used to measure the impact of the Strategy including defining the actual measurements.	Indicators have already been suggested; measurements will be provided as data are gathered.
GN	The Wellness Strategy should include how the data will be collected and applied to the evaluation of the Strategy.	Data will be collected through internal measures and employee feedback.
GN	The Wellness Strategy should include linkages between the Wellness Strategy and other initiatives such as socio-economic monitoring.	Some data collected from the Wellness Strategy will feed into the socio-economic monitoring measurements.
GN	How the proponent will work with Kitikmeot business in the area of capacity building should be linked to the Community Investment Policy.	These are not linked as the Community Investment Policy is Miramar's donation policy.
GN	Appendix A - Concerns and SEIA Addendum Response Matrix should be cross referenced to mitigation measures proposed in the FEIS, and also linked to the Socio-Economic Monitoring Plan.	This has been done internally and can be documented. Where applicable it will be related to VECs in the Socio-Economic Monitoring Plan

NIRB, Doris North Final Hearing, List of Commitments as Understood by Proponent

Socio-Economic Commitments

Requesting Agency	Commitment Requested	Miramar Response
GN	As part of the Socio-Economic Monitoring component, the Proponent should develop an up to date database of information. Territorial Government Agencies will assist as required.	Miramar has agreed to further develop the baseline and will welcome the assistance of the GN.
Hamlet of Cambridge Bay	Formation of a Socio-Economic Monitoring and Mitigation Committee for all projects in the region.	Miramar does not have control over this initiative.
Hamlet of Cambridge Bay	Consistent data collection and analysis to allow for proper monitoring and mitigation of issues	Agreed.
Hamlet of Cambridge Bay	MOU be signed between the Socio-Economic Monitoring Committee and other stakeholders not members of the communities.	The Socio Economic monitoring Committee does not have the authority to enter into an agreement with other stakeholders as we understand the request.
Hamlet of Cambridge Bay	That MHBL package all Socio-Economic mitigation plans except the Inuit Employment Plan in a document that would constitute a Socio-Economic Agreement between the Hamlet of Cambridge Bay and MHBL, and that this be made a condition attached to a project certificate.	This is not an appropriate condition of approval. Further, it is not necessary, given the commitments of Miramar, and the proposed Socio-Economic Monitoring Committee.

APPENDIX C

List of those who attended the Final Hearing

Nunavut Impact Review Board
Final Hearings for the Doris North Gold Project

SIGN-IN SHEET

Location: Cambridge Bay Kiilinik High School
Date: January 30, 2006

NAME (Please Print)	Organization (If Applicable)	Signature
Jamie Tapana	EDT GN	[illegible]
NAVJIT SIDHU	CGS	Navjt
Isabel Dewolf		[illegible]
ISA NEGLAK		[illegible]
JULIA OGINA	HSS	[illegible]
Darlene Elias	CGS	[illegible]
Valerie Meyok	Justice	Valerie Meyok
LENA KAMOAYOK		
Russ Blanchet		[illegible]
MAY HIKOALOK		
BERTHA TOOTIAK		[illegible]
Sally Kritaqliluk		Sally Kritaqliluk

Nunavut Impact Review Board
Final Hearings for the Doris North Gold Project

SIGN-IN SHEET

Location: **Cambridge Bay Kiilinik High School**
Date: **January 30, 2006**

NAME (Please Print)	Organization (If Applicable)	Signature
Charles Hutter	ED & T	[illegible]
MOSES KOIHOK	Cambridge Bay	Kelly [illegible]
Kelly [illegible]	Cambridge - Bay	
John [illegible]	" "	
Wendy [illegible]	Cambridge Bay	[illegible]
LINDA KLENGENBERG	KIA	[illegible]
ALEX BUCHAN	MIRAMAR MINING CORP	[illegible]
[illegible] Kilaodluk		
Simon Kuliktana	Hamlet of Kugluktuk	[illegible]
ALLEN KITIGON		
Beatrice Bernhardt	ED+T-GNU	[illegible]

Nunavut Impact Review Board
Final Hearings for the Doris North Gold Project

SIGN-IN SHEET

Location: Cambridge Bay Kiilinik High School
Date: January 30, 2006

NAME (Please Print)	Organization (If Applicable)	Signature
KEN LANDA	GN Justice	[illegible]
Julie Ross	GN CLEY	[illegible]
Colette Spagnuolo	Environment Canada	[illegible]
TANIA GORDANIER	FISHERIES + OCEANS CANADA	[illegible]
Steve Aoovak	TALOYOAK	[illegible]
Eric Hitatchak	Bathurst	
BEN PUTUGUG		
[illegible]	TAL	
JOHN AKANA		
Millie Evalik	Cambridge Bay	[illegible]
CHARLIE EVALIK	CAMBRIDGE Bay	[illegible]
Bev Ross	Fisheries + Oceans Canada	[illegible]

Nunavut Impact Review Board
Final Hearings for the Doris North Gold Project

SIGN-IN SHEET

Location: Cambridge Bay Kiilinik High School
Date: January 30, 2006

NAME (Please Print)	Organization (If Applicable)	Signature
Bella Kappolak	D.I.A.	
Carson Gillis	NTI	
Helen Navoligak		
Doug Soloway	Transport Can.	
Jim P Morrell	Transport Canada	
Chris King	Hamlet Cambridge Bay	
Michael McGurk	Roscan Environmental	
Donald Havioyak	KIA	
David Westerman	Miramar Mining	
Keith Morrison	Nunavut Tunngavik	
John Chapman	SRK for Miramar	
Phoebe Hainnu	GN	

Nunavut Impact Review Board
Final Hearings for the Doris North Gold Project

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Location: Cambridge Bay Kiilinik High School
Date: January 30, 2006

NAME (Please Print)	Organization (If Applicable)	Signature
[illegible]	TALEVRAIK	[illegible]
Nancy Haniliak	Bay Chimo	N. Haniliak
John Haniliak	Bay Chimo	J. Haniliak
Dionne Filiatrault	NWB	
JESSIE KAPOLAK		
MARY. KANIAK		
[illegible]	Transport Canada - Marine	
Geoff Clark	KIA	geoff@qiniq.com
Paul Emingak	KIA	
Fred Elias	KIA	
[illegible]	[illegible]	[illegible]

