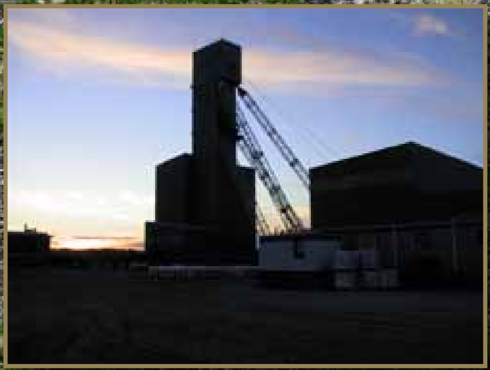
Agnico-Eagle Mines Limited

Project Description



AGNICO-EAGLE

Meliadine Gold Project

April 2011

Non-Technical Project Summary

On July 6, 2010, Agnico-Eagle Mines Limited (AEM) based in Toronto, Ontario, purchased Comaplex Minerals Corporation (Comaplex), making it a wholly owned subsidiary. At the time, Comaplex was planning to move the Meliadine Gold Project from an advanced exploration site to an operating gold mine. Exploration over the years has confirmed the potential for a gold mine.

AEM is an active mining company in the Kivalliq Region of Nunavut and, in 2010, opened the Meadowbank mine. The company has an excellent record, both as a local employer and for controlling the environmental impact of its work.

AEM proposes to build, operate and decommission an underground and open-pit gold mine near Meliadine Lake, roughly 25 kilometres north of Rankin Inlet. Currently, the life of the mine is anticipated to be about 10 years, and this may be extended as exploration is continuing. The mine will take two to three years to build before gold production can begin, and it will use proven, conventional technology. It is expected to process between 6,500 and 15,000 tonnes of ore per day. By Canadian standards, this constitutes a medium to large gold mine. A feasibility study is currently analysing the optimal tonnage. The mine is expected to combine both open-pit and underground mining. There is excellent potential for ore extensions, leading to an extended mine life - these extensions could be located both underground at depth, and in near-surface deposits.

The total disturbed area will be approximately 1100 hectares. The mine will disrupt of destroy small areas of largely seasonal fish habitat. It will not interfere with caribou breeding grounds or most migration routes. The area in the vicinity of the site does not host any endangered plant, fish, animal or bird species. When the ore has been exhausted, the mine's infrastructure will be dismantled and removed; pits will fill with water by natural means; underground access will be closed off; waste-rock management areas and tailings impoundment areas will be closed using approved techniques.

The mine will provide substantial employment and business opportunities for northern residents and will contribute substantially to the tax base of Nunavut. Community briefings by the site's previous owners, as well as AEM, have been regular and frequent since 1995. The community of Rankin Inlet supports this project.

ᔪᓚᐃ 6, 2010ᒥ, ᐊᒡᓂᑯ ᐃᑯ ᐅᔾᔪᖅᑕᕆᐊᑦ, ᑐᕋᑐᒥ ᐊᓐᑎᐳᕆᐅᒥ ᑎᑎᕋᕙᓕᒃ, ᓂᐅᕚᓗᐅᖅᑐᖅ ᐅᔾᔪᖅᑕᕆᐊᓂᒃ ᐊᑎᓕᒃ ᑯᒪᐸᓚᒃ ᐅᔾᔪᖅᑕᕆᐊᑦ (Comaplex Minerals Corporation) ᑕᒻᓇᓗ ᓇᒥᓂᕆᔭᐅᓕᖅᔪᓂ. ᑕᒻᓇ ᑯᒪᐸᓚᒃ ᐅᔾᔪᖅᑕᕆᐊᑦ ᓇᒥᓂᖅᑲᓚᐅᖅᑐᑦ ᓄᓇᒥᒃ ᑕᓯᕐᔪᐊᕐᒥ, ᑕᒻᓇᓗ ᐅᔾᔪᖅᑕᕆᐊᕐᕕᒃ ᐃᓐᖏᕋᑎᓂᓗᒃᔪᒍ. ᐅᑭᐅᓂᒃ ᐊᒥᓱᓂᒃ ᑯᓗᖅᑳᕐᓂᖓ ᖃᐅᔨᓴᖅᑕᐅᑕᕋᒥ, ᐅᔾᔪᖅᑕᕆᐊᕐᕖᖑᖅᐸᑦ ᑭᓇᐅᔭᓕᐅᕋᔭᖅᑐᖅ.

ᐊᒡᓂᑯ ᐃᑯ ᐅᔾᔪᖅᑕᕆᐊᑦ ᑭᒍᓕᕐᒥᑦ ᐅᔾᔪᖅᑕᕆᐊᕐᕖᖅᑲᖅᑐᖅ ᐊᐳᖅᑎᓐᓇᖅᑐᒥ ᖃᒪᓂᑐᐊᑉ ᓴᓂᐊᓂ, ᑕᒻᓇᓗ 2010ᒥ ᐅᔾᔪᖅᑕᕆᐊᓕᖅᔪᑎᒃ. ᐊᒡᓂᑯ ᐃᑯ ᐱᓕᕆᑎᑦᓯᔪᕐ ᐊᒥᓱᓂᒃ ᐊᒪᓗ ᑲᒪᑦᓯᐊᕐᔪᓂ ᓄᓇᒥᒃᓗ ᑕᓯᕐᓂᒃᓗ ᐅᔾᔪᖅᑕᕆᐊᕕᕆᔭᖓᑕ ᓴᓂᐊᓂ.

ᐊᒡᓂᑯ ᐃᑯ ᐅᔾᔪᖅᑕᕆᐊᑦ, ᐅᑯᐃᓯᔪᒪᔪᑦ, ᐅᔾᔪᖅᑕᕐᕕᒃᒥᒃ ᖃᖏᖅᓕᓂᐅᑉ ᓴᓂᐊᓂ ᑕᓯᕐᔪᐊᕐᒥ. ᐅᔾᔪᖅᑕᕆᐊᕐᕕᐅᓇᔭᖅᑐᖅ ᓄᓇᐅᑉ ᖃᖓᓂ ᐊᑦᓯᓕᖅᐸᓕᐊᔪᒥᒃ ᐊᒪᓗ ᓄᓇᐅᑉ ᐃᓗᐊᓄᑦ ᓴᖓᕐᓗᑎᒃ. ᑕᒻᓇ ᐅᔾᔪᖅᑕᕆᐊᕐᕕᕆᔪᒪᔭᖓᑦ 25 ᑭᓕᒥᑐᑦ ᐅᖓᓯᒃᑎᕆᔪᖅ ᑲᖏᖅᖠᓂᐅᑉ ᐊᑦᑐᐊᓂ. ᐅᔾᔪᖅᑕᕆᐊᕕᐅᓯᐊᕐᑐᖅ ᐃᓐᖏᕋᓇᔭᖅᑐᖅ ᐅᑭᐅᓂᒃ 10ᓂᒃ. ᑭᓯᐊᓂ ᑯᓗᒥᒃ ᓇᓂᓯᑲᓂᕈᒥᒃ ᐃᓐᖏᕋᑲᓂᕋᔭᖅᑐᖅ. ᑕᒪᑯᐊ ᐊᑐᖃᐅᓯᒪᔪᑦ ᐅᔾᔪᖅᑕᕆᐊᕐᓂᒧᑦ ᐊᑐᖃᐅᓂᐊᕐᑐᑦ, ᐊᒪᓗ 3ᓂᒃ ᐅᑭᐅᓂᒃ ᓴᓇᔭᐅᕙᓕᐊᓂᖓᓄᑦ ᓴᓇᓇᔭᖅᑐᑦ. ᐅᔾᔪᓕᕆᓕᕈᒥᒃ ᐅᕐᑯᒪᐃᑎᕆᔪᓂᒃ 6,500 ᐊᒪᓗ 15,000 tonnes ᐅᐸᓗᑕᒪᑦ ᐅᔾᔪᓕᕆᑕᕋᔭᖅᑐᑦ. ᑲᓇᑕᒥ ᐅᔾᔪᖅᑕᕆᐊᕐᕙᑦ ᑕᐅᑐᒃᓗᑭᑦ, ᑕᒻᓇ ᐊᖏᓂᕐᐸᓄᑦ ᐃᓚᐅᖃᑕᐅᔪᖅ. ᖃᓄᖅ ᐅᔾᔪᕆᓇᓗᐊᕐᑎᑭᓂᐊᕐᒪᖔᑕ ᒪᓇ ᖃᐅᔨᓴᖅᑐᑦ.

ᐅᔾᔪᖅᑕᕆᐊᓕᖅᐸᑕ ᓄᓇᐅᑉ ᖃᖓᓂ ᐅᔾᔪᓕᕆᓇᔭᖅᑐᑦ, ᐊᒪᓗ ᓄᓇᐅᑉ ᐃᓗᐊᓂ. ᑕᑯᐊ ᐅᔾᔪᖅᑕᕆᐊᑦ ᖃᐅᔨᒪᔪᑦ ᐊᓯᖏᓂ ᑕᓯᕐᔪᐊᑉ ᓴᓂᐊᓂ ᑯᓗᖅᑲᑲᓂᕐᒪᑦ, ᐅᔾᔪᖅᑕᕆᐊᖅᑕᐹᓇᖅᑐᑦ ᐅᑭᐅᓄᑦ ᐊᒥᓱᓄᑦ. ᑕᒪ ᐅᔾᔪᓕᕆᓂᖅ ᓄᓇᐅᑉ ᖃᖓᓂᓗ ᐊᑕᓂᓗ, ᐅᔾᔪᓕᕆᓇᔭᖅᑐᑦ.

ᐅᔾᔪᖅᑕᓕᕈᒥᒃ ᓄᓇ ᐊᓚᖑᕐᓂᖓ ᐊᖏᑎᕆᓂᐊᕐᑐᖅ 1100 hectares. ᐅᔾᔪᖅᑕᕐᕕᒃᓗ ᐃᖃᓗᖃᕐᕕᐅᔪᓂᒃ ᐊᒃᑐᐃᓗᓂ. ᑐᒃᑐᓗ ᐊᑉᖁᑎᕆᔭᖏᓂᒃ ᐊᒃᑐᐃᓚᖏᑐᖅ, ᓄᕐᕕᕕᖏᓂᒃᓗ. ᐅᔾᔪᖅᑕᕆᐊᕐᕕᐅᓂᐊᕐᑐᑉ ᓴᓂᐊᓂ, ᐱᕈᒃᑐᓄᑦᓗ, ᐃᖃᓗᒃᓄᑦᓗ, ᑎᖏᒥᐅᖅᑐᓄᑦᓗ, ᐃᓗᐃᔪᑕᐅᓚᖏᑐᖅ. ᐅᔾᔪᖅᑕᕐᕕᒃᒥ ᑯᓗ ᓄᖑᐸᑦ, ᐃᓗᔪᐊᓗᒃᑕᑦ, ᐱᖁᑎᓗᒃᑕᑦ, ᓯᖁᐸᑎᕐᓗᑭᑦ ᐊᓯᐅᓚᐅᓇᔭᖅᑐᑦ, ᓄᓇᓗ ᐃᐸᒋᒃᓴᕐᓗᒍ. ᓄᓇᒥᓗ ᐅᔾᔪᖅᑕᕆᐊᕐᕕᐅᓚᐅᖅᑐᑦ ᐃᒥᓚᐅᓗᑎᒃ ᑕᓯᕐᒥᑦ. ᓄᓇᒥᓗ ᐊᑦᓯᓗᐊᕐᑐᑦ ᐊᕿᓚᐅᓗᑎᒃ. ᐅᔾᔪᐃᑦᓗ ᓯᐅᖅᑕᕐᕕᑦᓗ ᒪᓂᒃᓴᓚᐅᓗᑎᒃ. ᐃᒪᕐᓗᓂᒃᓗ ᐅᔾᔪᒃᓗᓂᒃᓗ ᐃᒋᑦᓯᕕᑦ, ᐊᑐᓚᐅᓯᖅᑐᓂᒃ ᐅᔾᔪᖅᑕᕐᑯᒃᓂ ᐊᕿᓯᓚᐅᓂᐊᕐᑐᑦ.

ᐅᔾᔪᖅᑕᕆᐊᓕᖅᐸᑕ ᐱᓕᕆᔪᑦ ᐊᒥᓱᓂᐊᖅᑐᑦ ᑭᓇᐅᔭᓕᐅᕐᓗᑎᒃ. ᐊᒪᓗ ᐱᓕᕆᕝᕕᓂᒃ ᓇᒥᓂᓕᑦ, ᐊᑐᒐᐅᓂᐊᕐᒥᔪᑦ. ᑲᖏᖅᖠᓂᕐᒥᐅᑦ ᐊᒥᓱᑦ ᐱᓕᕆᐊᖅᑲᕐᓗᑎᒃᓗ, ᓄᓇᐅᑉᓗ ᐊᑐᕐᓂᖓᓄᑦ ᐊᑭᓕᕈᑎᑦ ᐊᑭᓕᒐᐅᓗᑎᒃ. ᑕᒻᓇ ᓄᓇᕗᒻᒥᐅᓄᑦ ᐃᑲᔪᕐᓂᖅᑲᕐᓂᐊᕐᑐᖅ. ᐅᑭᐅᒥᑦ 1995ᒥᑦ ᐱᒋᐊᖅᓱᒍ ᑕᒻᓇ ᐅᔾᔪᖅᑕᕆᐊᕐᕕᐅᓯᐊᖅᑐᖅ ᐅᖃᐅᓯᐅᑕᖅᑐᖅ ᑲᖏᖅᖠᓂᕐᒧᐅᓄᑦ, ᑕᒪᓇᓗ ᐅᖃᐅᓯᑕᖅᑐᐃᓇᕐᓗᓂ. ᐊᒥᓱᑦᓗ ᑲᖏᖅᖠᓂᕐᒥᐅᑦ ᐃᑲᔪᖅᑐᐃᔪᑦ ᑕᑉᓱᒪᖓ ᐅᔾᔪᖅᑕᕆᐊᕕᐅᓯᐊᕐᑐᒥᒃ..

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SECTION 1 INTRODUCTION

The information and concepts presented in this project description are based on the March 2011 Technical Report (AEM, 2011a), which highlights the potential of the Meliadine property to host an economically viable gold mine. Baseline socio-economic and environmental data collected since 1997, and public consultations conducted since 1995, were also used in preparing this project description.

Following the purchase of the Meliadine Gold Project (project) in July 2010, Agnico-Eagle Mines Ltd. (AEM) initiated a preliminary feasibility study for the base case of a 3,000-tonne-per-day (tpd) gold mine. This allowed AEM to develop an understanding of the property, the mineralogy of the deposit, possible mining methods and other aspects of the project. The feasibility study was completed in March 2011. Based on its conclusions, AEM has initiated another feasibility study, which will include an evaluation of the site's optimal production rate. Production rates between 6,500 and 15,000 tpd will be evaluated; an optimal rate will be selected based on current known mineral resources. The production rate could be re-evaluated and potentially increased if additional mineral resources are confirmed. While the feasibility study is not expected to substantially change the design and operation of the project described here, refinements are anticipated as AEM completes additional work and advances its knowledge of the property.

1.1 Project Location and Ownership

The Meliadine Gold Project is located approximately 25 kilometres north of the hamlet of Rankin Inlet on the west coast of Hudson Bay, Nunavut. The main gold deposits of the Meliadine project are situated on Inuit Owned Land that is administered by Nunavut Tunngavik Inc. (NTI; subsurface and mineral rights) and the Kivalliq Inuit Association (KIA; surface rights) on behalf of the Inuit beneficiaries as designated under the Nunavut Land Claims Agreement. The Meliadine gold property is a group of mineral leases, claims, and concessions—held solely by AEM—that were staked and grandfathered under the Canadian Mining Regulations before the Nunavut agreement.

AEM's proposed mining project comprise mineral deposits at six separate locations on the property: the Tiriganiaq, F Zone, Wolf, Pump, Wesmeg and Discovery deposits.The project's co-ordinates are centred on the underground portal at 63°01'30"N, 92°10'20"W (UTM 6988500N, 540250E; NAD 83, zone 15; National Topographic Survey sheets 55/J, N, and O). The general project location and configuration of land tenure is shown in Figure 1-1.

Proponent Information

The Meliadine Gold Project is being managed by Agnico-Eagle Mines Ltd., a Canadian publicly traded mining company listed on the Toronto and New York Stock Exchanges, trading symbol AEM, with head offices in Toronto, Ontario.

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The people who work for and with Agnico-Eagle Mines in advancing the Meliadine Gold Project and developing this document are listed below.