Nunavut Impact Review Board
Final Hearings for the Doris North Gold Project

SIGN-IN SHEET

Location: Cambridge Bay Kiilinik High School
Date: January 30, 2006

NAME (Please Print)	Organization (If Applicable)	Signature
B OMILGOETAK		
Glen Kilin	NTI	
BRAD ARMSTRONG	MIRAMAR	
MARK CALLON	Hamlet	
ALICE ISNOR	Comm. Member	
JASON TOLOGANAK	Kitikmeot Inuit Association	
Navalik Helen Tologanak	Self.	
Lorraine Pudlat	GJOA HAVEN	
Janet Klengenberg	Kugluktuk	Janet Klengenberg
Doris Koilhok		
PAUL. OMILGOETOK		
Lucy Chokak		

Nunavut Impact Review Board
Final Hearings for the Doris North Gold Project

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Location: Cambridge Bay Kiilinik High School
Date: January 30, 2006

NAME (Please Print)	Organization (If Applicable)	Signature
BEN J'UTUQJUQ	Gjoa Haven	
George Hakongak	NTI LANDS	George Hakongak
Tommy Akoluk		
Matt Illaszewicz	CBL	
Eric Hopkins	INAC	
DONALD KOGVIK		
Brenda Jancke	Education	Brenda Jancke
Gary Ash	Golder Assoc Ltd	
Paul Waye	Hamlet of Kugluktuk	
Jolyn Abernethy-Gillis	Indian & Northern Affairs Canada	Jolyn Abernethy-Gillis
ERIC PATAHAK	Bathurst	Eric A Patahak

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Date: January 30, 2006

NAME (Please Print)	Organization (If Applicable)	Signature
Jon Humbolt	INAC	
Clarence Klengenberg	Uminqmatiok	
JURATE GERTZBEIN	DIAND	
Eric Denholm	INAC – Gartner Lee	
Randy Ash	Dept of Ed	
Peter Scholz	CGS	
JAMES EETOOLOOK	NTI	
[illegible]	HTO GJOA HAVEN	
Larry Connell	AMEC E&C - Miramar	
Terri Maloof	Miramar Hope Bay Ltd.	
Simon Kuliktana	Hamlet of Kugluktuk	
Fatima Hadlari	HTA Rep.	

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Final Hearings for the Doris North Gold Project

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Date: January 30, 2006

NAME (Please Print)	Organization (If Applicable)	Signature
EUGENE YAREMKO	INAC	
Holger Hartmaier	BGC Engineering (for INAC)	
Heidi Klein	Gartner Lee (for INAC)	
Leslie Gomm	Gartner Lee (for INAC)	
Per Mehling	Mehling Environmental	
[illegible]	INAC	
Mike Hine	INAC	
Stephanie TUCKTOO	~~Stephanie TUCKTOO~~	Stephanie TUCKTOO
BRIAN LABADIE	MIKAMAC	
Carolyn DUNN	Health Canada	
Steve ACOREK	TALOYOAK	

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Final Hearings for the Doris North Gold Project

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Date: January 30, 2006

NAME (Please Print)	Organization (If Applicable)	Signature
RAMLI HALIM	HATCH ACRES	
Cindy Robinson	Golder Associates Ltd	
KEN RAMSEY	NEWMONT MINING	
Mike Setterington	GNDoE	
MARITZ RYKAART	SAK	
John Vivyan	Golder Associates Ltd	
Corey Lake Moore	Golder Associates Ltd.	
NATHAN SCHMIDT	Golder Associates.	
HEATHER DUGGAN	MIRAMAR MINING	
DAVID LOVE	"	
DAVID KNOGALOAK	KUGLUKTUK HTO	

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Final Hearings for the Doris North Gold Project

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Location: Cambridge Bay Kiilinik High School
Date: January 30, 2006

NAME (Please Print)	Organization (If Applicable)	Signature
Joe G Navalik	Kugluktuk HTO	[illegible]
Joseph Niptanatiak	"	
Carl McLean	INAC	[illegible]
Roger Ekehik	Gjoa Haven	
Peter Paneak		
Uriash Puqiqnak	Gjoa Haven	[illegible]
Raymond Kamookak Sr	Hamlet of Gjoa Haven	[illegible]
John Donihee	KIA	John Donihee
Jeff Holwell	INAC	[illegible]
Emma A. Klungenberg		
Ashley Fleischer	INAC	[illegible]
Simon Qingnaqtuq	Taloyoak	[illegible]

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Final Hearings for the Doris North Gold Project

SIGN-IN SHEET

Location: Cambridge Bay Kiilinik High School
Date: January 30, 2006

NAME (Please Print)	Organization (If Applicable)	Signature
Grant Newman	Kugluktuk	[illegible]
MICHELLE BOYLE	EDO Hamlet Cam Bay.	[illegible]
Peter QAMUTINUAK	TALOYOAK HTA	[illegible]
Jeannie Ehaloak	NTI C.Bay	[illegible]
LEE WEBBER	JUSTICE CANADA	[illegible]
James Aiyout	TALOYOAK NU	[illegible]
	~~TALOYOAK N.U.~~	[illegible]
Joe Ohokannoak	N.T.I.	[illegible]
Doug Brubacher	Brubacher Development	[illegible]
Martina Kapolak	Bay Chimo	[illegible]
Peter Kapolak	Bay Chimo	[illegible]

Nunavut Impact Review Board
Final Hearings for the Doris North Gold Project

SIGN-IN SHEET

Location: Cambridge Bay Kiilinik High School
Date: January 30, 2006

NAME (Please Print)	Organization (If Applicable)	Signature
Keith Peterson, MLA.	Legislative Assembly	
TONY WALSH	MIRAMAR MINING	