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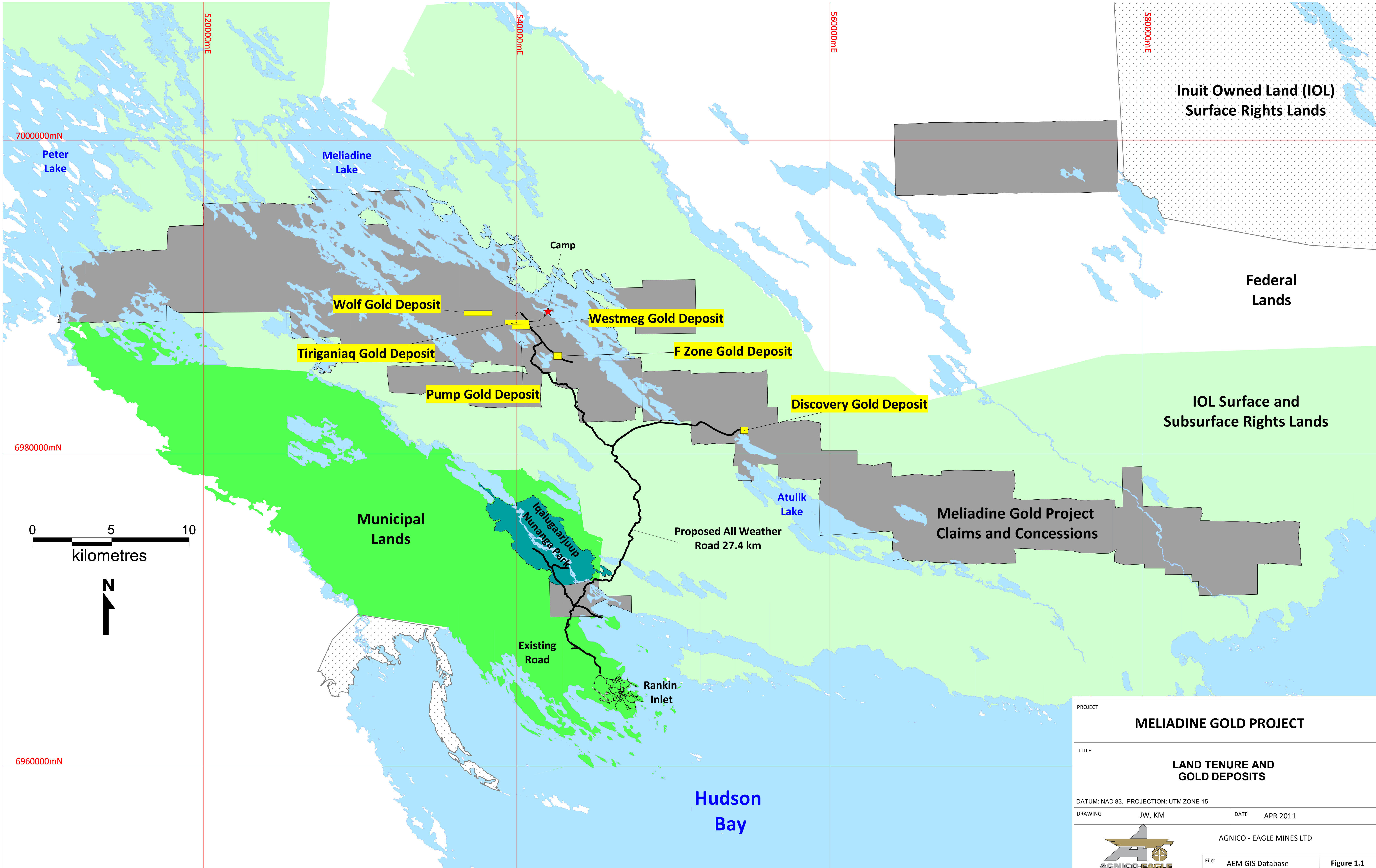

520000mE
540000mE
560000mE
580000mE
7000000mN
6980000mN
6960000mN
Peter Lake
Meliadine Lake
Inuit Owned Land (IOL) Surface Rights Lands
Federal Lands
IOL Surface and Subsurface Rights Lands
Camp
Wolf Gold Deposit
Westmeg Gold Deposit
Tiriganiaq Gold Deposit
F Zone Gold Deposit
Pump Gold Deposit
Discovery Gold Deposit
Atulik Lake
Meliadine Gold Project Claims and Concessions
Proposed All Weather Road 27.4 km
Municipal Lands
Iqalugaarjuup Nunanga Park
Existing Road
Rankin Inlet
Hudson Bay
0 5 10
kilometres
N
PROJECT
MELIADINE GOLD PROJECT
TITLE
LAND TENURE AND GOLD DEPOSITS
DATUM: NAD 83, PROJECTION: UTM ZONE 15
DRAWING
JW, KM
DATE
APR 2011
AGNICO - EAGLE MINES LTD
File:
AEM GIS Database
Figure 1.1

1.2 Brief Project History

Rankin Inlet was established as a mining community in the early-to-mid-1950s with the discovery and subsequent development of a nickel mine. North Rankin Nickel Mines identified gold mineralization in the area of Meliadine Lake during an exploration program for nickel and copper in the early 1960s. The first mineral claims in the project area were staked by Comaplex and Asamera Minerals Inc. in 1987, with the Discovery deposit being found on the eastern half of the property in late 1989.

Successive exploration programs by Asamera, Rio Algom Ltd., and Comaplex from 1990 to 1994 identified gold mineralization along the 80-kilometre-long east-west-trending Pyke Fault, with the first holes drilled into the Tiriganiaq, F Zone, and Pump deposits by Comaplex in 1993 and 1994. From 1995 to 2000, substantial exploration by WMC International Ltd., through an option on the western half of the Meliadine property, significantly expanded the Tiriganiaq deposit, led to the discovery of the Wolf deposit, and expanded the F Zone and Pump deposits. Work by Comaplex in 1996 and 1997 concentrated on the Discovery deposit on the eastern half of the property, known as Meliadine East.

In the ensuing years, and until late 2003, Comaplex and its partners continued exploration on Meliadine East, while little field work was completed by WMC on Meliadine West. In late 2003, Comaplex acquired WMC International's interest in the Meliadine West property. From 2004 onward, Comaplex devoted the majority of its efforts to outlining new, higher-grade gold resources in the deeper parts of the Tiriganiaq deposit, and to reconnaissance work on outlying targets. Sporadic exploration was conducted on Meliadine East.

In 2007 and 2008, Comaplex conducted an underground exploration and bulk sample program on the Tiriganiaq deposit. In early 2009, Comaplex completed a preliminary assessment for the Meliadine property, using independent mining consultant Micon International Ltd. This assessment indicated that the property had the potential to support a mining operation. On the basis of this information, Comaplex elected to advance the project to the feasibility level, and initiated the regulatory process to permit a mining operation on the property.

On July 6, 2010, AEM completed its purchase of Comaplex, making it a wholly owned subsidiary. The first drilling was done on the property's Wesmeg deposit. AEM is continuing with Comaplex's earlier decision to pursue the development of a gold mine.

A complete year-by-year synopsis of exploration activity and results for both the eastern and western halves of the Meliadine Gold Project is presented in Appendix A.

1.3 The Proposed Project

The proposed project would be a gold-only operation, with gold mined, milled, and poured on site. Preproduction surface and underground construction is expected to require about two to three years to complete. The mine's production rate is expected to be between 6,500 and 15,000 tpd, with the optimal rate arising from the feasibility study that is currently under way (and expected to be completed in 2012). The continued success of exploration programs could lead to a re-evaluation of the optimal production rate. The project proposes to combine open-pit and underground mining. Based on current known resources, these methods will result in an estimated operating life of about 10 years for the mine. Mining is proposed on six gold deposits on the property at this time: Tiriganiaq as the main deposit, and the F Zone, Wesmeg, Pump, Wolf and Discovery deposits as satellite operations. Gold mineralization extends to the bedrock surface in all six deposits, but is generally covered by glacial deposits of varying thicknesses. Permafrost is present from the surface to a vertical depth of between 350 and 450 metres.

Gold mineralization in these six deposits is mostly mesothermal quartz-vein-dominated gold systems in strongly sheared and complexly folded host rocks or Archean turbidites, iron formation and volcanic rocks. Within each deposit are many gold-bearing lodes of quartz-vein stockwork, laminated veins and sulphidized iron formation with strike lengths of up to three kilometres. The stratigraphic units generally strike northwest-southeast, dip steeply to the north and are overturned, with the oldest units to the north. All six deposits remain open at depth, providing excellent potential for the discovery of additional gold resources and extension of the proposed mine's life. There is also the potential that other mineable gold deposits will be found in the surrounding area.

Open-pit mining is proposed for the Tiriganiaq, F Zone, Pump, Wolf, Wesmeg and Discovery deposits using conventional surface-mining methods. At present, underground mining is also proposed for the Tiriganiaq deposit, and a combination open-pit and underground scenario is envisioned for the Wesmeg and F Zone deposits. The draft Environmental Impact Statement (EIS) and further exploration results will provide greater detail about which deposits could host underground mining; this cannot be discounted at any of the deposits.

A mill will be built on the site. It will treat the mineralized material by crushing and grinding the rock, followed by gravity separation, intensive cyanidation of the gravity concentrate, cyanidation of the gravity tailings, and carbon adsorption. These processes will be followed by elution, electrowinning and refining. The final step is the smelting of gold bars on-site. Before the tailings are discharged to the tailings impoundment area, they will be treated with a cyanide destruction step. Water and reagents used in these processes will be recycled to the greatest extent practicable. The waste-rock, overburden and tailings impoundment areas will be designed to minimize the size of the project footprint, and environmental impacts, as much as possible.

A fully catered permanent camp will be built on the site to accommodate employees, along with other infrastructure appropriate to a remote mine site. Power for the site[1] would be diesel-generated with the fullest possible use of waste heat. A 27.4-kilometre-long all-weather road is currently undergoing environmental screening. The road is needed to service an approved underground exploration and bulk-sampling program. It will connect the mine site with Rankin Inlet. Supplies would arrive in Rankin Inlet by ship, barge and air, and moved to the site by road as required. Proposed upgrades to the infrastructure in Rankin Inlet would include a laydown area and a tank farm with a capacity of up to 100 million litres. These facilities could continue to benefit the community after the mine is closed.

The construction phase of the project will see the greatest number of workers at the site; between 700 and 800 people could be present at a time. During the operations phase, the total payroll of the proposed mine is estimated at 700 to 1000, with a total workforce of about 500 on site at any one time. The recruitment of employees will maximize opportunities for inhabitants of Rankin Inlet and nearby Kivalliq communities. The balance of the workforce will be flown in and out from other parts of Canada. The mine would operate 24 hours a day, 365 days a year. As with Meadowbank, workers will be on a two-week rotation--two weeks at work, two weeks off.

AEM intends to develop the Meliadine Gold Project in an environmentally and socially responsible manner, ensuring the highest level of environmental care in conserving the natural environment, while at the same time enhancing the well-being of the Inuit, particularly those living in or near Rankin Inlet and neighbouring communities. For the life of the mine, sustained benefits will flow to the owners of the company, its employees, the Inuit, and the federal and Nunavut governments.

1.4 Project Schedule

As with many industrial activities in the North, schedules for projects such as that proposed at the Meliadine property reflect a balance of logistical and technical considerations as well as the timing of regulatory approvals. The feasibility study will take full account of environmental and community concerns and regulatory requirements. Its findings will contribute to both the draft and final Environmental Impact statements. At the same time, the efficient execution of the project and its delivery of benefits to the Government of Nunavut and local communities will depend on the timely issuing of permits. Instances have occurred in the past in which a small delay in issuing a permit has delayed a project by a year because of missed shipping seasons (e.g. open-water periods in summer or ice roads in winter). A detailed, realistic schedule of construction and preproduction activities, combined with expected and timely regulatory approvals, are essential if the project is to move forward.

At this level of study, important milestones and a schedule for the Meliadine project are estimated in Table 1.1. These major schedule components will be refined as required.

[1] The alternative of locating the power plant in Rankin Inlet is being investigated as part of the feasibility study. If this should be the case, a power line would supply power to the mine.

Table 1.1 Important Milestones and Project Schedule

Activity	Date
Project description filed	April 2011
Feasibility and optimization study	April 2011 - 2013
Project infrastructures detailed engineering	September 2012 - 2014
Continuing mineral exploration on site and on adjacent mineral claims	2011 - 2026
Environmental assessment/regulatory review	March 2011 - June 2013
Permits / authorizations / and other agreements	March 2011 - May 2015
Inuit Impact Benefit Agreement	January 2011 - 2013
Underground Exploration & Bulk Sampling Program	2011 - 2013
Underground development & mining	2012 - 2026
Construction of all-weather road (under separate review)	September 2011 - May 2012
Construction of infrastructure in Rankin Inlet and on site	September 2011 - November 2015
Prestripping of Tiriganiaq pit and building of tailings impoundment area	July 2014 - September 2015
Open-pit mining of Tiriganiaq, F Zone, Discovery, Wesmeg, Pump & Wolf	October 2015 - 2025
Operation of the mill complex	2016 - 2026
Reclamation and closure	2026 - 2029

Exploration will continue during the environmental assessment and regulatory processes, as well as throughout the life of the mine. Diamond-drilling is required in order to better define existing mineral resources and also to find new resources on the minerals claims. Underground exploration using the existing portal is proceeding, and the decline is being extended to a depth of 400 metres to facilitate underground drilling and bulk sampling. This work has been approved by the Nunavut Water Board under Water Licence 2BB-MEL0914. As in previous years, geotechnical drilling to shallow depths is likely on the mineral claims. Condemnation drilling will be carried out in 2011 to allow sites to be selected for mine infrastructure.

1.5 Project Fact Sheet

Ownership: AEM is the sole owner of the Meliadine Gold Project.

Location: The site is located south of Meliadine Lake, 25 kilometres north of Rankin Inlet.

Access: Current winter-road access from Rankin Inlet and by helicopter from Rankin Inlet airport. Ultimately, access during underground exploration, construction and production will be by a 27.4-kilometres all-weather road connecting the mine site to Rankin Inlet.

Mineral Claims: The main gold deposits are situated on leased claims under the Canada Mining Regulations that were staked prior to the Nunavut Land Claims Agreement.

Mining Method: The plan for the mine is to combine both open-pit and underground exploitation. The mine's production rate is expected to be between 6,500 and 15,000 tonne-per-day, pending results of the continuing feasibility study. Over the life of the project, the deposits are expected to be mined in sequence, with some overlap possible. The project's total area of disturbance will cover an estimated 1100 hectares.

Mining Areas: Open-pit and/or underground mining is planned at six deposits:

Tiriganiaq – mill site is expected to be located immediately east of the Tiriganiaq deposit.
F Zone –located approximately three kilometres south of the proposed mill site.
Discovery –located approximately 21 kilometres southeast of the proposed mill site.
Wesmeg – located approximately 300 metres south of the Tiriganiaq pit.
Wolf – located approximately five kilometres west of the proposed mill site.
Pump – located approximately three kilometres southwest of the proposed mill site.

Life of Mine: Current estimates support a 10-year mine life based on estimated mineral resources as of Dec. 31, 2010. The property has excellent exploration potential and an extension of this estimate is possible with further work.

Gold Resource: Based on estimated mineral resources as of Dec. 31, 2010, the probable reserves were 2.6 million ounces of gold; indicated resources were 1.5 million ounces and inferred resources were 2.6 million ounces.

Mill Process: The ore will be processed using a conventional gold-milling circuit. The ore size will be reduced to the consistency of fine sand using a sequence of crushing and grinding circuits. A portion of the gold will be recovered in a gravity circuit. The remaining gold will be recovered using intensive cyanidation and carbon adsorption, followed by elution, electrowinning and refining. Residual cyanide will be recovered and/or destroyed prior to the deposition of tailings in the management area. The final step will be the smelting of gold bars on-site.

Personnel: A project workforce of approximately 700-1000 personnel is required for operations, with around 500 on-site at any one time.

1.6 Mineral Claims and the Nunavut Land Claims Agreement

The main gold deposits of the Meliadine project are situated on Inuit Owned Land that is administered by Nunavut Tunngavik Inc. (NTI; subsurface and mineral rights) and the Kivalliq Inuit Association (KIA; surface rights) on behalf of the Inuit beneficiaries as designated under the Nunavut Land Claims Agreement.

The mineral claims underlying the main deposits at the Meliadine project were staked with the Government of Canada prior to the signing of the Nunavut Land Claims Agreement in 1999, and have been held continuously by the holder of the mining rights (formerly Comaplex and now AEM). Consequently, they are considered to be grandfathered under the Nunavut agreement; this means the payment of mineral-production royalties to the owner of the land and mineral rights is administered by the Government of Canada under the Canada Mining Regulations, unless otherwise mutually agreed to by the mineral claim-holder and the mineral rights-owner. The royalties collected are transferred to Nunavut Tunngavik Inc. as the new owner of the subsurface mineral rights.

The Meliadine Gold Project consists of 52,173 hectares--887 hectares as claims and 51,286 hectares as leases. Those 51,286 hectares of leases are held under the above-mentioned mining regulations, administered by Indian and Northern Affairs Canada (INAC), and referred to as Crown Land. As well, AEM has 3,430 hectares of subsurface concessions from NTI, in which the subsurface mineral rights are administered directly by NTI.

1.7 Applicable Acts, Regulations and Guidelines

Appendix B lists the federal and territorial government acts, regulations and guidelines that apply to the Meliadine project.

1.8 Current Licences, Permits, Agreements and Approvals

Land management and environmental management in the region of the project are generally governed by the provisions of the Nunavut Land Claims Agreement. Table 1-2 lists the current licences, authorizations and permits held by the Meliadine project.

Table 1.2 Current Licences and Permits – Meliadine Gold Project

Type	Permit Number	Issuing Agency	Expiry date
Type B Water Licence	2BB-MEL0914	Nunavut Water Board	31 Jul 2014
Exploration Land-Use Licence	KVL100B195	Kivalliq Inuit Association	31 Oct 2010
Drilling Land Use Licence	KVL302C268	Kivalliq Inuit Association	1 Jul 2010
Overland Right-of-Way	KVRW07F02	Kivalliq Inuit Association	26 Oct 2010
Meliadine Lake Right-of-Way	KVRW98F149	Kivalliq Inuit Association	30 Apr 2010
Commercial Lease	KVCL102J168	Kivalliq Inuit Association	30 Jun 2011
Mainland Esker Quarry Permit	KVCA07Q08	Kivalliq Inuit Association	15 Sep 2010
WSCC Program Authorization		Workers' Safety & Compensation Commission	31 Dec 2011
CWM Claims Drilling Permit	N2007C0041	Indian and Northern Affairs	13 Apr 2012
Hamlet Disposal Authorization	Letter of approval	Hamlet of Rankin Inlet	No end date
Scientific Research Licence	0301 309N-M	Nunavut Research Institute	31 Dec 2011
Exploration Land-Use Licence	KVL308C07	Kivalliq Inuit Association	13 Jun 2011
Type B Water Licence	2BE-MEP0813	Nunavut Water Board	31 Oct 2013

1.9 Required Licenses, Permits, Agreements and Approvals

The first approval required by the Meliadine Gold Project is a determination by the Nunavut Planning Commission that the project conforms to the Keewatin Regional Land Use Plan. Once this determination is obtained, the Nunavut Impact Review Board (NIRB) can initiate the environmental-assessment process. The NIRB can then grant or deny the second approval, a Project Certificate. Further licences and operating permits can be issued only after the Project Certificate has been obtained. Upon receiving a Project Certificate, the Meliadine project will proceed to obtain a Class A Water Licence from the Nunavut Water Board (NWB). The water licence will allow for the use of fresh water and the deposit of wastes to receiving water.