Nunavut Impact Review Board
Final Hearings for the Doris North Gold Project

SIGN-IN SHEET

Location: Cambridge Bay Kiilinik High School
Date: January 31, 2006

NAME (Please Print)	Organization (If Applicable)	Signature
SAMMY KATTALUK	CAM - BAY	
~~DAPHNE~~ KADLALUK	CAM BAY	
LAZARUS TOTAMU	"	
TETLA KENT	"	
Jeannie Ugyuk	Talurjaruk	
Allen Otokiak	CAM-BAY	
Steve Acoka	TALOYOKA	
~~Robyn Ad~~ Paul Emingak	KIA YCB	
Rob Johnstone	Natural Resources Canada	
Bobby Maghagak	Cam-Bay	
[illegible]	[illegible]	

Nunavut Impact Review Board
Final Hearings for the Doris North Gold Project

SIGN-IN SHEET

Location: Cambridge Bay Kiilinik High School
Date: January 31, 2006

NAME (Please Print)	Organization (If Applicable)	Signature
NATHAN SCHMIDT	Golder Assoc. Ltd.	
Uriash Pupiqnak	Hamlet of Gjoa Haven	
Raymond Kamookaksik	Hamlet of Gjoa Haven	
Grant Newman	Kugluktuk	
Jannie Ehaloak	NTI, Cam-Bay	
George Hakongak	NTI Lands	
Heather Dugan	Miramar Mining	
MOSES AKOTCHOK	GAM	
Simon Kuliktana	Hamlet of Kugluktuk	
Ashley Fleischer	INAC	
Eric Denholm	INAC - Gartner Lee	
Charles Hunter	ED&T GN	

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Final Hearings for the Doris North Gold Project

SIGN-IN SHEET

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Date: January 31, 2006

NAME (Please Print)	Organization (If Applicable)	Signature
Holger Hartmaier	BGC Engineering Inc (INAC)	[illegible]
Gene Yaremko	NHC (INAC)	[illegible]
Steve Aodlaa	TAYLYOAK	
Emma Klengenberg		
Clarence Klengenburg		
Tania Gordanier	DFO	[illegible]
Leslie Gomm	Gartner Lee (INAC)	[illegible]
Mike Setterington	GNDoE	[illegible]
Eric Apatahak	Bathurst	[illegible]
Bella Kapolak	BATHURST	
Terri Malout	Miramar Mining	[illegible]
David Fennell	MIRAMAR	[illegible]

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Final Hearings for the Doris North Gold Project

SIGN-IN SHEET

Location: Cambridge Bay Kiilinik High School
Date: January 31, 2006

NAME (Please Print)	Organization (If Applicable)	Signature
JOHN DONIHEE	KIA	[signature]
Jon C Nowdluk	KUGLUKTUK	[signature]
Stephanie Tucktoo		[signature]
Michael McGuirk	Rescan Environmental (KIA)	[signature]
BILL DAVIDSON	KIA	[signature]
Doug Brubacher	Brubacher Development Strategies (INAC)	[signature]
Randy Ash	Education GN	[signature]
Carolyn Dunn	Health Canada	[signature]
Peri Mehling	Mehling Env. Mangement (INAC)	[signature]
Peter Kapolak	Bay Chimo	[signature]
BEN PUTULIK	Gjoa Haven	
TONY WALSH	MIRAMAR MINING	[signature]

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Final Hearings for the Doris North Gold Project

SIGN-IN SHEET

Location: Cambridge Bay Kiilinik High School
Date: January 31, 2006

NAME (Please Print)	Organization (If Applicable)	Signature
[illegible]	Cambridge Bay	
Julie Ross	GN - CLEY	[illegible]
MARITZ RYKAART	SRK CONSULTING	[illegible]
DAVID ENOGALOAK	KUGLUKTUK HTO	[illegible]
M HINE	DIAND	[illegible]
Ian Rumbolt	DIAND	[illegible]
JEFF HOLWELL	DIAND	[illegible]
Simon [illegible]	[illegible]	[illegible]
Martina Kapolak	Bay Chimo	[illegible]
Jacate Gertzbein	DIAND - Iqaluit	[illegible]
[illegible] Hadlari	Cam. Bay res.	[illegible]

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Final Hearings for the Doris North Gold Project

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Location: Cambridge Bay Kiilinik High School
Date: January 31, 2006

NAME (Please Print)	Organization (If Applicable)	Signature
MICHELLE BOYLE	UBC / Hamlet of Cam Bay	[signature]
[illegible]	Cambridge Bay	[signature]
Willie [illegible]	" "	[signature]
Gary Ask	Golder Associates Ltd	[signature]
[illegible]	Cambridge Bay	
LENA KAMOAYOK	" "	
Ruby Hamiliak	" "	[signature]
SUSIE KOAHA	" "	[signature]
JOE KOAHA	" "	[signature]
JOSH MUKLEBOROUGH	CCS	[signature]
BRUCE SINCLAIR	ADCAIR	[signature]

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Final Hearings for the Doris North Gold Project

SIGN-IN SHEET

Location: Cambridge Bay Kiilinik High School
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NAME (Please Print)	Organization (If Applicable)	Signature
Peter Scholz	CGS	[signature]
CARL McLEAN	INAC	[signature]
John Haniliak	Bay Chimo	[signature]
DONALD HAVIOYAK	KIA	[signature]
Phoebe Hainnu	GN	[signature]
MARY. IKANIAK		
Joe Ohokannoak	NTI	[signature]
Muhammad Akhtar	Transport Canada	[signature]
Jim [illegible]	TRANSPORT CANADA	[signature]
Keith Morrison	NTI	[signature]
Sammy Pawlaisie	Diavik Mine	[signature]
George Samuel Angohiatok Jr.		[signature]

Nunavut Impact Review Board
Final Hearings for the Doris North Gold Project

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Location: Cambridge Bay Kiilinik High School
Date: January 31, 2006

NAME (Please Print)	Organization (If Applicable)	Signature
Bev Ross	Fisheries and Oceans Canada	[signature]
Patti's Blighs Northern Studies	Class / 10 grade (11 Students)	Patti Bligh
CHRIS KING	HAMLET OF CAMBRIDGE BAY	[signature]
Alison Cormier	DIAND	[signature]
Winnie d Paul	Beneficiary	[signature]
Naomi Sallum	CGS	Naomi
ALLEN KITIGOON	CAMBRIDGE BAY	
Tommy Akoluk		
Paul Waye	Hamlet of Kugluktuk	[signature]
JASON TOLOGANAK	Kitikmeot Inuit Association	[signature]
Fred Elias	" " "	[signature]