Authorization(s) from the Department of Fisheries and Oceans (DFO) will be needed, because fish habitat is likely to be altered, disrupted and/or destroyed by the development of the mine. The Meliadine project will also require a Schedule 2 listing under federal Metal Mining Effluent Regulations (MMER), because lakes (most probably Lake B7) and associated small ponds are expected to be used as tailings impoundment areas, resulting in the permanent loss of these water bodies. An alternatives assessment is currently underway to assist in selecting the most appropriate option for mine waste disposal from environmental, technical and socio-economic perspectives. As the Meliadine Gold Project is on Inuit land, a number of permits will be required to carry out commercial production and continue exploration drilling.

A list of anticipated permits, licences, agreements, authorizations and approvals for the project is presented in Table 1-3.

Table 1.3 Pending Permits, Licences, Agreements and other Authorizations

Authorization	Authority	Basis
Conformity determination with Keewatin Regional Land Use Plan	Nunavut Planning Commission	Allows project to proceed to environmental-impact review
Project Certificate	Nunavut Impact Review Board	Allows project to proceed to authorizations to operate
Type A Water Licence	Nunavut Water Board	Allows use and disposal of water and waste
Inuit Impact Benefit Agreement	Kivalliq Inuit Association	Ensures compensation for negative impacts; ensures benefits flow to the Inuit
Water Compensation Agreement	Kivalliq Inuit Association	Ensures compensation for negative impacts on water
Development Partnership Agreement	Economic Development & Transportation - NU	Ensures socio-economic benefits flow to local communities
Production Lease	Kivalliq Inuit Association	Allows production on Inuit land
Certificate of Exemption	Kivalliq Inuit Association	Non-commercial activity such as environmental monitoring will continue into operations
Quarry Approval	Hamlet of Rankin Inlet	Aggregates and rock for construction of laydown area and tank farm
Approval to Construct	Hamlet of Rankin Inlet	Construction of fuel tank-farm, laydown area, and secure storage area in the industrial area
Schedule 2 Amendment to Metal Mining Effluent Regulations	Environment Canada / Department of Fisheries and Oceans / Transport Canada	Use of fish-bearing water bodies/navigable waters for a Tailings Impoundment Area (TIA)
Fisheries Authorizations	Department of Fisheries and Oceans	No-net-loss: to replace fish habitat lost due to the alteration, disruption and/or destruction of habitat
Navigable Waters Permits	Transport Canada	The possible building of a jetty in Meliadine Lake and, if Lake B7 is a navigable water, a submission to Privy Council with Env. Canada
Explosive Manufacturing Licence (renewal by contractor)	Natural Resources Canada	Storage, manufacture and use of explosives at the mine site
Explosive Magazine Permit renewal	Workers' Safety & Compensation Commission	Permits the placement of an explosive magazine on site
Nuclear Substances & Radiation Devices Licence	Canadian Nuclear Safety Commission	Gauges for use in the mill
Mineral Lease	Indian and Northern Affairs Canada	Maintain surface and subsurface rights around mineral lease
Class 2 Permit for Heritage Sites obtained by qualified, professional archaeologist	Department of Culture, Language, Elders, & Youth	Two heritage sites within the boundaries of the Tiriganiaq pit & several where mine site infrastructure could be located
Socio-economic & Traditional Knowledge Research Licence obtained by qualified contractor(s)	Nunavut Research Institute	Continuing further Inuit Qaujimajatuqangit and socio-economic studies

SECTION 2 PROJECT DESCRIPTION

The Meliadine project involves building, operating, decommissioning and rehabilitating a conventional gold mine. Some facilities development will take place at Rankin Inlet, where materials will be received by air and sea transport. Year-round access between Rankin Inlet and the mine site will be facilitated by an all-weather road.[2] Mine site development will include open-pit and underground mining that will provide ore to the mill. The mill; camp; powerhouse;[3] tank farm; tailings impoundment area; waste rock and overburden management areas; water supply and sewage treatment plant are integral components of this proposal. At this time, six gold deposits have been identified on the Meliadine property, of which Tiriganiaq is the most significant. The other deposits are F Zone, Discovery, Wolf, Pump and Wesmeg. Underground mining is planned for Tiriganiaq and possibly Wesmeg and F Zone. Underground mining at the other three deposits cannot be discounted, and will be subject to more exploration drilling and the completion of the feasibility study.

2.1 Mineral Resources

Estimates of the mineral resources at the Meliadine gold deposits are updated annually, thereby allowing for each season's drilling results to be incorporated. In February 2011, AEM released its Dec. 31, 2010 mineral resource estimates in a NI 43-101 compliant Technical Report (AEM, 2011a). This report and the supporting feasibility study (AEM, 2011b) assessed the potential of the Tiriganiaq, F Zone, Wesmeg, Discovery, Wolf, and Pump deposits to support a gold-mining operation based on a resource of 6.7 million ounces of gold, as outlined in Table 2-1.

Table 2.1 Mineral Resource Estimates as of 31 December 2010 (oz. gold)

	Probable Reserves	Indicated Resources	Inferred Resources
Tiriganiaq Deposit	2,600,000	810,000	1,913,000
F-Zone Deposit		329,000	183,000
Discovery Deposit		315,000	143,000
Wolf Deposit		22,000	160,000
Pump Deposit			100,000
Wesmeg Deposit			143,000
Total	**2,600,000**	**1,476,000**	**2,642,000**

Exploration work in 2010 resulted in a first-time estimate of reserves and a change in the estimated resources for the Meliadine project. As of Dec. 31, 2010, the project had probable gold reserves of 9.5 million tonnes grading 8.5 g/t gold (for 2.6 million ounces of gold); indicated resources of 8.8 million

[2] The all-weather road is part of a separate application as it is required to service the approved underground exploration and bulk-sampling program.
[3] The alternative of locating the power plant in Rankin Inlet is being investigated as part of the feasibility study. If this should be the case, a power line would supply power to the mine.

tonnes grading 5.2 g/t gold (for 1.5 million ounces of gold); and inferred resources of 11.8 million tonnes grading 6.9 g/t gold (for 2.6 million ounces of gold).

From 2011 onward, the drilling program will continue to convert “inferred” resources to “indicated” resources, and will improve the confidence in, and quality of, the estimates for the Wesmeg, F Zone, Pump, Wolf and Discovery deposits. The resource estimates will be adjusted accordingly in the Environmental Impact Statement.

2.2 Project Construction

The development of the Meliadine project will require land near Rankin Inlet, mainly for storage, as well as at the mine site for infrastructure, open pits, waste rock/overburden and tailings impoundment areas. The anticipated land requirements are tabulated in Table 2-2. AEM is dedicated to minimizing as much as possible the footprint of its operations. These numbers are subject to the completion of the feasibility study, and may change slightly. The results of the study will be presented in the Environmental Impact Statement.

Table 2.2 Approximate Land Requirements for Mine Components (hectares)

Project Component	Area
Off-site developments in Rankin Inlet	14
On-site mine infrastructure	30
Open Pits	291
Waste rock/overburden management areas	367
Ore stockpile	25
Mine-site roads (around 30 km)	39
Tailings impoundment area	325
Total	**1091**

2.3 Project Infrastructure Located in Rankin Inlet

2.3.1 Dockside Laydown Area – Rankin Inlet

During the construction and operation of the proposed mine, the majority of the materials and supplies will be transported to Rankin Inlet by seasonal sealift. For the first three years, construction materials will be off-loaded; this will be followed in later years by mine supplies. Upon arrival, materials and supplies will be unloaded and moved directly to the site.

The established harbour at Itivia will be used to receive loaded barges from either Churchill, Manitoba or Canada’s eastern ports during the open-water season. The procedures for off-loading equipment in the Itivia harbour will largely be similar to those for the Meadowbank gold mine at Baker Lake. A spud barge will be located at the off-loading ramp. One end of the barge will be connected to the shore while the other end, having a crane, will lift sea-cans and other containers and equipment directly off the delivery barges, and place them onto trucks. A level, drained area of approximately 14 hectares will be established on land leased from Nunavut airports. The laydown area and the location of the spud barge are shown in Figure 2-1.

Incoming air freight will be moved directly from the airport to the mine site. Expediting services are currently provided by a local contractor. The implementation of the project will greatly increase the scope of this work, resulting in greater local employment opportunities.

Fuel Storage Area – Rankin Inlet

The fuel storage tanks will have the capacity to store nine or 10 months' worth of fuel. In total, the Rankin Inlet tank farm would need a storage capacity of as much as 100 million litres. The tanks would be field-erected steel tanks built to API-650 standards. They will be situated in a lined and bermed containment area capable of containing 110 per cent of the contents of the largest tank. The storage tanks and fuel-dispensing systems will be constructed in accordance with current regulatory requirements and fire regulations.

Annual fuel shipments to Rankin Inlet will come via deep-sea vessels or barges during the open-water season—late July to early September. The fuel will be pumped from the vessels to the Rankin Inlet storage tanks through a pipeline. From Rankin Inlet, fuel will be transported year-round by tanker trucks to the Meliadine tank farm. An outline of the Rankin Inlet tank farm is shown in Figure 2-1.

Discussions are well under way between AEM and Nunavut airports for AEM to lease approximately 14 hectares of airport land for the proposed tank farm and laydown area near the Itivia harbour.

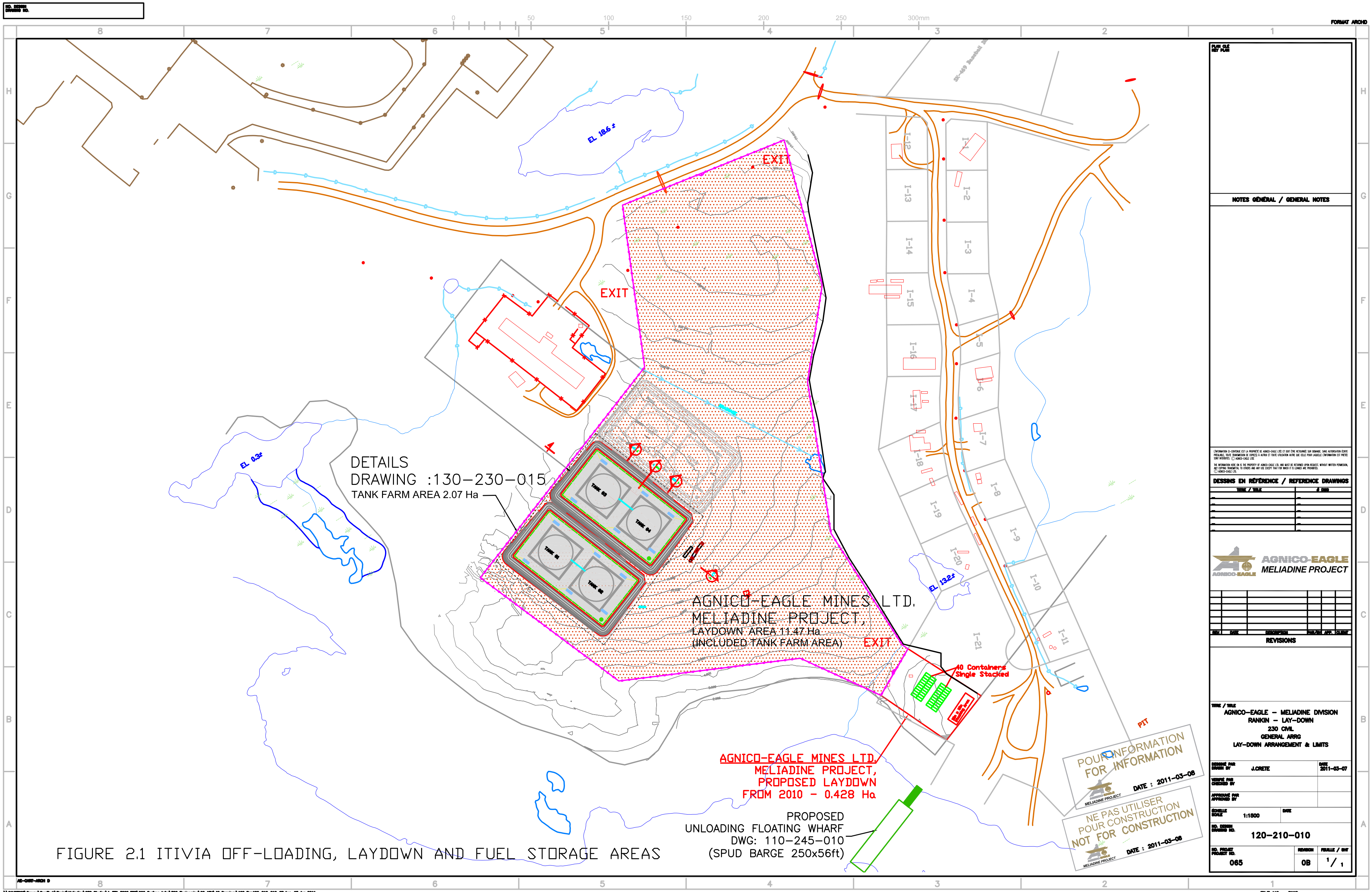

FIGURE 2.1 ITIVIA OFF-LOADING, LAYDOWN AND FUEL STORAGE AREAS

2.4 Road Access and Routes

2.4.1 Access Road from Rankin Inlet to Mine Site[4]

The proposed all-weather access road joining Rankin Inlet to the mine site is a critical part of the approved underground exploration and bulk-sampling program, and has been applied for under a separate application. The road will facilitate the timely transport of fuel and materials year-round for the 2012 and 2013 underground program. It will give residents of Rankin Inlet easier access to areas of traditional use as well as camps and cottages around Meliadine Lake. Increased year-round economic activity can be expected in Rankin Inlet when the underground program has year-round access to the fuel, supplies, infrastructure and services found there.

Should the proposed mine go ahead, the all-weather road will facilitate the movement of construction materials for the mine buildings; construction machinery; mill and mining equipment; and other supplies to the mine site. The road will also be used to transport workers between Rankin Inlet and the site. The route of the proposed road is illustrated in Figure 2-2.

2.4.2 Spur Road from the F Zone Deposit to Main Access Road

A spur road will be required to connect the F Zone deposits with the main access road as shown in Figure 2-2. Another route is also possible, depending on the final location of the mine infrastructure. The spur road will follow the shortest possible distance from the F Zone area to the mill. At this time, it is likely that the road will be an all-weather road primarily used to haul ore to the mill, and to transport workers, equipment, and supplies to the F Zone area. The feasibility study will provide details about the routing and engineering of this road.

2.4.3 Spur Road from the Discovery Deposit to the Main Access Road

Access to the Discovery deposit will require a 9.4-kilometre-long spur road from the main access road, as shown in Figure 2-2. Approximately 3.4 kilometres of this spur road will already have been built to the edge of Meliadine Lake if the construction of the all-weather road is approved. The final routing of the spur road to the Discovery deposit will emerge from the feasibility study.

2.4.4 Spur Roads from the Wesmeg, Wolf and Pump Deposits to the Mine Roads

The Wesmeg, Wolf and Pump deposits are all close to the proposed mine infrastructure, and will require short stretches of road to connect them to the mine roads. Again, details about the final routing and engineering of these roads will emerge from the feasibility study.

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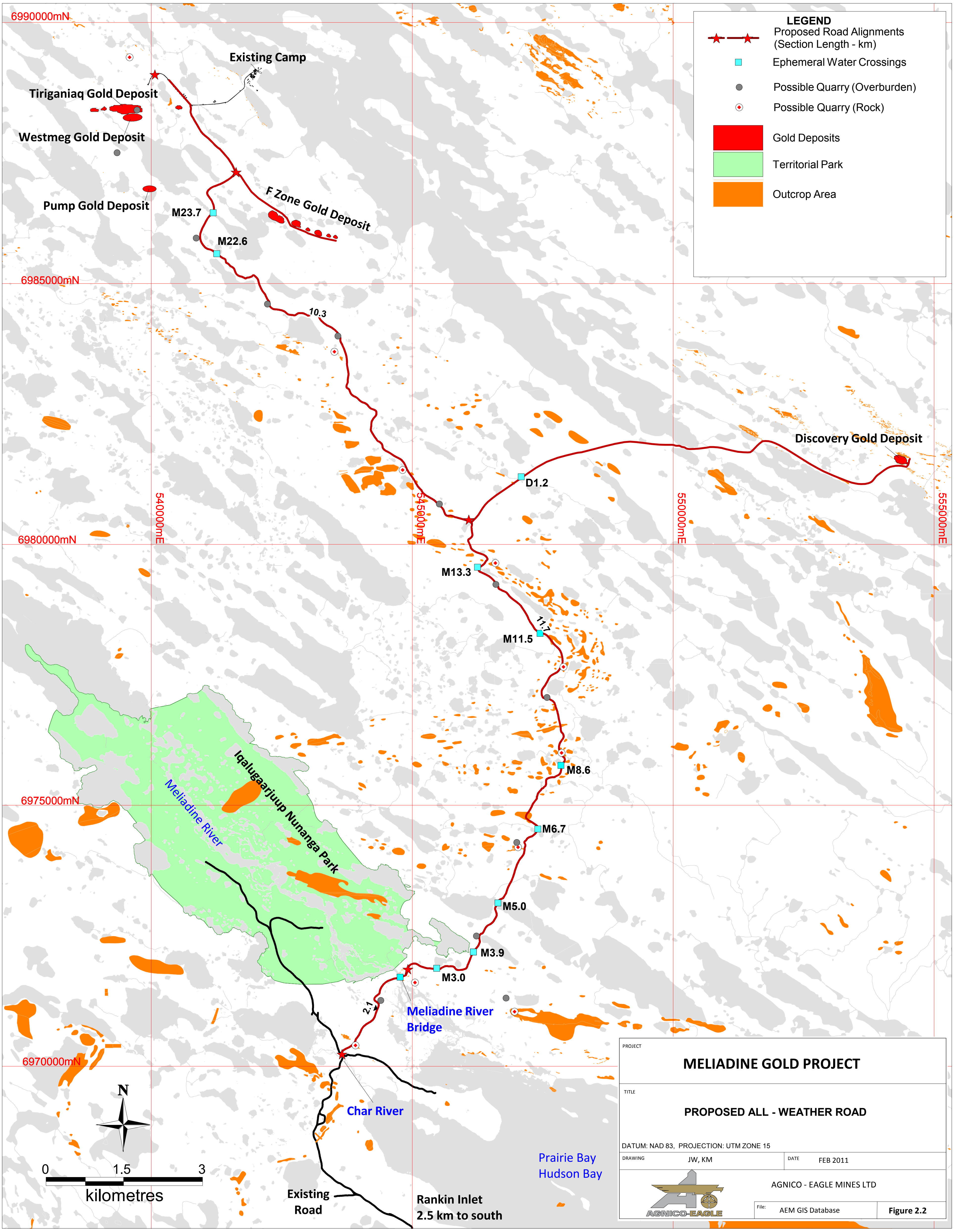
[4] For more detailed information about the road between Rankin Inlet and the mine site, consult the Project Description: "All-Weather Road in Support of the Underground Program – Rankin Inlet to the Meliadine Site." It can be found on the attached CD.