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Final Hearings for the Doris North Gold Project

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NAME (Please Print)	Organization (If Applicable)	Signature
James Aivout	TACOYOAK N.U	[illegible]
[illegible]	TALOYOAK	[illegible]
Brenda Jancke	Education	Brenda Jancke
Ken Lancke	GN Justice	[illegible]
B Berzelauth	EDTT	[illegible]
Paul Emingak	KIA	Paul Emingak
Carson Gillis	NTI	[illegible]
Robyn Abernethy-Gillis	Indian + Northern Affairs Canada	Robyn Abernethy-Gillis
Brian Steele	Nunavut Planning Commission	[illegible]
IDA Kuliktana		Ida Kuliktana
B OMIK UIEFIK		

Nunavut Impact Review Board
Final Hearings for the Doris North Gold Project

SIGN-IN SHEET

Location: Cambridge Bay Kiilinik High School
Date: January 31, 2006

NAME (Please Print)	Organization (If Applicable)	Signature
Peter Qamutinuak	Taloyoak HTA	
Lee Webber	Justice Canada	
John Chapman	SRK	
Brian Labadie	Miramar	
Alex Buchan	MMC	
Roger Ekelik	Gjoa Haven	
Nancy Haniliak	Bay Chimo	Nancy Haniliak
Mike Mifflin	GN - Env.	
Eric Hopkins	INAC	
Linda Klengenberg	KIA	
Geoff Clark	KIA	
Kirk [illegible]	KIA	

Nunavut Impact Review Board
Final Hearings for the Doris North Gold Project

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NAME (Please Print)	Organization (If Applicable)	Signature
RAMLI HALIM	HATCH ACRES	
KEN RAMSEY	NEWMONT MINING	
Cindy Robinson	Golder Associates	
JOSEPH NIPTANATIAK	CBC IKAHUKTUK	
Hank Klein	Partner Lee (For INAC)	
JIMMY QIRQUT	HTO GJOA HAVEN	
JAMES EGOTOLOOK	NTI	
John Virgo	Golder Assoc.	
Larry Connolly	AMEC for E. MHBL	
DAVID LOVE	MIRAMAR	
Corey DeLaMare	Golder Assoc.	
Colette Spagnuolo	Environment Canada	

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Final Hearings for the Doris North Gold Project

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Location: Cambridge Bay Kiilinik High School
Date: February 1, 2006

NAME (Please Print)	Organization (If Applicable)	Signature
Rose Egotak	Cambridge Bay	
Fiona Buchan-Corey	NAC	Buchan-Corey
Keith Morrison	NTI	
Janet Klengenberg	Kugluktuk	
LINDA KLENGENBERG	KIA	
Allen Otokiak	CAM BAY	Allen Otokiak
Bobby Maghagak	Cambridge Bay	Bobby Maghagak
Wendy Avalak	Cam Bay	
Christina Makkagak	cam Bay	CMakkagak.
J MANIYCLINA	CAMBAY	
JASON TOLOGANAK	Kitikmeot Inuit Association	

Nunavut Impact Review Board
Final Hearings for the Doris North Gold Project

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NAME (Please Print)	Organization (If Applicable)	Signature
SEAN SOMERS	INAC HQ	
TONY WALSH	MIRAMAR	
[illegible]	TC	
[illegible]	KUGLUKTUK	
DAVID ENOGALOAK	KUGLUKTUK	
LENA KAMOAYOK		
MOSES		
Jaiki Malgot	Miramar	
(Michelle Gillis)	Hamlet (Cambridge Bay	
Helen [illegible]	TALOYOAK	
Tommy Kilaadluk	M. Kilaadluk	

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Final Hearings for the Doris North Gold Project

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NAME (Please Print)	Organization (If Applicable)	Signature
Brian Steele	Nunavut Planning Commission	[illegible]
Eric Hopkins	INAC	[illegible]
Travis Kashina		[illegible]
Ryan [illegible]		[illegible]
Bev Ross	Fisheries and Oceans Canada	[illegible]
[illegible]		
[illegible]	Beneficiary	[illegible]
Martina [illegible]	beneficiary	[illegible]
Heather Duggan	Miramar	[illegible]
Donald [illegible]	ICA	[illegible]
TINA OGINA	KITIKMEOT HSS	[illegible]

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Final Hearings for the Doris North Gold Project

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NAME (Please Print)	Organization (If Applicable)	Signature
Jeannie Ehaloak	NTI- Cambridge Bay	[signature]
George Hakongak	NTI LANDS	[signature]
Simon Kuliktana	Hamlet of Kugluktuk	[signature]
Mike Hine	DIAND	[signature]
Tommy Akoluk		
Paul Emingak	KIA YCB	[signature]
Tanui Gordanier	DFO.	[signature]
ALLEN KITIGON		
Beatrice Bernhardt	EDYT GNU	[signature]
Paul Waye	Hamlet of Kugluktuk	[signature]
Carson Gillis	NTI	[signature]
Peggy Tologanak	–	[signature]

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Final Hearings for the Doris North Gold Project

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NAME (Please Print)	Organization (If Applicable)	Signature
Michael McGuirk	Rescan Environmental (for KIA)	[illegible]
Bill Davidson	RT Associates Ltd (for KIA)	[illegible]
Attima Hadlari	Cam. Bay	[illegible]
Peri Mehling	Mehling Env. Management Inc.	[illegible]
Geoff Clark	KIA	[illegible]
Alex Buchan	MMC	[illegible]
Grant Newman	Kugluktuk	[illegible]
Carl McLean	DIAC	[illegible]
Evelyn Abernethy-Gillis	Indian + Northern Affairs Canada	[illegible]
Rob Johnstone	Natural Resources Canada	[illegible]
Robert Esser	Nunavut Tunngavik Inc.	[illegible]
Maureen Dawson	Indian & Northern Affairs	[illegible]

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Final Hearings for the Doris North Gold Project

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NAME (Please Print)	Organization (If Applicable)	Signature
Heidi Klein	Gartner Lee for INAC	[illegible]
Jim Gnovolicar	Kugluktuk	[illegible]
Maritz Rykaart	SRK Consulting	[illegible]
John Virgl	Golder Assoc.	[illegible]
David Enogaloak	Kugluktuk HTO	[illegible]
Ken Ramsey	Newmont Mining	[illegible]
Corey DeLaMare	Golder Associates	[illegible]
Charles Hunter	ED&T	[illegible]
Emma Klengenberg	Bay Chimo	
Clarence Klengenberg	" "	
Roger Ekeshi	Gjoa Haven	
John Doniher	KIA	John Doniher

Nunavut Impact Review Board
Final Hearings for the Doris North Gold Project

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NAME (Please Print)	Organization (If Applicable)	Signature
RAMLI HALIM	HATCH ACRES	[illegible]
BRIAN LABADIE	MIRAMAR	[illegible]
Leslie Gomm	Gartner-Lee (INAC)	[illegible]
Peter Scholz	CGS	[illegible]
Muhammad Akhtar	Transport Canada	[illegible]
Mike Mifflin	GN	[illegible]
Nuta Atkin	GN	[illegible]
JOSEPH NIPTANATIAK	CBC KUGLUKTUK	
Ian Rumbolt	DIAND	[illegible]
Gary Ash	Golder Associates	[illegible]
Uriash Puqiqnak	MAYOR of GJOA HAVEN	[illegible]
Bella Hapalak	BATHURST	

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NAME (Please Print)	Organization (If Applicable)	Signature
Larry Connell	AMEC - Miramar	[signature]
Simon Qingnaqtuq	Taloyoak	[signature]
Lee Webber	Justice Canada	[signature]
Julie Ross	GN CLEY	[signature]
Jurate Gertzbein	DIAND	[signature]
Steve Alookee	Taloyoak	
Stephanie Tucktoo	" "	[signature]
Randy Ash	GN. Dept of Education.	[signature]
Peter Aiyaittunuuvak	Taloyoak HTO.	[signature]
Eric Denholm	INAC - Gordon Lee	[signature]
John Hanilak	Bay Chimo	[signature]
Martina Kapolak	Bay Chimo	[signature]

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Final Hearings for the Doris North Gold Project

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NAME (Please Print)	Organization (If Applicable)	Signature
Ken Landa	GN Justice	[illegible]
Cindy Robinson	Golder	C. Robinson
Mike Setterington	GNDoE	[illegible]
Jeff Holwell	INAC	[illegible]
Eric Hitkolok	Bathurst	Eric Hitkolok
Raymond Kaomayok Sr	Hamlet of Gjoa Haven	[illegible]
Brenda Jancke	Education	Brenda Jancke
Peter Kapolak	Bay Chimo delegate	[illegible]
Nathan Schmidt	Golder Associates Ltd.	Nathan Schmidt
Ashley Fleischer	INAC	A. Fleischer
[illegible] James [illegible]	TALOYOAK	[illegible]
Colette Spagnuolo	Env. Canada	[illegible]

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NAME (Please Print)	Organization (If Applicable)	Signature
Nancy Haniliak	Bay Chimo	Nancy Haniliak
Doug Brubacher	BPS Inc (INAC)	[illegible]
Holger Hartmaier	BGC Engineering (INAC)	[illegible]
BEN PUTUGUG	Gjoa Haven	
DONALD KOGVIK	Gjoa Haven	
MOSES KOIGHOK	EKALOTOTIAK	[illegible]
JAMES EETOOLOOK	NTI	
JERRY QIRQQUT	HTO – GJOA HAVEN	Pd
[illegible]	TALOYOAK	[illegible]
CHRIS KING	HAMLET CAMBRIDGE BAY	[illegible]
Carolyn Dunn	Health Canada	C. Dunn

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Final Hearings for the Doris North Gold Project

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NAME (Please Print)	Organization (If Applicable)	Signature
Phoebe Hainnu	GN	[illegible]
M Callan	Harlet	[illegible]
Joe Ohokannoak	NTI	[illegible]
Sally Kritaqliluk		Sally Kritaqliluk
Nowalik Helen Taloganak	Self	[illegible]
DAVID LONG	MIRAMAR	[illegible]
BRAD ARMSTRONG	MINAMAN	[illegible]
S. MANIYOGINA		

Nunavut Impact Review Board
Final Hearings for the Doris North Gold Project

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Location: Cambridge Bay Kiilinik High School
Date: February 2, 2006

NAME (Please Print)	Organization (If Applicable)	Signature
[illegible]		[illegible]
[illegible]		
Matthew Illaszewicz	CBC	[illegible]
Michelle Gillis	Hamlet of Cambridge Bay	[illegible]
Allen Otokiak	[illegible] CAM-BAY	Allen Otokiak
Keith Morrison	NTI	[illegible]
Peter Scholz	CGS	[illegible]
Bev Ross	Fisheries and Oceans Canada	[illegible]
PETER HARTIE	Kitikmeot Law Centre	[illegible]
BRUCE SINCLAIR	ADCAIR	[illegible]
IDA Kuliktana		Ida Kuliktana

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NAME (Please Print)	Organization (If Applicable)	Signature
Phoebe Haingu	GN	
[illegible]	Cambridge Bay	
[illegible]	Cambridge Bay	
[illegible]	[illegible]	
TONY WALSH	MIRAMAR	
J. MANIYOGINA	CAM-BAY	
Christina Maksagak	Cambridge Bay, Nu	C Maksagak
Ernie Lyall	Cam-Bay, Nu	E Lyall
Puglik, Jay		
ALICE ISNOR	Hamlet	
Bobby Maghagak	Cam Bay	Bobby Maghagak
Jacob Klengenberg	Kugluktuk	