6990000mN
6985000mN
6980000mN
6975000mN
6970000mN
540000mE
545000mE
550000mE
555000mE
LEGEND
Proposed Road Alignments (Section Length - km)
Ephemeral Water Crossings
Possible Quarry (Overburden)
Possible Quarry (Rock)
Gold Deposits
Territorial Park
Outcrop Area
Existing Camp
Tiriganiaq Gold Deposit
Westmeg Gold Deposit
Pump Gold Deposit
F Zone Gold Deposit
Discovery Gold Deposit
M23.7
M22.6
10.3
D1.2
M13.3
11.7
M11.5
M8.6
M6.7
M5.0
M3.9
M3.0
2.1
Iqalugaarjuup Nunanga Park
Meliadine River
Meliadine River Bridge
Char River
Existing Road
Rankin Inlet 2.5 km to south
Prairie Bay Hudson Bay
N
0 1.5 3
kilometres
PROJECT
MELIADINE GOLD PROJECT
TITLE
PROPOSED ALL - WEATHER ROAD
DATUM: NAD 83, PROJECTION: UTM ZONE 15
DRAWING JW, KM
DATE FEB 2011
AGNICO - EAGLE MINES LTD
AGNICO-EAGLE
File: AEM GIS Database
Figure 2.2

2.5 Mine Site Infrastructure

2.5.1 Design Basis

The Meliadine project has sufficient surface lands available to allow for flexibility in the project design, should the need arise. The surface rights are currently held by AEM under a surface lease obtained from KIA. The current lease is a Commercial Exploration Lease that will be converted into a Commercial Production Lease once the project has successfully completed an environmental assessment and received the required authorizations, permits and leases from the various regulatory agencies. The granting of a Commercial Production Lease is predicated upon the negotiation and implementation of an Inuit Impact Benefits Agreement.

The Meliadine infrastructure will follow typical Arctic construction practices, be similar to the Meadowbank mine, and be designed to have a minimal footprint. The Arctic design of the buildings will be reflected notably in insulation and special foundation requirements, use of heated utilidors (insulated, enclosed utilities corridors) to connect the buildings, and extreme space-heating requirements. The infrastructure will be compact in size to minimize construction costs and to maximize heat and fuel conservation and efficiency. The site experiences strong winds from the north-northwest, especially in winter, and snowdrifts tend to form downwind of obstructions. The mine site's major structures will be oriented with this in mind.

Space-heating requirements could be met through the recovery of waste heat from the diesel engines driving the power generators. Auxiliary glycol/water-heating boilers will be provided for heating requirements in extreme conditions and emergencies. Another climate-driven feature of the infrastructure will be the heat-tracing of fuel, water and tailings lines.

An assessment of the seismic hazard for the Meliadine site indicates that the proposed development lies within Seismic Zone 0 of the current National Building Code, so there is negligible risk of an earthquake or other seismic event.[5]

The "active" layer of soil in the overburden—the layer that freezes and thaws annually—is within one or two metres of the surface; consequently, in places where the bedrock is less than two metres below the surface, the foundations of buildings and heavy equipment will rest directly on bedrock, without the need for piles or extensive structural fill. For concrete foundations, experience has shown that bedrock tends to shatter when excavated in Arctic climates. Therefore, allowances will have to be made for pouring lean concrete and using rock dowels to stabilize these foundations. Where the bedrock is deeper than three metres, the foundations will be supported by pilings.

To avoid creating an aggregate quarry simply for construction material, the Tiriganiaq open pit will be developed at the outset of construction, in conjunction with the predevelopment of the underground

[5] Seismic zone information from the Geological Survey of Canada's Pacific Geoscience Centre.

mine. Suitable waste rock from these two sources will be used in constructing pads, roads and dikes. The waste rock and till material could also be used to make aggregate for concrete.

The Meliadine Gold Project's main infrastructure, mineral-processing facilities and employee accommodation complex would be built about two kilometres northeast of the Tiriganiaq deposit (approximately 1.2 kilometres northwest of the exploration camp). This infrastructure will be modelled after that at the Meadowbank mine. The proposed general layout of the site and location of its infrastructure are shown in Figure 2-3. Greater detail for the F Zone and Discovery deposits, and their associated infrastructure, is presented in Figures 2.5 and 2.6, respectively.

Details about the construction of the proposed Meliadine gold mine will emerge from the feasibility study, but the following information on general site layouts and construction is applicable. It is anticipated that approximately 50,000 tonnes of equipment and materials will be moved to the site during a construction period of two to three years.

2.5.2 Construction Infrastructure

The existing 150-person exploration camp could be enlarged to house up to 250 persons during construction if required. Additionally, a temporary construction camp is also under consideration. The accommodation complex will be the first permanent structure completed. It and the exploration camp will serve to accommodate the 700 to 800 persons required at the peak of construction. The mine's construction phase will require a concrete batch plant, maintenance shops, offices, warehouses, workshops and temporary power generators.

The fuel storage currently approved for the site will suffice during construction if the all-weather road to Rankin Inlet is in place. The 50,000-litre, double-walled fuel storage tanks and fuel bladders will be removed once the permanent tank farm has been completed; however, one of these tanks could be moved to the F Zone and later the Discovery deposit, for use during open-pit mining.

2.5.3 Main Processing Facilities

The mill complex will be the largest building on the site. Condemnation drilling is required on-site to ensure that there is no mineral potential under the preferred locations for this complex (shown in Figure 2-3). All condemnation drilling will be completed in 2011, after which a final infrastructure location will be determined. This process will be outlined in the draft EIS.

The infrastructure will be centrally located among the mining sites, but also situated more than 750 metres from the open pits, thereby providing a measure of safety from fly rock. The plant is designed to be compact, primarily to reduce the cost of site preparation and pad-building, but also to reduce the project's overall footprint.

The project’s mineral-processing facilities will consist of three main areas: the primary crusher; the crushed ore stockpile under a dome; and the mill building that will house the rest of the ore-processing equipment.

These three areas will be linked by conveyor tunnels to transport the crushed ore to the mill building. The foundations of these facilities will be concrete, extending to bedrock wherever possible; rock dowels will be used to decrease the amount of concrete required for the mill foundations. The floor will be a concrete slab on grade, over well compacted structural fill. All foundations will be insulated above bedrock to preserve the permafrost.

2.5.4 Power Plant

A power plant[6] will be installed, with sufficient generating power to process between 6,500 to 15,000 tonnes of ore per day, and meet the needs of the camp and other processes on-site. Additional, standby generator units will be installed to deliver power during the maintenance or repair of primary units.

The electrical demand for the Meliadine project should be between 22.1 and 42.8 megawatts (MW), depending on the optimal tonnage for the mine as identified by the feasibility study. This would necessitate between seven and thirteen 4-megawatt generators. If the feasibility study indicates that larger generators should be used, there will likely be fewer individual units. The scenario for the power plant also includes heat recovery, in which heat recovered from the generating process is used to heat buildings. Emergency backup power will be supplied by a smaller power plant that contains three 2-megawatt gensets that will have been used during construction. They will feed emergency power to the camp, other designated processes, and safety loads

2.5.5 Fuel Storage

Pending the results of the feasibility study, a tank farm storing between 5.0 and 8.0 million litres of diesel fuel will be installed in a lined, bermed and contained area. It will be located near the power plant, convenient to the power generators, mining operations and plant facilities. The design of its foundation will involve the placement of structural fill to insulate the underlying bedrock and promote good drainage.

Fuel will be delivered by trucks on the proposed all-weather road from Rankin Inlet to a single storage tank at the Meliadine plant site. A fuel-dispensing station for the mine’s mobile equipment, fuel trucks and light vehicles will be provided. The storage tank will meet American Petroleum Institute specifications and be constructed of cold-temperature-resistant steel.

Additionally, one or more 50,000-litre tanks for Jet A fuel will be relocated to the permanent tank farm or some other suitable area for helicopter use. In addition to diesel and Jet A fuel, the tank farm will also

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6 The power plant could be located in Rankin Inlet and a power line could run along the all-weather road to supply power to the mine.

hold small amounts of gasoline, other fuels and oils. Propane or natural gas may be used for camp cooking and, if used, will be stored in a bulk tank.

2.5.6 Assay Lab

The assay laboratory will include a sample preparation room, balance room, fire-assay room, sample receiving area and an office for the chief assayer. The laboratory will operate 24 hours per day, seven days per week, and will be able to handle all samples from the mine and process plant, including bullion assays. The laboratory will also be equipped to perform grade-control assays and simple environmental analyses.

2.5.7 Accommodation Complex

Employees of the Meliadine project will be recruited from across the Kivalliq region and the rest of Canada. Due to the remote location of the site, it will be necessary to provide catered accommodation. The accommodation complex will be similar to those at other remote mines, with rooms for resident employees and short-term contractors. The accommodation complex will be the first permanent building constructed. To shorten the construction time, the building will arrive on-site in modules, allowing quick assembly. Once completed, this building, the proposed temporary construction camp and the exploration camp combined will house between 700 and 800 people at the peak of construction, including workers for the underground and open-pit development. (These numbers may change if the feasibility study produces a different estimate.)The accommodation complex will have dormitory wings linked to a building that combines a reception area, security office, kitchen, dining room and recreational facilities. All modules will be connected with Arctic corridors. The complex will meet the National Building Code of Canada Group C fire safety and occupancy requirements. The dormitory will have eight or nine wings, with a capacity of 550 to 650 beds.

2.5.8 Sewage Treatment Plant

A sewage treatment plant will be built capable of treating all human, kitchen, laundry and other liquid wastes. Further details about sewage treatment during construction and mining operations will follow from the feasibility study, and be outlined in the draft Environmental Impact Statement.

2.5.9 Support Infrastructure and Equipment

The support infrastructure and equipment anticipated for the project includes, but is not restricted to, the following:

- Fresh water pumphouse at Meliadine Lake (see section 2.13.1 for details).
- Waste-management building housing a high-efficiency incinerator and other waste-management processing equipment.
- Mine maintenance shops.
- Workers' dry
- Main warehouse.

- General outdoor laydown areas.
- On-site roads with drainage control.
- Explosives magazines.
- Buildings for mixing and storing explosives.
- Mixing plant for cement slurry and/or cement paste.
- Gatehouse and gate where the all-weather road enters the mine area.
- Vehicles, including buses, ambulance, fire truck, snowplow, fuel trucks, forklifts, bobcats, pickup trucks, all-terrain vehicles and others.

2.6 Underground Development

At present, Tiriganiaq is the only deposit scheduled to have an underground development. Based on the current geological understanding of the Meliadine deposits, some portion of the resources to be mined in the future will be accessed by underground methods. Drilling at Wesmeg and F Zone has been encouraging, and an underground development at these locations cannot be discounted. Further diamond drilling to depth will confirm whether this is the case. Similarly, the extent of drilling at the other gold deposits is currently inadequate to rule out underground developments sometime in the future.

Underground mining generates less waste rock, and thereby causes less surface disturbance than open-pit mining. One challenge presented by underground mining could be the management of groundwater when mining activity reaches deeper than the permafrost.

Typical underground mining equipment will be used, and a proposed equipment fleet is presented in Table 2.3. The results of the forthcoming feasibility study could cause numbers and types of equipment to change.

Table 2.3 Underground Mining Equipment Fleet

Quantity	Type of Equipment
4	Two-boom, electric-hydraulic development jumbos
1	Single-boom, electric-hydraulic stope jumbos
2	Longhole drilling rigs
3	3-4-yard scooptrams
6	6-7-yard scooptrams
1	Mobile rockbreakers
1	Grader
8	Jeeps
3	Materials/modular trucks
2	Scissor lifts
5	40-ton mine haul trucks
2	Explosives trucks
4	Screening/bolting rigs
2	Service trucks

2.6.1 Underground Mining – Tiriganiaq Deposit

The underground mine at the Tiriganiaq deposit will use part of the existing decline built during the 2007-2008 underground exploration and bulk-sampling program. This decline is to be extended to a depth of 400 metres in 2012-2013. A new portal will be built closer to the mill, since the present one is located within the footprint of the future Tiriganiaq open pit. Depending on the exploration-drilling results and studies, a head frame and/or a ramp with a conveyor belt will be built to service the Tiriganiaq underground. The access will be placed close to the mill.

The underground mine will employ conventional technology, using rubber-tired diesel machinery and drill-and-blast excavation. Mined-out workings will be backfilled for reasons of ground stability, using coarse rock waste, cemented waste rock, paste tailings, or some combination of these.

The mine will be ventilated using three or more ventilation raises. The ventilating air flow and required fan power will be defined as part of the feasibility study when the final underground layout, and consequent resistance to air flow, are known in better detail.

Drilling has shown that permafrost persists to depths of between 350 and 450 metres from the surface. The early stages of the proposed mine will, therefore, be almost entirely situated in permafrost. Later in the mine's life, it is expected that the mining infrastructure will descend below the lower level of the permafrost, and will then have to deal with any groundwater encountered. The 2007-2008 underground exploration program did not encounter any ground ice in the bedrock. Recent hydraulic conductivity testing (2009) indicates that below the permafrost, the permeability of the rock will be low. The quality and quantity of water will be better known upon completion of deep test holes in 2011 for the collection of temperature data and groundwater samples, and testing of hydraulic conductivity at depth. This will be followed by groundwater modelling. The results of this work will be presented in the EIS.

2.7 Open Pit Development

Figure 2-3 shows the approximate footprints of the open pits proposed for the Tiriganiaq, Westmeg, Pump, and Wolf deposits. Management areas common to the four deposits are planned for low-grade ore and waste rock/overburden. At the F Zone and Discovery development areas, shown in Figures 2.5 and 2.6 respectively, a management area for low-grade ore and waste rock/overburden will be located at each site. Temporary repair shops for equipment maintenance, and fuel storage for open-pit mining operations could also be located at each of the two deposits.

Conventional surface mining using drill-and-blast excavation and truck haulage is proposed for all six near-surface gold deposits. The preliminary selection of the surface mining fleet is presented in Table 2-4. The numbers and types of equipment could change as a result of the feasibility study.

Table 2.4 Open-Pit Mining Equipment Fleet

Quantity	Item	Specification
7	Production drill	76-178 mm bit
1	Backhoe excavator	3 m^3 bucket
1	Backhoe excavator	6 m^3 bucket
2	Loader	5 m^3 bucket
2	Loader	12 m^3 bucket
25	Truck	100 ton
1	Truck	50 ton
4	Grader	7.3 m blade
2	Trackdozer	310hp
6	Trackdozer	410hp
1	Wheeldozer	354hp
1	Water truck	
6	Production Backhoe	10 m^3 bucket
1	Truck & Float	
20	Pickup truck	
1	Bus	
1	Snowplow	

2.7.1 Tiriganiaq Surface Mining

The gold mineralization at the Tiriganiaq deposit extends to the bedrock surface. This will allow the upper part of the Tiriganiaq deposit to be selectively mined from an open pit. Figure 2-3 shows the general location of surface mining at Tiriganiaq. The haul distance from the main Tiriganiaq pit exit to the crusher will be about two kilometres, depending on the final layout of the infrastructure, pit ramps and haul roads. The feasibility study will contain further details. The waste rock is currently categorized as non-Acid Rock Drainage (ARD) type. The waste rock that meets the requirements for building material will be crushed, screened, and used for the construction of tailings dikes, foundations, laydown pads and roads. Use of the waste rock in construction will take into account that leachate draining from the waste rock might contain some trace metals, such as arsenic and copper, in concentrations that exceed Canadian Water Quality Guidelines for the protection of freshwater aquatic life. Separate waste-management procedures are proposed for the ARD and non-ARD material should any ARD rock be found in continuing studies.

As a result of the thick (approximately 20 metres) overburden on top of the Tiriganiaq deposit, prestripping will be required in order to expose the mineralized rock for mine production. The stripped material will be used for construction where possible. If not suitable for construction, this overburden will be stored with the waste rock.

2.7.2 Wesmeg Surface Mining

The Wesmeg gold deposit was found in 2010 and is about 300 metres south of the Tiriganiaq deposit. The Wesmeg open pit will be elongated in an east-west direction, following the banded iron formation that holds the gold deposit. The deposit is open in all directions, and only after additional exploration drilling will the full extent of the open pit be known. Further drilling will follow the feasibility study and the results will be presented in the draft EIS.

2.7.3 F Zone Surface Mining

The F Zone deposit is located approximately 5.1 kilometres southeast of the Tiriganiaq deposit by road. Several potential open pits, 50 to 100 metres apart, have been defined; they are presented in Figure 2.5 along with their associated infrastructure.

In order to excavate the westernmost pit at F Zone, a small bay of Lake A6 would be closed by a 250-metre long dike and subsequently dewatered. The water is less than one metre deep at the location where the dike would be placed. Water flow into Lake A6 would either be pumped around the development for a short term, or a water diversion channel would be built to allow water to flow around the development and provide for fish migration and fish habitat.

2.7.4 Wolf Surface Mining

The Wolf gold deposit is located approximately six kilometres west of the Tiriganiaq open pit. As with the other deposits, ore extends to the surface, which would allow open-pit mining after removal of the overburden. The full extent of the resource envelope encompassing this deposit remains unknown, and further drilling will be required before its size is known. Further drilling will follow the feasibility study and the results will be presented in the draft EIS.