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NAME (Please Print)	Organization (If Applicable)	Signature
Nancy Haghagaik		[signature]
Fiona Buchan-Corey	NAC	[signature]
Eugene Yuranko	NHC/INAC	[signature]
Joseph Niptanatiak	CBC Kugluktuk	
Peri Melling	Mellingew Manger (INAC)	[signature]
Ashley Fleischer	INAC	[signature]
Jason Tologanak	Kitikmeot Inuit Association	[signature]
Sean Somers	INAC Ottawa	[signature]
Linda Klongenberg	KIA	[signature]
Tania Gordanier	DFO	[signature]
Terr... Maloof	Miramar	[signature]

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NAME (Please Print)	Organization (If Applicable)	Signature
ALEX BUCHAN	MMC	
Silie Ross	GN-CLEY	
[illegible]	FALCONBRIDGE HTO	
ALLEN KITTIKOOM		
CHRIS KING	HAMLET OF CAMBRIDGE BAY	
Ben O'Hara + 6 students	Kiilinik High School	
Charles Hunter	ED ET	
Doug Brubacher	Brubacher Development Strategies	
Donald Kuneyuk	K.I.A.	
Michael McGuffie	Rescan Environmental (for KIA)	
John Chapman	SRK (for MIRAMAR)	
BRIAN LANDRY	MIRAMAR	

Nunavut Impact Review Board
Final Hearings for the Doris North Gold Project

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Location: Cambridge Bay Kiilinik High School
Date: February 2, 2006

NAME (Please Print)	Organization (If Applicable)	Signature
JOHN DONIHEE	KIA	JohnDoniHee
Beatrice Bernhardt	ED&T.GNU	BBernhardt
John Akana	Bay Chymo	
Brian Steele	Nunavut Planning Commission	
Mike Setterington	GNDoE	
Paul Wayne	Hamlet of Kugluktuk	
Bobby Maghagak	Cam Bay	Bobby Maghagak
Carson Gillis	NTI	
Robert Esser	NTI	
Eric Hopkins	INAC	
George Samuel Angulalik		

Nunavut Impact Review Board
Final Hearings for the Doris North Gold Project

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NAME (Please Print)	Organization (If Applicable)	Signature
Nancy Hamilak	Bay Chimo	Nancy Hamilak
DONALD KOGVIK	Gjoa Haven	
Tommy Akoluk	Bathurst	
MERY KAMIAK	Bathurst	
MAUREEN DAWSON	NAC, HO	Maureen Dawson
MOSES KOTHOK	EKALOTOTIAL	
JAMES ECTOOLOOK	N71	
JIMMY QIRQUT	HTO - GJOA HAVEN	P J
Christine Aglugaatak	Bay Chimo	
Paul Emingak	KIA YCB	Paul Emingak

Nunavut Impact Review Board
Final Hearings for the Doris North Gold Project

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Location: Cambridge Bay Kiilinik High School
Date: February 2, 2006

NAME (Please Print)	Organization (If Applicable)	Signature
Simon Pingnaqtuq	TALOYOAK	
MARITZ REKKERT	SRK CONSULTING	
KEN RAMSEY	NEWMONT MINING.	
CLARENCE KLENGENBERG		
Holger Hartmaier	RGC Engineering (INAC)	
Gary Ash	Golder Associates	
Mike Hine	DIAND	
Ithma Hadlari	Can. Bay	
Colette Spagnuolo	Environment Canada	
Martina Kapolak	Bay Chimo	
Eric Denhoff	INAC - Gaither Lee	
John Haniliak	Bay Chimo	

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Final Hearings for the Doris North Gold Project

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NAME (Please Print)	Organization (If Applicable)	Signature
Raymond Kunnookak	Hamlet of Cambridge Bay	
Stephanie Tuckkoo	Taloyoak / Hamlet	Stephanie Tuckkoo
George Hakongak	MILLENNIUS	George Hakongak
Peter Kapolak	Bay Chimo rep.	
Randy Ash	Dept of Ed GN.	
Jan Rumbolt	DIAND	
Carolyn Dunn	Health Canada	Carolyn Dunn
Simon Kuliktana	Hamlet of Kugluktuk	
James Aipoot	TALOYOAK	
Heather Dyson	Miramar Mining	Heather Dyson

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NAME (Please Print)	Organization (If Applicable)	Signature
BEN PUTUGUQ	Gjoa Haven	
Jeannie Ehaloak	NTI - Cambridge Bay	[illegible]
Geoff Clark	KIA	[illegible]
Carl McLean	INAC	[illegible]
Rob Johnstone	NRCan	[illegible]
DAVID LOWE	MIRAMAR	[illegible]
NATHAN SCHMIDT	Golder Associates Ltd.	[illegible]
JEFF HOLWELL	INAC	[illegible]
Cindy Robinson	Golder	[illegible]
Peter QAYUTINUAQ	TALOYOAK HTA	[illegible]
Kelvin Abernethy-Gillis	INAC - Nunavut	[illegible]

Nunavut Impact Review Board
Final Hearings for the Doris North Gold Project

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NAME (Please Print)	Organization (If Applicable)	Signature
Hugh Allen	Gartner Lee for INAC	
Leslie Gomm	Gartner Lee (INAC)	
DAVID ENUOGALOAK	KUGLUKTUK HTO	
JIMP MORRELL	TRANSPORT CANADA	
Grant Newman	Kugluktuk	
Joe C Nowdluk	KUGLUKTUK	
Steve Aooka	TALOYOAK	
ERIC Hitkolok	Bathurst	
Bella Hapolak	BATHURST	
JESSIE KAPOLAK	BATHURST	
Uriash Puqiqnak	MAYOR of GJOA HAVEN	

Nunavut Impact Review Board
Final Hearings for the Doris North Gold Project

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Date: February 2, 2006

NAME (Please Print)	Organization (If Applicable)	Signature
[illegible]	GN	
KEN LAMMA	GN JUSTICE	
Muhammad Akhtar	Transport Canada	
Roger Ekekbir		
RAMLI HALIM	HATCH ACRES	
Larry Connell	AMEC - MIRAMAR	
Emma Klengenberg		
Lee WEBBER	Justice Canada	
John Vinyl	Golder Assoc.	
BILL DAVIDSON	RF ASSOCIATES LTD (FORKLIFT)	
Corey DeLaMare	Golder - Miramar.	

Nunavut Impact Review Board
Final Hearings for the Doris North Gold Project

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Location: Cambridge Bay Kiilinik High School
Date: February 2, 2006

NAME (Please Print)	Organization (If Applicable)	Signature
David [illegible]		
S. MANIYOGINA	Cambridge Bay	
C. Wilson	Kiilinik 4 students.	
Michelle Boyle	UBC / Hamlet of CB	[illegible]
Alison [illegible]	QiTNP	[illegible]
Amaiya Emingak	Kullik Ilihakvik Sch	[illegible]
Julia Ogina	HSS	[illegible]
[illegible]		
Gwen Kitigan		
[illegible]	KIA	[illegible]

Nunavut Impact Review Board
Final Hearings for the Doris North Gold Project

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Date: February 3, 2006

NAME (Please Print)	Organization (If Applicable)	Signature
Tommy Akuluk	Bay Chimo	
Carson Gillis	NTI	[illegible]
Lucy Akoak	Kugaaruk, Nu	[illegible]
Lorraine Puqiqnak	Gjoa Haven Nu.	[illegible]
Cindy Robinson	Golder	[illegible]
Helen Qayutinuak	Taloyoak Nu	[illegible]
Brian Steele	Nunavut Planning Commission	[illegible]
NATASHA NEGLAK	NPC	[illegible]
S. MANIYOGINA		[illegible]
Fred Elias	KIA	[illegible]
Janet Klengenberg	Kugluktuk	

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Final Hearings for the Doris North Gold Project

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NAME (Please Print)	Organization (If Applicable)	Signature
Tania Gordanier	DFO	Tania [illegible]
JOHN DONIHEE	KIA	John Donihee
Donald [illegible]	ICIA	[illegible]
Fred Pedersen	CN	[illegible]
Geoff Clark	KIA	Geoffrey Clark
Hawalik [illegible] Tologanak	self	[illegible]
Phoebe Hainnu	GN	[illegible]
Ben O'Hara +15 students	Kiilinik HS	[illegible]
Ursula Rudden	Pauktuutit	U. Rudden
Joe Ohokannoak	NTI	[illegible]
Keith Morrison	NTI	[illegible]
Wayne [illegible]		

Nunavut Impact Review Board
Final Hearings for the Doris North Gold Project

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NAME (Please Print)	Organization (If Applicable)	Signature
Charlie Hunter	EDET	[illegible]
TONY WALSH	MIRAMAR	[illegible]
Simon Kuliktana	Hamlet of Kugluktuk	[illegible]
Brenda Jancke	Education	Brenda Jancke
Mike Atk—	GN	M J Atk
Nancy Haniliak	Bay Chimo	N. Haniliak
ALLEN KITIGON	Cambridge Bay	
[illegible]	Cambridge Bay	
Barge Samuel Angohiatok	Cambridge Bay	[illegible]
Esther van Ginneys	Paulatuuqtit	[illegible]
Mary Kayasark	Kugaaruk.	Mary Ka[illegible].

Nunavut Impact Review Board
Final Hearings for the Doris North Gold Project

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NAME (Please Print)	Organization (If Applicable)	Signature
Eric Denholm	INAC – Gartner Lee	[illegible]
Grant Newman	Kugluktuk	[illegible]
Jeannie Ehaloak	NTI – Cambridge Bay	[illegible]
MIKE Hine	DIAND	[illegible]
George Hakongak	NTI LANDS	[illegible]
Paul Waye	Hamlet of Kugluktuk	[illegible]
James Aiu	TALOYOAK	[illegible]
JAMES EETOOLOOK	NTI	[illegible]
[illegible]	TALOYOAK HTO	[illegible]
DONALD KOGVIK		
Heather Duggan	Miramar Mining	[illegible]
LEE WEBBER	Justice Canada	[illegible]

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NAME (Please Print)	Organization (If Applicable)	Signature
JESSIE KAPOLAK	BATHURST	
Peter Qwawtinuar	THLEYERAK HTA	[illegible]
Uriash Puqiqnak	MAYOR OF GJOA HAVEN	[illegible]
Peter Kapolak	Bay Chimo rep	[illegible]
Martina Kapolak	Bay Chimo	[illegible]
ERIC Atatahak	Bathurst	Eric Atatahak
Heck Allen	Gartner Lee (for INAC)	[illegible]
Carolyn Dunn	Health Canada	C. Dunn
RAMLI HALIM	HATCH ACRES	[illegible]
Robyn Abernethy-Gillis	Indian + Northern Affairs Canada	Robyn Abernethy-Gillis
NATHAN SCHMIDT	Golder Associates Ltd.	Nathan [illegible]

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NAME (Please Print)	Organization (If Applicable)	Signature
Emma Klengenberg		
Clarence Klengenberg		
Roger Ekekik		
Carl McLean	DNAC	
Larry Connell	Miramar - AMEC	
John Chapman	SRK - Miramar	
DAVID EVOGALOAK	KUGLUKTUK H.T.O.	
Gary Ash	Golder Associates	
Matt Illaszewicz	CBC	
BEN KUNUC	Elder Gjoa Haven	Gjoa Haven
Raymond Kamookak	Hamlet - Gjoa Haven	
John Haniliak	Bay Chimo	John Haniliak

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Final Hearings for the Doris North Gold Project

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NAME (Please Print)	Organization (If Applicable)	Signature
Joe C Nowdluk	Kugluktuk	[illegible]
Ken Ramsey	Newmont Mining	[illegible]
Simon Qingnagtuq	Taloyoak	[illegible]
Stephanie Tucktoo	" "	Stephanie Tucktoo
Maritz Rykaart	SRK Consulting	[illegible]
John Virgl	Golder Assoc.	[illegible]
Corey De La Mare	Golder Assoc.	[illegible]
David Long	Miramar	[illegible]
Steve Ackie	Taloyoak	
Joseph Niptanatiak	CBC Kugluktuk	
Michelle Boyle	UBC / Bands of CC	MBoyle
Bella Hapalik	Bathurst	