The Wolf deposit will either use the waste rock/overburden management areas common to the Tiriganiaq, Wesmeg and Pump deposits, or have a dedicated waste rock management area. A road will be built to allow mining. As shown on Figure 2.3, the road around the tailings impoundment area could possibly be used as part of the route linking the Wolf mining area to the mill area further to the east. The final size and location of the open pit, waste-rock management area and road will be outlined in the draft EIS.

2.7.5 Pump Surface Mining

The Pump gold deposit is about three kilometres south of the Tiriganiaq open pit. As with the Wolf deposit, there has been insufficient drilling to fully define the extent of the resource envelope. However, drilling to date indicates that an open pit is feasible for this deposit, and more drilling in the future will allow the size of the open pit to be better defined.

The open pit would use the waste rock/overburden storage areas common to Tiriganiaq and Wesmeg. A short road will be developed linking the deposit to the nearby roads as shown in Figure 2-3.

2.7.6 Discovery Surface Mining

The Discovery deposit is located approximately 22.4 kilometres east-southeast of the proposed main site. It has the potential to be mined as a satellite deposit when mining at and around the Tiriganiaq pit is winding down.

The road to the Discovery deposit, the pit outline, and the waste rock/overburden management area are shown in Figure 2.6. No lakes are in the immediate area of the proposed Discovery pit or the waste/overburden management areas.

2.8 Tailings impoundment area

An evaluation of options for tailings disposal at the Meliadine project (Golder Associates, 2009a) first compared ten location/type (slurry or paste) disposal possibilities. For each option, factors such as environmental protection, mining operations, socio-economic concerns, and the eventual closing of the mine were taken into consideration and rated in a decision matrix. The Golder study also included a review of tailings management methods in cold climates.

The study concluded that the preferred option is slurry disposal in Lake B7, combined with an adjacent land area east of Lake B7. This option would allow the disposal of 7.7 million cubic metres of tailings[7] wherein ice formation within the tailings would add 20 per cent to the volume. This option would involve dewatering Lake B7, building on-land dams and staging the construction of tailings dams around Lake B7 during the mining operations. Based on the available bathymetry, Lake B7 has a volume of about 860,000 cubic metres. (Golder Associates, 2008c)

After AEM obtains a Schedule 2 listing under the Metal Mining Effluent Regulations and receipt of all other relevant approvals, Lake B7 would be fished out and subsequently dewatered by pumping water downstream in the basin. Options for dewatering and water treatment are being investigated. Preliminary discussions with Fisheries and Oceans Canada indicate that fish-habitat compensation will be required, and studies are under way to determine how best to fulfill this requirement. As well, a program to monitor environmental effects will be developed.

Preliminary work suggests that the TIA dike crest elevation will vary from 70 to 80 metres, with a crest width of 12 metres. A haul road would be constructed from the Tiriganiaq open pit and waste-rock/overburden management areas to the tailings impoundment area, and would continue around its perimeter. Construction of the tailings impoundment area will be phased in accordance with the mine production schedule and the availability of waste rock from mining as construction material. Dike construction would be supplemented with till material.

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[7] 9.2 million tonnes of tailings at 1.2 tonnes per m^3 dry density

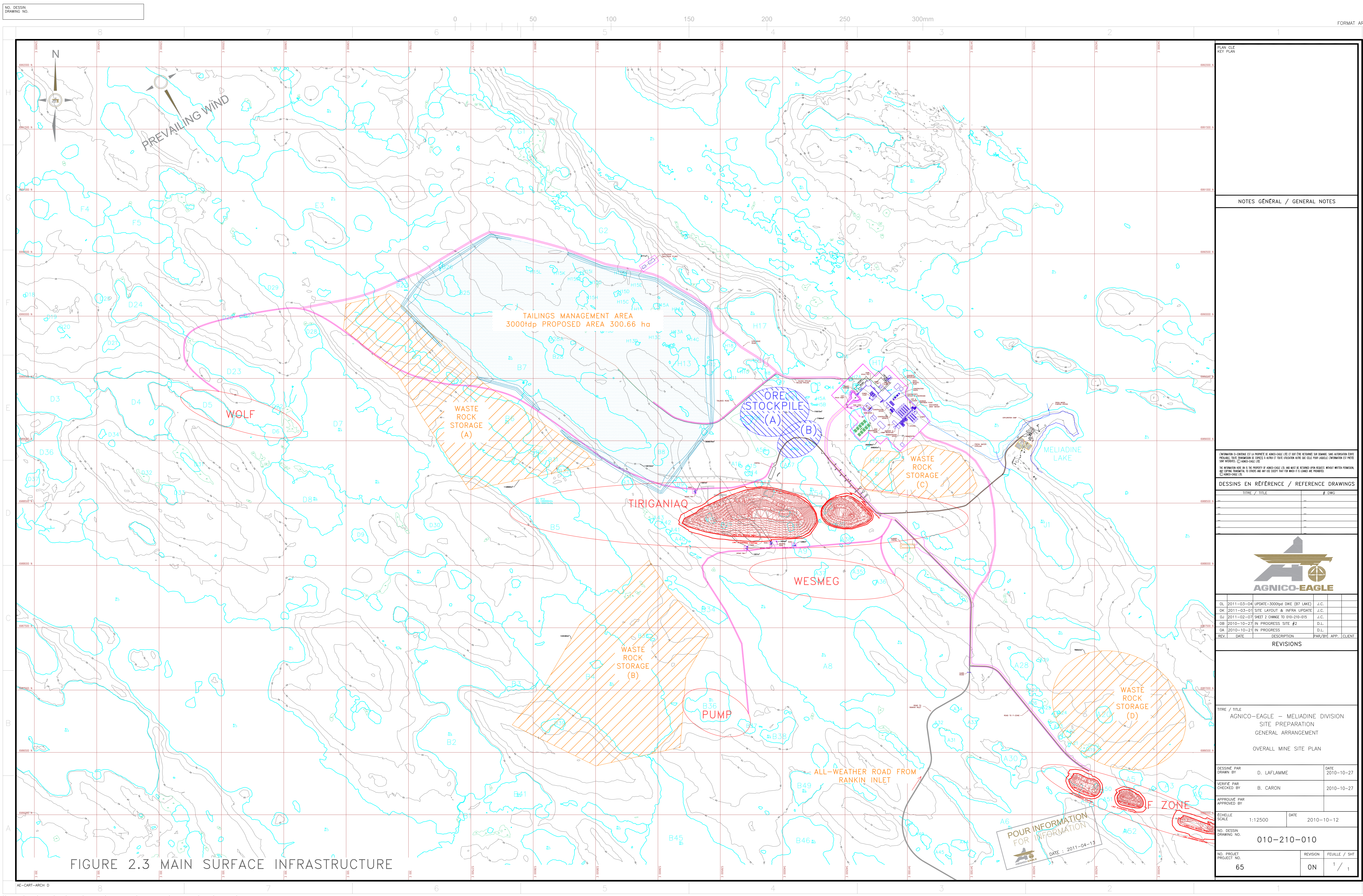

FIGURE 2.3 MAIN SURFACE INFRASTRUCTURE

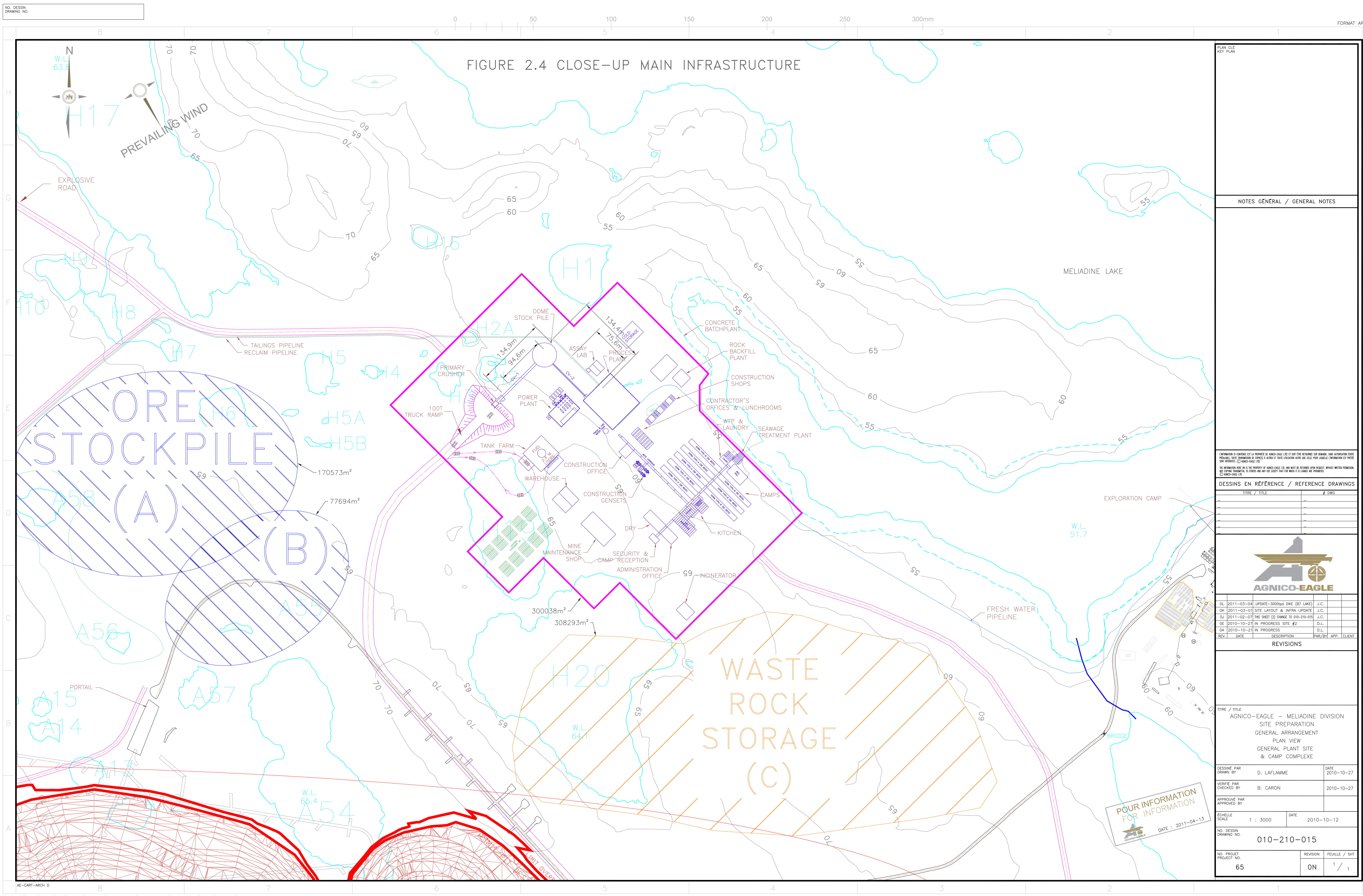
FIGURE 2.4 CLOSE-UP MAIN INFRASTRUCTURE
N
PREVAILING WIND
EXPLOSIVE ROAD
ORE STOCKPILE (A)
(B)
170573m²
77694m²
TAILINGS PIPELINE
RECLAIM PIPELINE
DOME STOCK PILE
PRIMARY CRUSHER
100T TRUCK RAMP
ASSAY LAB
PROCESS PLANT
POWER PLANT
CONCRETE BATCHPLANT
ROCK BACKFILL PLANT
CONSTRUCTION SHOPS
CONTRACTOR'S OFFICES & LUNCHROOMS
WTP & LAUNDRY
SEAWAGE TREATMENT PLANT
TANK FARM
CONSTRUCTION OFFICE
WAREHOUSE
CONSTRUCTION GENSETS
CAMPS
DRY
KITCHEN
MINE MAINTENANCE SHOP
SECURITY & CAMP RECEPTION
ADMINISTRATION OFFICE
INCINERATOR
300038m²
308293m²
WASTE ROCK STORAGE (C)
PORTAIL
MELIADINE LAKE
EXPLORATION CAMP
FRESH WATER PIPELINE
W.L. 51.7
POUR INFORMATION
FOR INFORMATION
DATE : 2011-04-13
NOTES GÉNÉRAL / GENERAL NOTES
DESSINS EN RÉFERENCE / REFERENCE DRAWINGS
AGNICO-EAGLE
REVISIONS
TITRE / TITLE
AGNICO-EAGLE – MELIADINE DIVISION
SITE PREPARATION
GENERAL ARRANGEMENT
PLAN VIEW
GENERAL PLANT SITE
& CAMP COMPLEXE
DESSINÉ PAR / DRAWN BY D. LAFLAMME DATE 2010-10-27
VERIFIÉ PAR / CHECKED BY B. CARON 2010-10-27
APPROUVÉ PAR / APPROVED BY
ÉCHELLE / SCALE 1 : 3000 DATE 2010-10-12
NO. DESSIN / DRAWING NO. 010-210-015
NO. PROJET / PROJECT NO. 65
REVISION ON
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FILE NO. .DWG

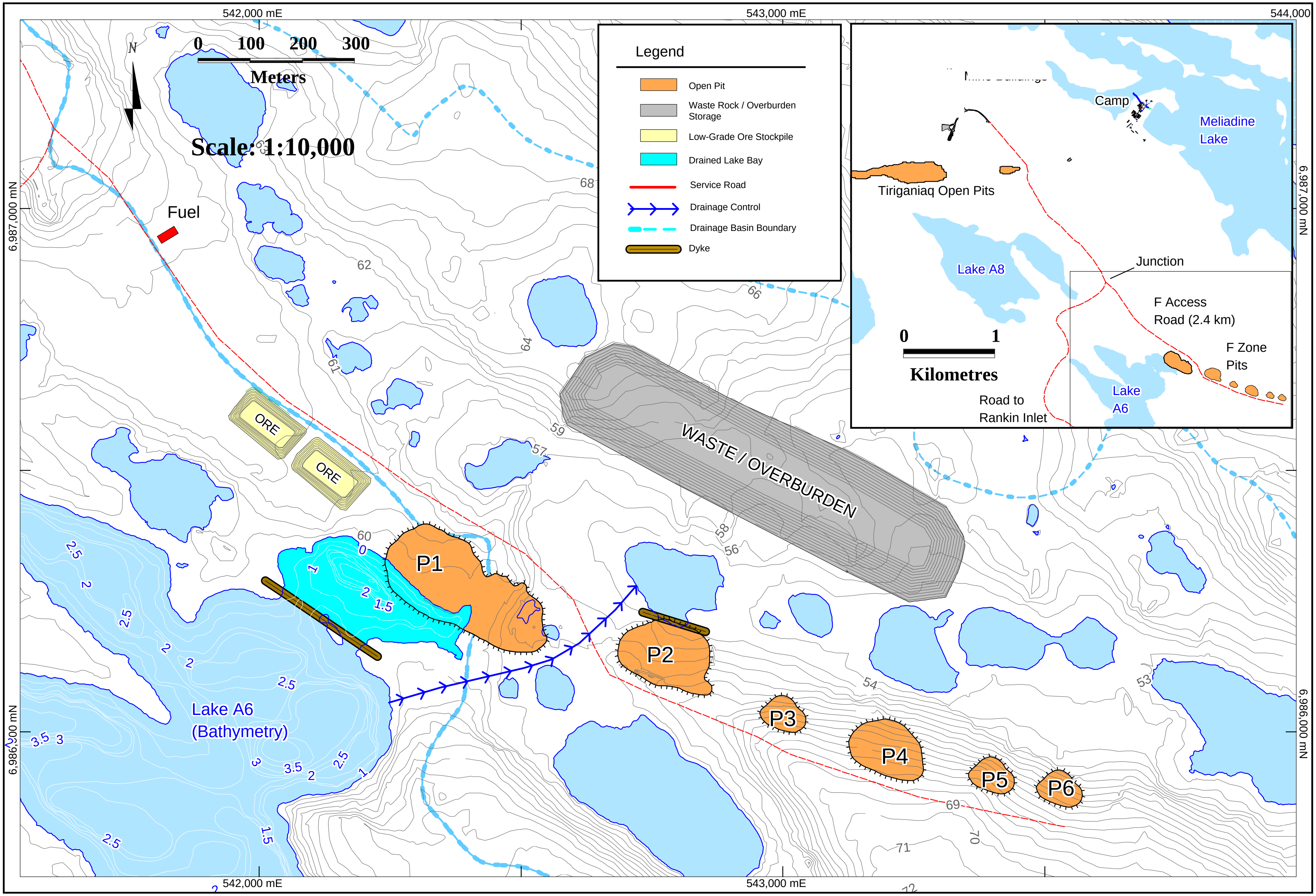

Figure 2-5: Proposed F Zone Infrastructure

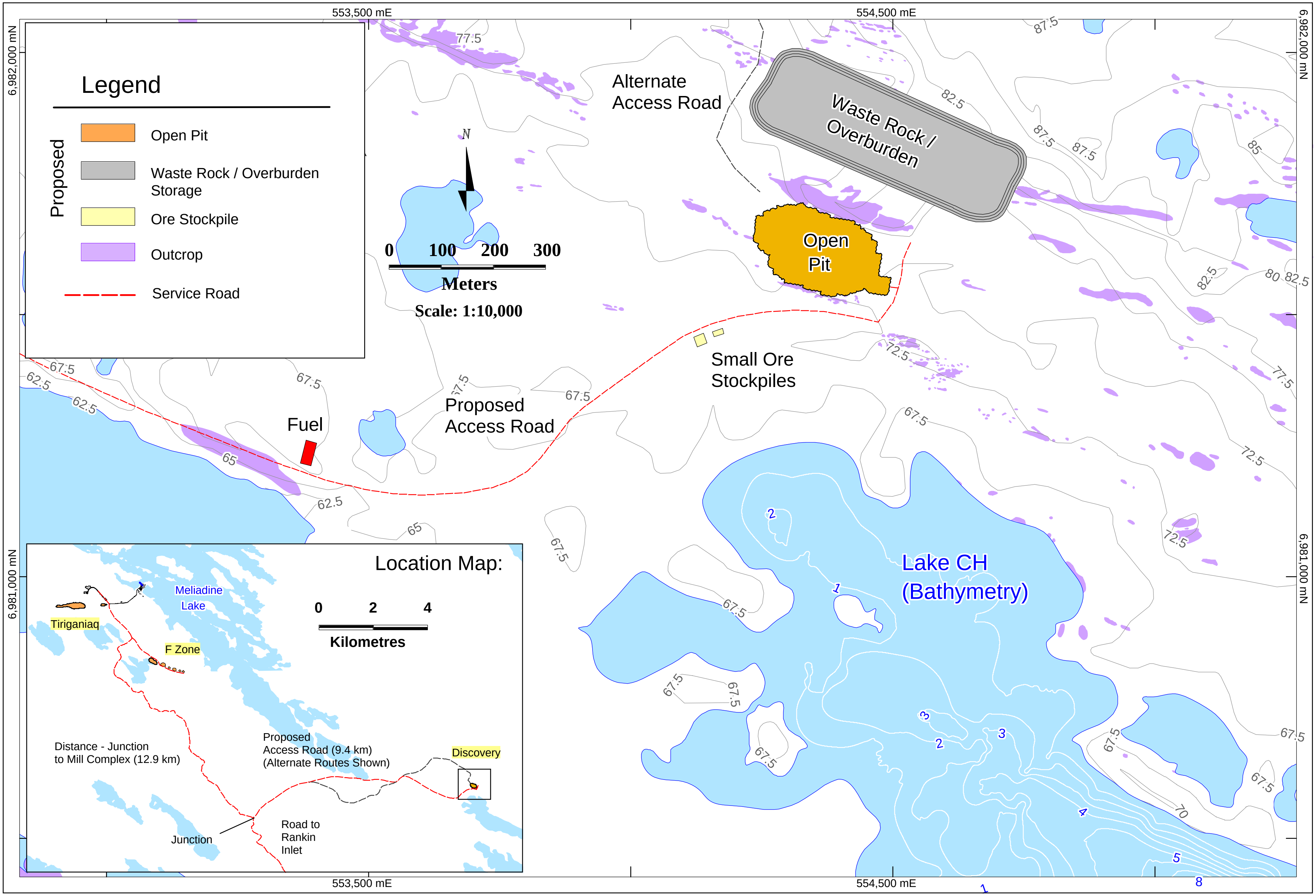

Figure 2.6: Discovery - Proposed Infrastructure

2.10 Preferred Options and Alternatives

2.10.1 Project Description and Project Status

The information and concepts presented in this project description are based on the NI 43-101-compliant technical report on the Meliadine gold deposit completed in March 2011. That document synthesized all available information on the Meliadine project, including the 2001 prefeasibility study completed for WMC International by independent consultant Beca Simons Pty Ltd. (now Beca AMEC), and the 2009 "Independent Technical Report on the Preliminary Assessment of the Meliadine Project, Nunavut, Canada," by Micon International.

In 2009, Comaplex compiled all available information and used experienced independent consultants to update the studies. A feasibility study is currently under way for completion in 2012. The draft EIS will incorporate information from the feasibility study.

2.10.2 Mining Options

Gold deposits on the Meliadine property will be mined by a combination of open-pit and underground methods. The feasibility study will determine the number, size and depth of all open pits. The current plan for the proposed mine calls for open pits at all six gold deposits, with underground mining at the Tiriganiaq deposit and possibly the Wesmeg and F Zone deposits. Underground mining cannot be discounted at the other three deposits, since drilling to date is insufficient to rule it out.

2.10.3 Tailings Impoundment Area Alternatives

Four quadrants centred on the present portal were first investigated (Golder Associates, 2009a) for the tailings impoundment area. These included Lake A54, Lake A8 and Lake B7. Fisheries work in 2010 indicated that all of the sites would adversely impact fish habitat and would require a Schedule 2 listing under the Metal Mining Effluent Regulations. No single area in the vicinity of the mine could be found where adverse impacts on fish habitat could be avoided. In all cases, a fish habitat compensation plan will be required.

As stated in Section 2.8, Lake B7 was first selected as the preferred tailings impoundment area. The proposed earlier mine would have processed 3,000 tonnes per day of ore and its 10 million tonnes of tailings over the mine life could have been accommodated in the Lake B7 basin. As a result of AEM's 3,000-tpd feasibility study, the area of land adjacent to Lake B7 basin was added, as shown in Figure 2-3.

AEM is considering the storage of tailings material in one of three forms:

- A conventional slurry having a high water content (50 per cent solids);
- A paste[8] or thickened tailings with a medium water content (68-70 per cent solids); or
- A solid (filter cake) with a low water content (85-92 per cent solids).

The slurry option is the most common method of storing tailings. It is proven technology and well understood. However, this method requires an allowance of approximately 20 per cent of the volume of the tailings impoundment area to compensate for loss to the formation of ice lenses in the tailings. Dewatering the tailings would have some advantages, notably in reducing the entrainment of ice; this would help to reduce the storage volume needed for the tailings. However, dewatering requires specialized equipment and transporting dewatered tailings may introduce some challenges.

Another option is to use tailings as underground paste backfill, for the purposes of ground support. Because the temperature underground is stable at minus-6 to minus-8 Celsius, these tailings would freeze shortly after placement, and would not require any further reclamation underground. If practicable, the use of paste backfill would reduce a commensurate quantity of tailings that would otherwise have to be managed and stored on the surface. The preferred option for tailings management will be presented in the draft Environmental Impact Statement.

2.10.4 Freshwater Intake at Meliadine Lake

The camp area will have a water-treatment plant for fresh water. A fresh-water intake will be built at Meliadine Lake and a heat-traced, insulated water line would run to the fresh-water supply tank in the mill complex. A pump will need to be located in water deeper than five metres, to allow year-round operation and avoid disturbing the lake bottom. All alternatives would employ measures to avoid the entrainment of fish in the intake or the impingement of fish on any screens. The options include a jetty, a floating barge, and an insulated pipe running from shore into deep water.

A jetty would require the use of waste rock to build a structure out into the lake to a point where the water depth exceeds five metres. A wet well would be installed near the end of the jetty and a pumphouse built over it. The pumphouse would be heated and insulated. The drawback of this option is that it would have an impact on fish habitat and would require approval under the Navigable Waters Protection Act.

A floating barge, similar to that at Meadowbank, is also being considered. One end of the barge would be near the shore and the other end would be anchored in deep water. A pump would be lowered from the barge into deep water.

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[8] Paste tailings are defined as tailings that have been significantly dewatered to a point where they do not have a critical flow velocity when pumped, do not segregate as they deposit, and produce minimal (if any) bleed water when discharged from a pipe.

The third option would see a large insulated pipe installed from the shore to deep water. The pump would be lowered down this pipe into deep water. The pipe would be covered with rip-rap to protect it from ice movement.

2.10.5 Spur Road Options

The proposed all-weather road from Rankin Inlet to the Meliadine site is presently being screened by the Nunavut Impact Review Board, as the road is required to service the approved underground exploration and bulk-sampling program. At this time there has been no final decision about whether the spur roads from the F Zone and Discovery deposits should be winter roads only, or all-weather roads. These spur roads will join the proposed all-weather road between Rankin Inlet and the mine site. The appropriate decision will become more obvious during the feasibility study and be presented in the draft EIS.

2.10.6 Project Alternatives

The Meliadine Gold Project, as proposed, is a medium-term, medium-sized mining operation with an estimated life of 16 years for construction, operations and closing. To forgo the building of the mine would be to lose a minimum of 8,000 person-years of employment, and business and economic development in the Kivalliq region would suffer accordingly.

2.10.7 Project Schedule Alternatives

Scheduling any project in the Arctic is tightly constrained by shipping seasons and by weather windows for certain types of outdoor work. The project schedule therefore offers few possibilities for alternatives. If slippage occurs at any point in the schedule, there will be potentially lengthy and disproportionate delays in planned activities.

2.11 Project Operations

The Meliadine Gold Project will include both open-pit and underground development and mining. The combination of the two types of mining is necessary to obtain the best possible economic return for the project. The open pits will be located at the Tiriganiaq, F Zone, Wesmeg, Pump, Wolf and Discovery deposits. Underground mining will initially take place at the Tiriganiaq deposit, with the possibility that it could also occur at Wesmeg and F Zone deposits, subject to further exploratory drilling and the results of the feasibility study. In fact, underground mining cannot be discounted at any of the deposits as they remain relatively unexplored at depth.

The expected tonnes of overburden, waste rock, and ore for the various areas to be mined are provided in Table 2-5.

Table 2.5 Overburden, Waste Rock and Ore Produced over the Mine Life

Ore processing rate	6,500 tonnes per day	15,000 tonnes per day
Mine Life	10 years	10 years
Ore processed	24 million tonnes	55 million tonnes
Ore from open pits	14 million tonnes	40 million tonnes
Ore from Underground	10 million tonnes	15 million tonnes
Open pit strip ratio	14	10
Total Waste from open pits	200 million tonnes	400 million tonnes
Total Waste from Underground	None, the underground will consume waste rock	

2.11.1 Mine Production Schedule

The ore from the open pits will be trucked to the crusher stockpile; underground ore will be fed by shaft and/or ramp and/or conveyor. The economical cut-off grade will be based on the price of gold and operational parameters. Mineralized material below the cut-off grade will be stockpiled for possible processing in the later years of operation.

The schedule for open-pit and underground mining will be better defined through the feasibility study. Predevelopment of the underground workings and the stripping of overburden and waste rock at the Tiriganiaq deposit will commence prior to the plant production. The mine is expected to have a production life of 10 years.

2.11.2 Underground Mining

The underground mining of the Tiriganiaq deposit will be the most important component of the proposed Meliadine Gold Project. Deposits of this geological type commonly extend to depths of between 1,500 and 3,000 metres in mines around the world, and current information seems to point to the open-ended potential of this deposit. It is expected that additional underground exploration work will be conducted as the production and extraction of existing mineral reserves take place. Due to the different widths and characteristics of the various gold-mineralized surfaces in the underground mine, two different underground mining methods are envisaged:

- Mechanized cut-and-fill mining for narrower, more complex zones; and
- Longhole/blasthole mining for larger, thick ore horizons.

Work on the details of the underground program is continuing, and refinements to the mine layouts and schedules are expected as part of the feasibility study.

Access to the underground mine will be by way of a portal and/or a shaft located close to the mill. Although the existing portal will be abandoned, as it is within the footprint of the open pit, the larger part of the existing ramp will continue to be used when mining commences. The portal and ramp were designed to production standards, at 5.2 metres high and 5.2 metres wide. Details will be provided in the draft Environmental Impact Statement.

In order to mine and extract sufficient tonnages for daily mill requirements, mining will take place on multiple levels, on multiple working faces. Scoop tram and truck operators will remove waste rock and ore, and transport the ore to the surface or a silo underground. The waste rock will be dumped in mined-out areas or—if in excess of the underground capacity at the time—will be hauled to the surface and placed in a waste-rock management area. The equipment used in the underground mining operation will be substantially the same as that used in the mine's development, and is listed in Table 2.3.

Consideration is being given to the idea of using paste fill as backfill in mined-out stopes and as fill in mined areas. The paste would be generated from tailings and mixed with cement as part of the final process in the mill. An evaluation of this backfilling methodology will be carried out under the feasibility study. Special attention will be paid to the ability to move the paste successfully in a zone of continuous permafrost.

Another alternative being evaluated for these areas is cemented rockfill, in which waste rock is supplemented with cement in order to increase ground stability.

Early underground mining will be in the zone of continuous permafrost, which extends to depths of approximately 350 to 450 metres below surface. Since mining may extend below the permafrost in later years, the hydraulic conductivity of the bedrock below the permafrost is being tested, and a hydrological model for the deep groundwater will be developed for the project. Details will arise from the feasibility study and be provided in the draft EIS.

2.11.3 Open-Pit Mining

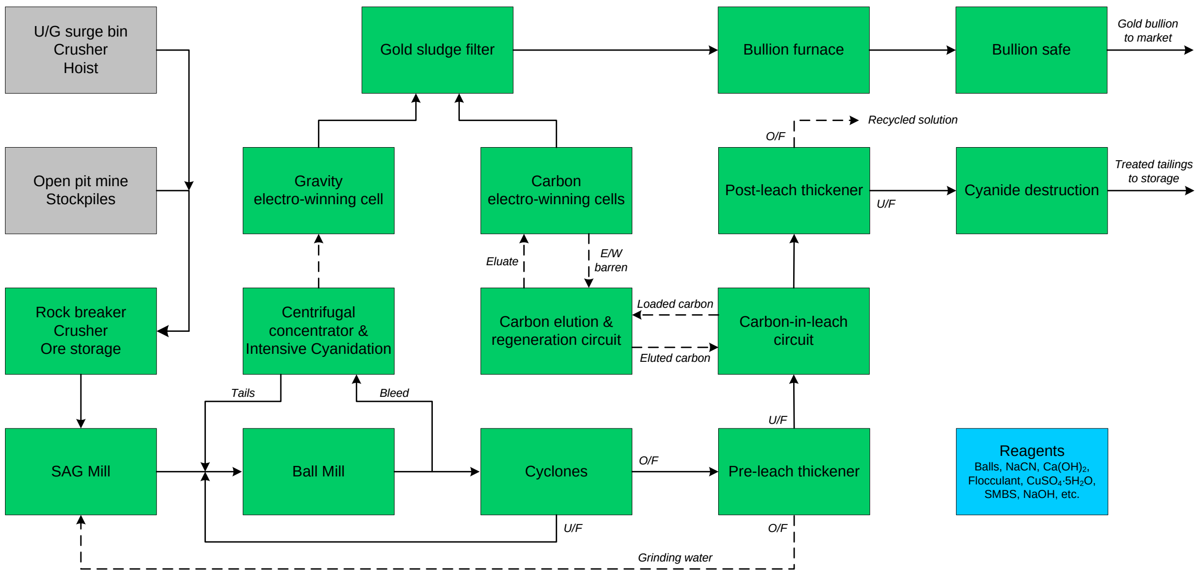
Conventional surface-mining methods will be used at all six deposit sites. Frozen overburden, ore and waste rock will be excavated by drilling and blasting in benches. Backhoe and shovel-type excavators will load material onto trucks. These will haul the material to the crusher stockpile or waste-management area.

The mining sequence for the open pits will be optimized in the feasibility study, which is expected to be completed in 2012.

2.11.4 Ore Processing

The Meliadine Gold Project will use a conventional milling and gold-recovery process. The process involves a series of sequential steps consisting of crushing; grinding; gravity separation of free gold; cyanide leaching; and gold recovery. Since feed to the mill will be provided from several distinct ore bodies, it is likely that the metallurgical response could vary with the ore type. Variability testing of material from each deposit is therefore required to fully understand the implications for overall plant recovery; testing will be investigated as part of the feasibility study. A schematic outlining the preferred ore-milling and gold-extraction process is illustrated in Figure 2.7.

Figure 2.7 Preliminary Block Diagram of Gravity-Flotation-Cyanidation Flowsheet



Ore from the open pits and underground will be blended and fed to the crushing circuit. The mill rate will be determined by the feasibility study; the mill will process between 6,500 to 15,000 tonnes per day.

The ore will be crushed in the primary crusher and fed by conveyor to the covered ore stockpile. It will be reclaimed from the stockpile and fed via conveyor belt to the grinding circuit, where it will first be reduced to a sand-sized consistency in a semi-autogenous grinding (SAG) mill. This will be followed by secondary grinding in a ball mill, which will reduce the rock to a fine slurry. The target grind size for cyanidation should be 80 per cent passing 105 µm, pending results of the feasibility study.

An alternative crushing/grinding circuit configuration—in which the SAG mill is replaced by a secondary crusher and high-pressure grinding rollers (HPGR)—is also being considered; This option has the potential to reduce the mill's overall power consumption, but it depends on the amenability of the ore to this form of processing. The final choice of method will depend on the recommendations of the feasibility study.

Tests of gravity-recovery methods indicate that gold is amenable to recovery in a centrifugal concentrator, and a gravity-recovery circuit is therefore included in the flowsheet. It is expected that about 30 per cent of the gold will be recovered in the gravity circuit; the precise proportion will be ascertained in the feasibility study. Gravity concentrate will be subjected to intensive cyanidation in a batch inline leach tank, followed by electrowinning to produce a gold sludge suitable for smelting.

The final product from the grinding circuit will go to a thickener to increase pulp density prior to cyanide leaching. The overflow water will be recycled back to the grinding thickener. Underflow from the thickener will go to two preaeration tanks in series, followed by cyanidation and carbon adsorption in a carbon-in-leach (CIL) circuit. The selection of a CIL circuit over a carbon-in-pulp (CIP) circuit was made due to the presence of carbon in the ore which, in previous test work, showed preg-robbing properties. The extent of preg-robbing and the final circuit configuration in terms of CIL versus CIP and the optimal number of stages will be ascertained by the feasibility study.

Loaded carbon will be stripped of gold in a pressure Zadra-type process, and the gold-bearing solution will be pumped through an electrowinning cell where gold will be recovered on steel-wool cathodes. Gold sludge from the cathodes will be collected, dried and smelted in a furnace to produce doré bars. The bars will be placed in a secure storage vault pending shipment.

Cyanidation tailings will go to a thickener to recover cyanide solution, which will be recycled within the mill. Tailings containing residual cyanide will pass through cyanide destruction before being discharged to the tailings impoundment area. Cyanide destruction should employ the conventional SO_2/air process to oxidize and destroy it. The final reagent additions and circuit configuration for cyanide destruction will be determined by the feasibility study. It is currently assumed that the final tailings will be transported directly to the impoundment area, but the possibility of filtration or paste thickening is also being considered, with final selection pending the results of the feasibility study.

Services will be required for plant operations, which include reagent systems, water systems and air distribution systems. The expected reagent systems required are listed below in Table 2.6 and each will consist primarily of a mixing tank and holding tank. The steel balls will be added directly to the grinding circuit and the activated carbon directly to the carbon regeneration circuit, while the refinery reagents will be handled directly by the refiner. The final list of mill reagents and details of the circuit configuration will be determined by the feasibility study. The water systems required in the mill are detailed in section 2.13.1. Air compressors will be required to provide air for the cyanidation and cyanide-destruction circuits, as well as for crusher dust control and instrumentation air. The configuration of the air systems is dependent on the final process flowsheet and will be described in the feasibility study.

Final details about ore processing will follow the completion of the feasibility study and be presented in the draft EIS.