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NAME (Please Print)	Organization (If Applicable)	Signature
JULIA OGINA	HSS	[illegible]
MOSES KORGHOK	EKALOTUTIAK	[illegible]
BRAD ARMSTRONG	MIRAMAR	[illegible]
Rob Johnstone	NRCan	[illegible]
Bub Brubacher (later than Rob?)	Brubacher Devpt Strat. Inc	[illegible]
LENA KAMOAYOK		
CHRIS KING	HAMLET OF CAMBRIDGE BAY	[illegible]
Beatrice Bernhardt	EDYT GNU	[illegible]
Ashley Fleischer	INAC	[illegible]
Alison C[illegible]	INAC	[illegible]
Bobby maghagak	com Bay	Bobby maghagak

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NAME (Please Print)	Organization (If Applicable)	Signature
Paul Epingalk	PKIA	
BettyAnne Kitigan	DDMI	BettyAnne Kitigan
MARY O RANIAK		
wayne mcgregor		

APPENDIX D

List of Exhibits

No.	Description of Exhibit	Hard Copy Electronic	Filed By:
1	MHBL Presentation – Technical Sessions	❑ Hard Copy - X ❑ Electronic - X	MHBL
2	MEMO From Golder to MHBL Re: GNDOE Comments on Revised Wildlife Mitigation and Monitoring Plan	❑ Hard Copy - X ❑ Electronic	MHBL
3	Opening Remarks from Mayor of Cambridge Bay	❑ Hard Copy - X ❑ Electronic	Hamlet of Cambridge Bay
4	MEMO (January 18th) from MHBL to NIRB re: Clarification of Application of CCME Guidelines	❑ Hard Copy - X ❑ Electronic	MHBL
5	MAP – Rock Quarry Lithology	❑ Hard Copy - X ❑ Electronic	MHBL
6	KIA Presentation – Speaking Notes	❑ Hard Copy - X ❑ Electronic	KIA
7	KIA Presentation – Powerpoint Presentation	❑ Hard Copy ❑ Electronic - X	KIA
8	Letter from NTI to NIRB (January 3, 2006) Re: NTI's Technical Submission	❑ Hard Copy - X ❑ Electronic	NTI
9	NTI Presentation	❑ Hard Copy - X ❑ Electronic	NTI
10	Government of Nunavut Presentation	❑ Hard Copy - X ❑ Electronic - X	GN
11	Indian and Northern Affairs Canada Presentation, including speaking notes	❑ Hard Copy - X ❑ Electronic - X	INAC
12	Transport Canada Presentation	❑ Hard Copy - X ❑ Electronic -	Transport Canada

No.	Description of Exhibit	Hard Copy Electronic	Filed By:
		X	
13	Environment Canada Presentation	❑ Hard Copy - X ❑ Electronic - X	Environment Canada
14	Recommended Minimum Altitudes for Aircraft Flying near Birds in the Inuvialuit Settlement Region	❑ Hard Copy - X ❑ Electronic	Environment Canada
15	Response to Questions Asked By the Hamlet of Cambridge Bay	❑ Hard Copy - X ❑ Electronic	NTI
16	Summary of Existing Canadian Environmental Quality Guidelines	❑ Hard Copy - X ❑ Electronic	Environment Canada
17	Fisheries and Oceans Canada - Presentation	❑ Hard Copy - X ❑ Electronic - X	Fisheries and Oceans Canada
18	Habitat Conservation and Protection Guidelines	❑ Hard Copy - X ❑ Electronic	Fisheries and Oceans Canada
19	Guidelines for the Use of Explosives In or Near Canadian Fisheries Waters	❑ Hard Copy - X ❑ Electronic	Fisheries and Oceans Canada
20	Policy for the Management of Fish Habitat	❑ Hard Copy - X ❑ Electronic	Fisheries and Oceans Canada
21	Freshwater Intake End-of-Pipe Fish Screen Guideline	❑ Hard Copy - X ❑ Electronic	Fisheries and Oceans Canada
22	Natural Resources Canada Presentation	❑ Hard Copy - X ❑ Electronic - X	NRCan
23	Health Canada Presentation	❑ Hard Copy – still need ❑ Electronic – X	Health Canada
24	Hatch Acres Presentation, including speaking notes and Curriculum Vitae for Ramli Halim	❑ Hard Copy - X ❑ Electronic - X	Hatch Acres

No.	Description of Exhibit	Hard Copy Electronic	Filed By:
25	Canadian Handbook on Health Impact Assessment – Volumes 1 to 4	❑ Hard Copy ❑ Electronic - X	Health Canada
26	Hamlet of Cambridge Bay Presentation	❑ Hard Copy - X ❑ Electronic - X	Hamlet of Cambridge Bay
27	Hamlet of Kugluktuk Presentation	❑ Hard Copy - X ❑ Electronic	Hamlet of Kugluktuk
28	MHBL Presentation – Community Sessions	❑ Hard Copy - X ❑ Electronic - X	MHBL
29	MEMO from MHBL Re: Examples of Human Health and Aquatic Life Water Quality Guidelines	❑ Hard Copy - X ❑ Electronic	MHBL
30	Canadian Water Quality Guidelines for the Protection of Aquatic Life	❑ Hard Copy - X ❑ Electronic	MHBL
31	Summary of Guidelines for Canadian Drinking Water Quality	❑ Hard Copy - X ❑ Electronic	MHBL
32	Curriculum Vitae – MHBL Consultants	❑ Hard Copy - X ❑ Electronic	MHBL
33	Summary of the Inuit Impact Benefit Agreement	❑ Hard Copy - X ❑ Electronic	MHBL and KIA
34	Response from INAC Re: Socioeconomic Monitoring Committee	❑ Hard Copy - X ❑ Electronic	INAC
35	Response from GN Re: Socioeconomic Monitoring Committee	❑ Hard Copy - X ❑ Electronic	GN
36	Curriculum Vitae – INAC Consultants	❑ Hard Copy - X ❑ Electronic	INAC
37	MHBL Additional Commitments	❑ Hard Copy - X ❑ Electronic	MHBL