Table 2.6 Expected consumables required for the mill

Chemicals	Circuit	Expected Consumption (kg/t)
Steel balls	Grinding	1.5
Flocculant	Grinding	0.04
Lead Nitrate	Carbon-in-Leach	0.35
Cyanide	Carbon-in-Leach	0.6
Lime	Carbon-in-Leach	2.5
Activated Carbon	Carbon-in-Leach	0.03
Sodium hydroxide	Elution-Regeneration	0.25
Chlorhydric acid	Elution-Regeneration	0.7
Antiscalant	Plant general	0.035
Borax	Refinery	0.005
Sodium nitrate	Refinery	0.005
Silica	Refinery	0.005
Sodium metabisulfite	Cyanide destruction	2
Copper sulphate	Cyanide destruction	0.075

The above materials will be transported to the site by surface means in accordance with the applicable Transport Canada regulations. A staging point will be maintained at Rankin Inlet. Materials will be unloaded, moved and loaded by forklift. Employees engaged in handling these materials will be fully instructed in WHMIS and safe handling procedures. At the mine site, these materials will be stored within the mill complex and/or in the mill warehouse. These materials will be kept in their original containers until actual use.

2.12 Tailings, Ore Stockpiles and Waste Rock/Overburden Management

Final quantities of tailings, stockpiles and waste rock/overburden will be determined in the feasibility study and will be detailed in the draft Environmental Impact Statement. Preliminary estimates in tonnes are provided in Table 2.7 for all six deposits over a 10-year mine life.

Table 2.7 Preliminary Quantities of Ore and Waste (tonnes)

Ore production rate (tonnes per day)	6,500	15,000
Total ore processed	24,000,000	55,000,000
Open pit ore	14,000,000	40,000,000
Underground ore	10,000,000	15,000,000
Open pit strip ratio (%)	14	10
Total waste rock from pits	200,000,000	400,000,000
Total waste rock from underground	Negligible	Negligible

Between 6,500 and 15,000 tonnes of tailings will be produced daily, with a solids composition to be determined by the feasibility study (see Section 2.10.3 for more details). Depending on the option selected, tailings could be piped to the tailings impoundment area with water reclaimed from the impoundment to the mill, or they could be dewatered at the mill site and transported by pipe, truck or conveyor to the tailings impoundment area. A portion of the tailings could also be used as underground paste backfill for ground support.

Ore will largely be delivered directly to the crusher stockpile in order to avoid the duplicate handling of material. Crushed ore will be stockpiled under a dome to minimize dust emission. A run-of-mine (ROM) stockpile will be located near the mill to be used if necessary. Low-grade stockpiles are planned for the Tiriganiaq area and could also be present at F Zone and Discovery.

Waste rock will be used for site construction as much as possible, with the excess going to the waste-rock management areas. Analyses of the waste rock for acid generation potential has been largely completed for Tiriganiaq, F zone and Discovery, while the same testing for Pump, Wolf and Wesmeg is about to get underway. The results of the testing will be presented in the draft EIS.

Overburden will be stripped from the open pits early in the development of each deposit and will be used for construction wherever possible. Studies of the Tiriganiaq till overlying the proposed open pit are under way to determine how much can be used for construction. Most samples of waste rock and all samples of surface soil indicate that there is no potential to generate acid rock drainage (ARD). This finding generally stems from the rock's low sulphide content and its excess buffering capacity, because of the presence of reactive carbonate minerals. However, on occasion, the till material has been found to leach some trace metals in concentrations that exceed the Canadian Water Quality Guidelines for the protection of freshwater aquatic life.

Tests are under way to further evaluate the potential of this waste rock and till material for ARD and metal leaching. The results will be included in the draft EIS. Any materials shown to have excessive metal leaching would be placed in the waste-rock management areas.

2.13 Site Water Management

2.13.1 Water Use

A fresh-water intake will be placed in Meliadine Lake where the water depth exceeds five metres. It would be designed and built to avoid any entrainment or impingement of fish, to minimize the impact on fish habitat, and so that it would be granted approval under the Navigable Waters Protection Act.

Water will be used for domestic purposes, mining and mineral-processing. Fresh water will be pumped from Meliadine Lake to a fresh/fire water tank in the mill area. From there it will be distributed through a pressurized system to the potable-water treatment plant and to the mill. A separate firefighting main will also be kept under pressure.

Conventional treatment using sand filters, ultraviolet disinfection and/or chlorination are expected to be used for potable water. Potable water will be distributed throughout the camp, where it will be used for domestic activities, and the process plant. In the mill complex, it will be used in the change rooms and washrooms. Most of the water used in the mill process will be wastewater that is continuously reclaimed and will be complemented with fresh water only as required. The treatment of fresh water is not necessary for the mill process; in the mill, water will be reclaimed by dewatering the tailings or reclaiming wastewater from the tailings impoundment area. Arctic conditions suggest that it would be desirable to retain the maximum amount of water possible in the mill complex. This issue will influence the ultimate selection of a tailings disposal method in the feasibility study.

Dedicated and pressurized water lines for firefighting will run from the fresh-water tank to distribution points in the mill and the accommodation complex. Water for firefighting will take priority over all other uses; the lines delivering it will be greater in diameter than the potable-water lines, and will be at a higher pressure. Sprinklers will be located in accordance with building codes.

Water use will be detailed in the draft Environmental Impact Statement.

2.13.2 Water Management

Water management at the Meliadine Gold Project will ensure that any water directly affected by mine operations is controlled, tested and released to the receiving environment only after meeting licence/Metal Mining Effluent Regulation limits. The exact locations of water-collection sumps at the Tiriganiaq, F Zone, Pump, Wolf, Wesmeg and Discovery mining areas will be known once details of the locations of the various management areas and pits are determined by the feasibility study. The sumps will be sized to hold water running off the waste rock/overburden management areas and the low-grade ore stockpiles, as well as any water pumped from the open pits. Water samples will be collected from the sumps and if licence/MMER conditions are met, the water will be released to the environment. If not, the water will be treated and held until it meets licence/MMER limits.

Depending on what method is used to manage the tailings, the tailings pond could be used as a water-management pond, or another area could be selected to manage surface waters and surplus wastewater from the mill and Tailings Impoundment Area. This water would be tested and if necessary, treated, before release to the environment. It would be released downstream of Lake B7 and pass through a series of small lakes that would serve to polish the effluent before it reaches Meliadine Lake to the southwest.

Underground mining will eventually extend below the permafrost. Studies have been initiated to estimate the potential quantity and quality of water that may be encountered below the permafrost and how it will be handled.

Wastewater from the accommodations complex will be treated in a sewage treatment plant. The design of the treatment system will be based on a flow rate of 200 litres per day, per worker. A number of site-specific parameters must be accounted for in the design of a sewage treatment facility. These include the proximity of the system to wastewater inputs, the anticipated influent characteristics (i.e., the quality and quantity of the wastewater), the estimated site conditions (i.e., the number of workers), the effluent requirements, and the maximum and minimum ambient temperatures. The sewage treatment plant for the camp will be designed to meet the Nunavut effluent guidelines for wastewater discharge and/or Nunavut Water Board licence requirements. It will be housed in a prefabricated, modular structure adjacent to the camp with the treated water pumped to a holding pond or the Tailings Impoundment Area before release to the receiving environment.

2.14 Waste Management

Site operations will use all available opportunities to reduce, reuse and recycle waste materials. Where this is not possible, waste materials will be disposed of in accordance with best practices and applicable regulations. Inert, non-recyclable, non-combustible solid waste will be disposed in an on-site landfill, which will be located in a waste rock management area.

The mine site will include a dedicated waste-management building in accordance with current practice at other northern mines. This building will be separate from the accommodation and mill complexes and will be used for waste processing. The building will house a high-efficiency, dual-chamber, controlled-air industrial incinerator for all combustible, non-hazardous wastes. The unit will be diesel-fired and its exhaust will be located downwind of the facilities. Other equipment in the waste-management building will include a barrel crusher, a plastic shredder, drip trays for oil filters and paint cans, and a means of packaging hazardous wastes. Hazardous wastes will be packaged for shipment off-site to registered hazardous management facilities in southern Canada. Wastes that can be handled locally or on-site will be managed daily. The accumulation of wastes will be avoided through an active waste-management program.

Acceptable waste for incineration will be:

- Solid waste (mainly organic matter, including food, food containers and wrappings contaminated by food);
- Sewage sludge (mainly generated during the construction phase; during the mine’s operation, sludge may be disposed of in a different manner);
- Used oils, including flammable or combustible petroleum hydrocarbons, and plastic products.

The waste-management building will be managed and operated by workers after proper training. They will be issued appropriate personal protective equipment, including the means for decontamination, as applicable.

A Waste Management Plan will be developed that will detail how non-hazardous and hazardous waste will be identified, handled and properly disposed of at or from the mine site. This plan will build on the existing plan under water licence 2BB-MEL0914 and will be included in the draft Environmental Impact Statement.

2.15 Bulk Materials, Fuel and Explosives Management

2.15.1 Bulk Materials

The Meliadine project will order a year's supply of bulk materials from suppliers each spring. Total tonnage may be between 100,000 and 200,000 tonnes per year, including fuel.

Bulk materials, other than diesel fuel, will typically include mill reagents, grinding balls, drill steel, rock-support materials, fabrication steel, explosives, lubricants, tires and non-perishable foods. Upon arrival in Rankin Inlet, these materials will be trucked to the mine site.

2.15.2 Fuel

Current estimates suggest the proposed Meliadine mine would need fuel storage capacity in Rankin Inlet for up to 100 million litres. Fuel will be shipped to Rankin Inlet in barges and/or vessels, transferred to the tank farm, and trucked to the mine site year-round.

2.15.3 Explosives

The mine's annual consumption of explosives is estimated to be between 7,000 and 14,000 tonnes, two-thirds of which will be Ammonium Nitrate - Fuel Oil (ANFO). This will be shipped as bulk ammonium nitrate prill. Bulk ammonium nitrate is inert and will not require special handling or storage during transit.

Ammonium nitrate will remain in its shipping containers until needed. A building will be constructed on the site in which to manufacture explosives. The potential location is shown in Figure 2.3. The building would be built to the specifications dictated by applicable laws and regulations.

The balance of the explosives and blasting accessories will be stored in a secure magazine(s). These items will be cartridged slurries (Hazard Classes 1.1D and 1.5D), detonating cord and detonators. All handling, transport, storage, manufacture and use of explosives will be subject to federal approval under the Explosives Act, and the Nunavut Mine Health and Safety Act.

2.16 Safety

AEM recognizes that the Meliadine project involves activities that may pose hazards, and the company places the utmost priority on safety. If local services are used at the mine, their safety requirements will match those of the mine. All individuals will be trained to ensure that they:

- Understand their job responsibilities;
- Understand the hazards of their jobs and how to safeguard against them;
- Know how to use safety equipment;
- Know how to respond to emergency situations; and
- Wear appropriate personal protective equipment.[9]

Emergency supplies and equipment will be kept at the workplace and select members of each work crew will be trained in first aid.

The contractor for the underground exploration program developed a Mine Rescue Plan. Comaplex purchased the mine rescue equipment from the underground contractor in the fall of 2008. This equipment is still on the site. A comprehensive mine rescue plan was developed and submitted to the government of Nunavut to comply with its mine safety legislation and regulations before the start of the underground exploration and bulk-sampling program in May 2011. The rescue plan will be updated before underground mining commences, once regulatory permits are in place.

A gate will be placed on the all-weather road just outside the mine area. Public access to the mine and related facilities will be restricted to authorized personnel. Unauthorized visitors will be escorted off the site. When members of the public are authorized by the company to visit the site, they will be given a safety orientation and personal protective equipment. During their visit, they will be accompanied by site personnel at all times. Signs at the entrance restricting access to the site will be posted in English and Inuktitut. Signs will indicate parking and reception areas for visitors. Safety policies and procedures will be further developed in the draft Environmental Impact Statement.

2.17 Project Closure and Reclamation

2.17.1 General Approach

The Meliadine Gold Project's reclamation objectives are to minimize negative environmental effects of mining wherever practicable, to practice progressive reclamation, and when mining operations are closed, to return areas that have been negatively affected to productive and lasting use by wildlife and humans. Reclaimed areas will be chemically and physically stable, and should ultimately support the same functions as the surrounding, undisturbed land. Because of the proximity of the mine site to

[9] Personal protective equipment includes, but is not limited to: safety glasses; safety vest or reflective clothing; hard hat; safety boots and heavy-duty work gloves. Specific tasks may require additional, special-purpose equipment, such as face masks or safety lanyards and harnesses.

Rankin Inlet, particular attention will be paid to ensuring that reclaimed areas are safe for future traditional use.

A practical, cost-effective approach will be central to the reclamation and closing of the project's properties. AEM's intent is to keep climate change in mind, and to leave the reclaimed properties in such a way that no long-term care and maintenance will be required. A Reclamation and Closure Plan will be developed and then updated and revised on a regular basis; ultimately, it will evolve into an interim plan during the active mining phase, becoming a final plan when the mine closes. Each iteration of the plan will provide more detail and greater certainty regarding the sequence of events involved in reclamation and closure. The Reclamation and Closure Plan will also address temporary shutdowns, times when the mine is placed in care and maintenance. This plan will be presented in its initial form in the draft Environmental Impact Statement.

Progressive reclamation efforts will be used throughout the life of the mine to reclaim areas that are no longer needed for mining. In general, disturbed land surfaces will be stabilized, thereby promoting natural revegetation. This work will be undertaken in accordance with best practices in the reclamation field, and will ultimately advance the return of former mining areas to natural conditions, while reducing the overall cost of reclamation. In a similar manner, buildings, obsolete equipment and surplus chemicals will be removed as soon as they are no longer needed.

Hazardous waste and contaminated soil will be managed continually; consequently there will be little to no accumulation of such wastes during the operation of the mine, subject to seasonal shipping considerations.

A site-monitoring program will continue after the mine is closed, but the emphasis will shift from mining operations to the success of reclamation activities and the recovery of affected areas.

2.17.2 Reclamation of Quarries, Roads and Waste Rock/Overburden

A geochemical study of the waste rock/overburden from the Tiriganiaq, F Zone and Discovery pit areas by the company's independent consultant, Golder Associates, indicates that there is little to no likelihood of acid rock drainage. Waste rock and overburden from the Pump, Wesmeg and Wolf deposits are now being tested to determine their potential to leach trace metals over time. Studies at diamond mines in the Northwest Territories indicate that waste-rock management sites remains frozen after the rock is placed there; because these sites are elevated above the surrounding terrain, they become super-cooled to temperatures well below those prevailing in the near-surface permafrost. Precipitation and melting snow is captured in the waste-rock management areas with little leachate evidenced at the toes. As a result of this super-cooling and lack of runoff, there is only a shallow active layer of overburden during the summer, and the larger part of the waste rock/overburden remains physically and chemically stable.

Parts of the overburden that are not suitable for construction purposes would be included in waste-rock management areas. At the Tiriganiaq site, overburden consisting of glacial till cannot, in large part, be used for construction, while some of the overlying esker material can. Placing the waste rock with an eye on reclamation will ensure its stability, reduce its visibility and control runoff erosion. Sumps will be removed and dikes breeched to allow natural drainage. Diverted watercourses will be re-established, and culverts in roads to be reclaimed will be removed to allow the passage of fish.

Once mining is complete, the open pits will be allowed to fill with water. AEM is also investigating the possibility of backfilling mined-out open pits, partly or totally, with overburden and waste rock. If practical and if there is time, this approach could help to minimize the final footprint of the operation. Depending on the volume of a given pit, it will take some years to fill with water. Water quality will be monitored throughout this time, and when the pit is full, to ensure it meets standards for receiving water.

Preliminary plans suggest that the mine's landfill site will be placed in a waste-rock management area. Only non-hazardous, solid materials would be deposited there, and would be covered daily. Materials not suitable for the landfill would be handled in the waste-management building. No reclamation of the landfill will be required.

All roads will be reclaimed unless it is the express desire of the residents of Rankin Inlet that they be left in place to provide access to cabins and other traditional pursuits in and around Meliadine Lake. The spur roads to the satellite deposits would be reclaimed as required. The timing of road closures will be dependent on post closure monitoring for the site.

2.17.3 Reclamation of Tailings Impoundment Area

The tailings impoundment area will be in use until the end of mining production. Assuming that a portion of the Lake B7 basin is used for tailings deposition, the removal of water in that portion will cause the existing talik to freeze, because the lake bed will be exposed to the air. Tailings would be deposited there throughout the life of the mine, and this tailings mass would ultimately freeze. During reclamation, the tailings will be covered by waste rock of sufficient thickness that the active layer will remain in this cover material, ensuring that the tailings mass beneath it remains permanently frozen.

The reclamation of the tailings facility will be timed to coincide with the final shutdown of the mill. As mining nears completion, the progressive reclamation of the tailings will be timed so that as much of the management area as possible will be covered by the time the last of the tailings are delivered to the site. Monitoring will also be undertaken to document the efficacy of the progressive reclamation.

Any surface infrastructure aimed at transporting tailings (i.e., a pipeline, conveyor, or other method) will be removed. The service road to the tailings area will remain, to allow water-quality monitoring as part of the Aquatic Environmental Effects Monitoring Program.

2.17.4 Reclamation of the Mine Site

The reclamation of the mine’s infrastructure will proceed in stages, beginning shortly after production begins, with the removal of any unused infrastructure.

Upon the completion of milling and ore processing, the mill and all processing circuits will be dismantled and scrubbed to recover all remaining gold, which will be smelted as the final gold produced at the Meliadine mine. All wash-down water will be directed through the cyanide destruction plant before being discharged.

Site buildings will be cleaned, dismantled to the greatest extent possible, and—because of their proximity to Rankin Inlet—offered for sale to the community. The last building to be reclaimed will be the waste-management building. All foundations will be leveled and, along with concrete floors, will be covered with waste rock. A dedicated closure landfill will be established in a waste rock management area for non-hazardous demolition material.

Specialized mining and milling equipment with residual value will be sold and removed through Rankin Inlet by sealift. General equipment such as graders, dozers and loaders required for the reclamation work will be the last to go, and will be offered to the community for purchase or salvage. Maximum use will be made of the underground to dispose of all inert, non-salvageable equipment and materials. These will be cleaned of hazardous materials such as oil and grease before being moved underground for final disposal. All the openings to the underground will be permanently sealed and made inaccessible.

Any fuel remaining in the tank farm will be pumped out and moved to a fuel tank in Rankin Inlet. The tanks will be disassembled and moved to Rankin Inlet for re-assembly, or placed in the dedicated closure landfill, the underground or the open pits. If spilled fuel is present in the lined and bermed tank-farm area, it will be collected from the sumps and burned in the incinerator. Once the soil in the tank farm meets soil quality requirements, it will be reclaimed, and the berms will be leveled.

All chemicals, mill reagents, explosives and hazardous materials still in unopened packages when the mine closes will be shipped south for resale or reuse. Unpackaged or waste materials will be shipped for recycling or disposal in a licenced landfill. The operation of the waste-management building throughout the life of the mine, together with the annual removal of surplus chemicals and hazardous waste and the immediate cleanup of spilled fluids, will minimize the quantity of material requiring handling, packaging and removal when the mine closes.

Pilings that support the accommodation complex will be cut off at or below ground level. All pipelines will be removed and service roads scarified.

2.17.5 Off-Site Reclamation

In Rankin Inlet, the laydown area and fuel storage will be offered for sale to the town, local businesses or government agencies. If there are no interested parties, reclamation would be conducted as for the main site.

SECTION 3 EXISTING ENVIRONMENT AND BASELINE STUDIES

3.1 Overview of Project Environmental, Socio-economic, and Traditional Knowledge Studies

The Meliadine Gold Project will interact with the natural and human environment of the area in both time and space. The natural and human environment has been extensively studied since 1997 and an overview of this work is provided here. The years when studies were carried out are noted in Table 3-1. No substantial work was done on the property between 2002 and 2004.

Table 3.1 Environmental, Socio-economic and Traditional Knowledge Studies

Baseline Studies	1997	1998	1999	2000	2001	2005	2008	2009	2010
Aquatic Invertebrates & Algae	√	√							
Water Quality	√	√	√	√			√	√	
Sediment Quality		√		√					
Hydrology[1]	√	√	√	√			√	√	
Geochemistry - Acid Base[2]		√			√	√	√	√	√
Fisheries	√	√	√	√	√		√	√	
Wildlife	√	√	√	√			√	√	
Vegetation & Soil		√					√	√	
Climate[3]	√	√	√	√	√	√	√	√	
Traditional Knowledge	√		√						√
Heritage Resources		√					√		√
Socio-economic	√		√						√
Public Consultation	√	√	√	√			√	√	√

[1] Regional hydrology studies by Water Survey of Canada carried out from 1989-1995
[2] Geochemistry studies in 1998, 2001 and 2005 were not as extensive as studies in 2008 and 2009
[3] Regional climate studies by Environment Canada from 1981 to the present

With reference to Table 3-1, it should be noted that baseline data for air quality and noise were not collected. Before exploration, the area was subject to air emissions only from Rankin Inlet and the global atmosphere. The baseline for air quality and noise will therefore reflect scientific data collected elsewhere under similar conditions. For the baseline indicators for which data were collected, an overview of the natural and human environment follows. Greater detail and a synthesis of all the data collected over the years will be presented in the draft Environmental Impact Statement, as will the identification of valued environmental and socio-economic components. These valued components will be selected through a review of baseline studies; scoping by the Nunavut Impact Review Board; continuing consultation; input from various agencies and the work of focus groups.

The information collected to date about the environment, socio-economic picture and traditional knowledge in the area of the Meliadine project will be used in preparing the draft Environmental Impact Statement. However, further baseline studies are planned to gather more socio-economic information and Inuit Qaujimajatuqangit beforehand. Following the environmental assessment and regulatory permitting processes, it is expected that monitoring will measure and interpret changes to the valued environmental and socio-economic components identified with the project, and report those changes on a regular basis. Additionally, compliance monitoring will be undertaken to ensure that all regulatory limits are met and commitments made are fulfilled.

3.2 Physical Environment

3.2.1 Geology and Mineralization

Six mineral deposits have been defined at the Meliadine property. The Tiriganiaq, F Zone, Wesmeg, Wolf, Pump and Discovery deposits are considered for mining. Detailed surface mapping of the deposits is not possible due to the complete or almost-complete lack of outcrop in the immediate vicinity of the deposits. The geology of the deposits has therefore been interpreted from a combination of drilling information, high-density ground magnetic surveys, and outcrop mapping and channel sampling.

Geologically, the facing-direction evidence suggests that rock layers have been overturned at each deposit, with the older rocks to the north lying structurally on top of the younger ones to the south.

Gabbro dykes and sills of several ages are recognized on the property. The oldest gabbro bodies are contained within the Wesmeg Formation and are interpreted as feeders to the overlying basalt pile. The youngest gabbros commonly cross-cut the second-generation folds in the Sam Formation, and postdate the deformation associated with the gold deposits.

Minor narrow, undeformed lamprophyre dykes are intersected locally and cross-cut all older rock units, including mineralized veins.

All the rocks in the deposit areas are lower to middle greenschist metamorphic grade.

The main targets of exploration at the Meliadine project are mesothermal lode gold and shear-controlled deposits. The six gold deposits defined on the property are vein- and shear-dominated occurrences; these are hosted predominantly in iron formations, fine-grained sediments, and volcanics, either on an east-west-trending splay off the 115 degree trending regional Pyke Fault (such as at the Tiriganiaq deposit), or on structures parallel to the Pyke Fault (such as at the Discovery, Pump, F Zone, Wesmeg and Wolf deposits).

Gold mineralization in these deposits is strongly correlated with shearing and quartz veining. Mineralized lodes are hosted in quartz-vein stockworks, laminated veins and variably sulphidized iron formation; they are in complexly folded and sheared iron formation, sedimentary and volcanic rocks in or near the volcanic-sedimentary contact.

3.2.1.1 Tiriganiaq

The stratigraphic sequence in the Tiriganiaq deposit area strikes east-west and dips to the north at an average of 60 degrees. The orientation of the Tiriganiaq gold deposit is unique on the property; the rock units are aligned for more than three kilometres along what is interpreted as the mineralized shear direction.

Clastic turbidites of the Sam Formation are the oldest (northernmost) rocks. Beneath is the Upper Oxide Formation, a diverse package of iron-rich rocks that includes beds of magnetite, chert, chloritic mudstone, and greywacke. The upper contact with the Sam Formation is occupied by the distinct, laterally consistent “Upper Oxide Iron Formation,” which is easily recognized and traceable across the property due to its high magnetic susceptibility. Further south is the Tiriganiaq Formation of laminated siltstones.

At the base of the Tiriganiaq Formation there is sporadic black argillite, commonly underlying 1000-lode mineralization. The Lower Fault likely formed along this obvious stratigraphic weakness. This fault defines the contact between the Tiriganiaq Formation and the underlying Wesmeg Formation of chlorite-rich massive to pillowed basalts with rare gabbro dykes and interflow sediments. The Lower Fault is the locus of intense late shearing that decreases away from the contact surface, but is more developed in the structural hanging wall. Splay faults emanating from the Lower Fault have resulted in repetition of the stratigraphy in the Tiriganiaq gold deposit.

Mineralization in the Tiriganiaq gold deposit is strongly associated with shearing and quartz veining, which likely developed during the Proterozoic third deformation event. The most intense and consistent gold mineralization is present within both the Upper Oxide Iron Formation and proximal to the Lower Fault in the siltstones of the Tiriganiaq Formation, but minor amounts of mineralization have been reported in all rock types. Areas of intense shearing are ”healed” by quartz veining and there is generally little to no brittle deformation.

Visible gold is common in all lodes in the deposit and is present in quartz veins, pyrrhotite, and along the margins and late fractures of arsenopyrite crystals.

3.2.1.2 F Zone

The stratigraphic sequence in the F zone deposit area strikes northwest-southeast and dips from 45 to 50 degrees to the north.

The host rocks for F zone are chlorite-rich massive to pillowed basalts of the Wesmeg Formation, which are cut by rare gabbro dykes and interflow sediments. Within the Wesmeg Formation are chert-rich and iron-poor rocks of the Lower Lean Iron Formation that consist of metre-scale cherty iron formation units interbedded with centimetre-scale volcanic units. The iron formations that host the gold mineralization vary in thickness from metres to tens of metres. This great thickness is interpreted to be the result of the intersection of an east-southeast-trending iron formation with a dominant east-west-trending structure and a second southeast-trending structure. Plunges of these thick mineralized iron formations vary from steeply northeast to steeply northwest.

Mineralization in the F Zone deposit is strongly associated with shearing and quartz veining within the Lower Lean Iron Formation. Thicker sections with higher gold grades are controlled by the intersection of the east-southeast-trending iron formation with a dominant east-west-oriented structure and a second southeast-trending structure. Plunges of this thickening vary from steeply northeast to steeply northwest, depending on local changes in strike.

Free gold occurs as discrete blebs in pyrrhotite and quartz shears and to a lesser extent along fractures and grain boundaries in large recrystallized arsenopyrite.

3.2.1.3 Discovery

The stratigraphic sequence in the Discovery deposit area strikes northwest-southeast and dips from 45 to 60 degrees to the north.

Clastic turbidites of the Sam Formation are the oldest (northernmost) rocks. As at Tiriganiaq, these overlie the Upper Oxide Formation and its uppermost portion, the “Upper Oxide Iron Formation.” Chlorite-rich massive to pillowed basalts of the Wesmeg Formation form the structural footwall to the sequence, but occur at least 600 metres south of the Discovery deposit. The Lower Fault forms the contact between the Wesmeg and Upper Oxide formations and is interpreted as a basal detachment surface, but in the area of the Discovery deposit it is not exposed and has not been drilled so far. The Lower Fault therefore represents a potential target for Tiriganiaq-style-lode gold-vein zones similar to the 1000-lode.

The Upper Oxide Iron Formation hosts most of the gold mineralization at Discovery. It is strongly folded with most of the thicker and more continuous mineralization following the fold noses, which plunge to the east-northeast at 47 degrees.

Mineralization in the Discovery gold deposit is strongly associated with shearing and quartz veining within the Upper Oxide Iron Formation. The thicker, higher-gold-grade sections are controlled by the noses of Z-shaped folds that trend east-northeast and plunge 47 degrees. In the area of the current mineral resource estimate, at least four of these fold noses have been identified: Pisces, Discovery, Discovery West, and Capricorn.

Free gold occurs as coatings and fracture fillings in large recrystallized arsenopyrite and pyrrhotite grains, and as disseminations in quartz veins and chlorite layers. Trace amounts of sphalerite and chalcopyrite are found locally.

3.2.1.4 Wolf

The stratigraphic sequence in the Wolf deposit area strikes northwest-southeast and dips 70 degrees to the north. The Wolf gold deposit is divided into two areas: the northerly Wolf North is hosted in stratigraphy similar to Tiriganiaq, while the southerly Wolf Main is hosted in stratigraphy similar to F Zone.

Clastic turbidites of the Sam Formation are the oldest (northernmost) rocks. These overlie the Upper Oxide Formation and its uppermost portion, the “Upper Oxide Iron Formation,” which hosts the Wolf North mineralized zones.

Chlorite-rich massive to pillowed basalts of the Wesmeg Formation form the structural footwall to the sequence. Within the Wesmeg Formation are chert-magnetite-chlorite iron formations of the Lower Lean Iron Formation that host the Wolf Main mineralization.

East-west structures intersecting the dominant east-southeast stratigraphic trend may control the gold mineralization at Wolf North and Wolf Main.

Mineralization at the Wolf gold deposit is divided into Wolf North (resembling Tiriganiaq), Wolf Main (similar to Pump and F zone), and Wolf Central. The mineralization is strongly associated with shearing and quartz veining within the Upper Oxide Iron Formation and thus is analogous with the 1100-lode at Tiriganiaq in setting and character. Gold mineralization occurs as disseminated and coarse blebs of gold within sheared silica-replaced iron formation and within coarse arsenopyrite and pyrrhotite concentrations in veins. The other form of mineralization is associated with lode quartz on or near the Lower Fault, which represents the contact between the structurally overlying Upper Oxide Formation and the Wesmeg Formation and is analogous with the 1000-lode at Tiriganiaq. Gold mineralization appears as free gold in laminated and non-laminated quartz veins with lesser concentrations of arsenopyrite and pyrrhotite.

In Wolf Main, as at Pump and F Zone, mineralization is found along the Lower Lean Iron Formation.

3.2.1.5 Pump

The stratigraphic sequence in the Pump deposit area strikes northwest-southeast and dips 50 degrees to the north.

As at F Zone, the host rocks for the Pump deposit are chlorite-rich massive to pillowed basalts of the Wesmeg Formation, which are cut by rare gabbro dykes and interflow sediments. At Pump, there are three types of chert-rich iron formations in the Lower Lean Iron Formation: chert-magnetite-chlorite iron formation, grunerite-cummingtonite-rich iron formation, and sulphide-rich beds in chert-dominated iron formation. Occasional metre-scale ultramafic units are noted in the sequence.

The main structural feature is a kilometre-long Z-shaped fold formed by the intersection of east-west-oriented shear structures and the Lower Lean Iron Formation.

Mineralization in the Pump gold deposit is also strongly associated with shearing and quartz veining within the Lower Lean Iron Formation, with thicker, higher-gold-grade sections associated with east-west shearing. As at the F Zone deposit, the plunges of this thickening vary from steeply northeast to steeply northwest depending on local changes in strike.

Free gold occurs as discrete blebs in pyrrhotite and quartz shears and to a lesser extent along fractures and grain boundaries in large recrystallized arsenopyrite.

3.2.1.6 Wesmeg

The Wesmeg deposit was the target of a dedicated drilling program for the first time in 2010. There appear to be two parts to the deposit: a northern and southern part.

In the northern part, Wesmeg's stratigraphic sequence strikes east-west and dips 65 degrees to the north. This is similar to the east-west orientation of the Tiriganiaq gold deposit (about 400 metres to the north of Wesmeg), where it is interpreted as the mineralized shear direction. This same orientation is observed in the results of a high-resolution magnetic survey over the northern part of the Wesmeg area.

The stratigraphic sequence in the southern part of the Wesmeg area strikes northwest-southeast and dips 50 degrees to the north.

The host Wesmeg Formation is chlorite-rich massive to pillowed basalts and interlayered mafic volcaniclastics are rare gabbro dykes, with some interflow sediments comprising siltstone, mudstone (some graphitic) and minor iron formations. The chert-rich and iron-poor rocks of the Lower Lean Iron Formation consist of interbedded metre-scale cherty iron formation units interbedded with centimetre-scale volcanic and sedimentary units. The iron formation units hosting the gold mineralization at Wesmeg vary in thickness from metres to tens of metres.

Mineralization in Wesmeg is strongly associated with shearing and quartz veining within the Lower Lean Iron Formation, with thicker, higher-gold-grade sections.

Free gold occurs as discrete to coarse blebs, locally disseminated, associated with very coarse to finely disseminated arsenopyrite.

3.2.2 Permafrost

Permafrost underlies all the land and most of the shallow lakes in the mine area. Alterations to the permafrost and the active layer of land will occur with the creation of quarries for granular material and rock, the building of roads, dikes and pads, the storage of waste rock and overburden, and possibly also from any ground disturbance.

Granular-material quarries are normally located in tills and glacial deposits. The removal of granular material causes a shift in the active layer of ground, and can result in the melting of ground ice and the resulting thaw settlement (when thawed areas of ground move or settle). This can result in erosion, the slumping of side slopes in the summer, and an altered landscape that extends beyond the quarry. Rock quarries can also change the active layer, but without the same consequences that are possible from granular-material quarries.

The construction of roads, dikes and pads can result in permafrost moving up into the new structure. This has the positive effect of increasing its stability. In the case of dikes, permafrost has the desirable effect of reducing their permeability. However, as permafrost moves up into the bases of pads and roads, it forms a dam and can result in water ponding against the structure, as well as subsequent changes in vegetation. The same also applies for waste rock and overburden storage areas, where water can also pond. The active layer of ground (that which goes through an annual freeze/thaw cycle) is between one and two metres thick in the project area, depending on the type of ground cover. It is believed that a “through talik” (a type of year-round unfrozen ground) underlies Meliadine Lake and possibly some of the medium-sized lakes, such as B6, B7 and A8. However, all the small lakes and ponds directly overlying or immediately proximal to most gold deposits freeze to the bottom and will not have a through talik.

A sealed sensor cable, for determining the annual soil temperature profile from the surface through the permafrost zone, was placed in drill hole Mel 98-195 in June 1998. This drill hole is close to Lake A54. Permafrost in the area extends to a depth of 450 metres from the surface with minimum temperatures of minus-6 to minus-8 Celsius at approximately 10 metres depth. Permafrost deeper than 10 metres from the surface did not show seasonal temperature variation. Additional thermistors were installed in 2007, 2008, and 2009 at the locations of the proposed tailings dikes, waste-rock management areas, and mill/camp site. Two more thermistors are to be installed in 2011 to monitor the temperature gradient through the bottom of the permafrost transition zone to a depth of approximately 550 metres.

Diamond drilling on the Meliadine property over the years has confirmed that permafrost in the area extends to between 350 and 450 metres vertically below the surface. Drill holes passing through the base of the permafrost have noted on occasion a minor amount of free water entering the drill stem in the permafrost transitional zone.

In the summer of 2009, Golder Associates tested the hydraulic conductivity of the bedrock under the base of the permafrost in Lake B7. A water sample was also obtained for testing, from a depth of 200 metres within the talik and showed a composition of diluted seawater. Test results will be provided in the draft Environmental Impact Statement.

3.2.3 Air Quality and Noise

After the mine is constructed, the noise and air quality at the Meliadine project will be studied as part of a comprehensive monitoring program. Baseline air-quality data will be obtained from existing databases for areas not directly affected by current industrial or community influences in the Arctic. This baseline will serve for comparisons with data collected on-site after the commissioning of the mine.

3.2.4 Climate

The climate of the project area is characterized by short, cool summers and long, cold winters. Brisk wind is common year-round. Precipitation is roughly divided evenly between rain during the short summer and fall (predominantly in late summer), and snow, which can fall in any month, but is most common between October and April. Surface waters are usually frozen by early October and remain that way until early June. The land is usually snow-free by late June.

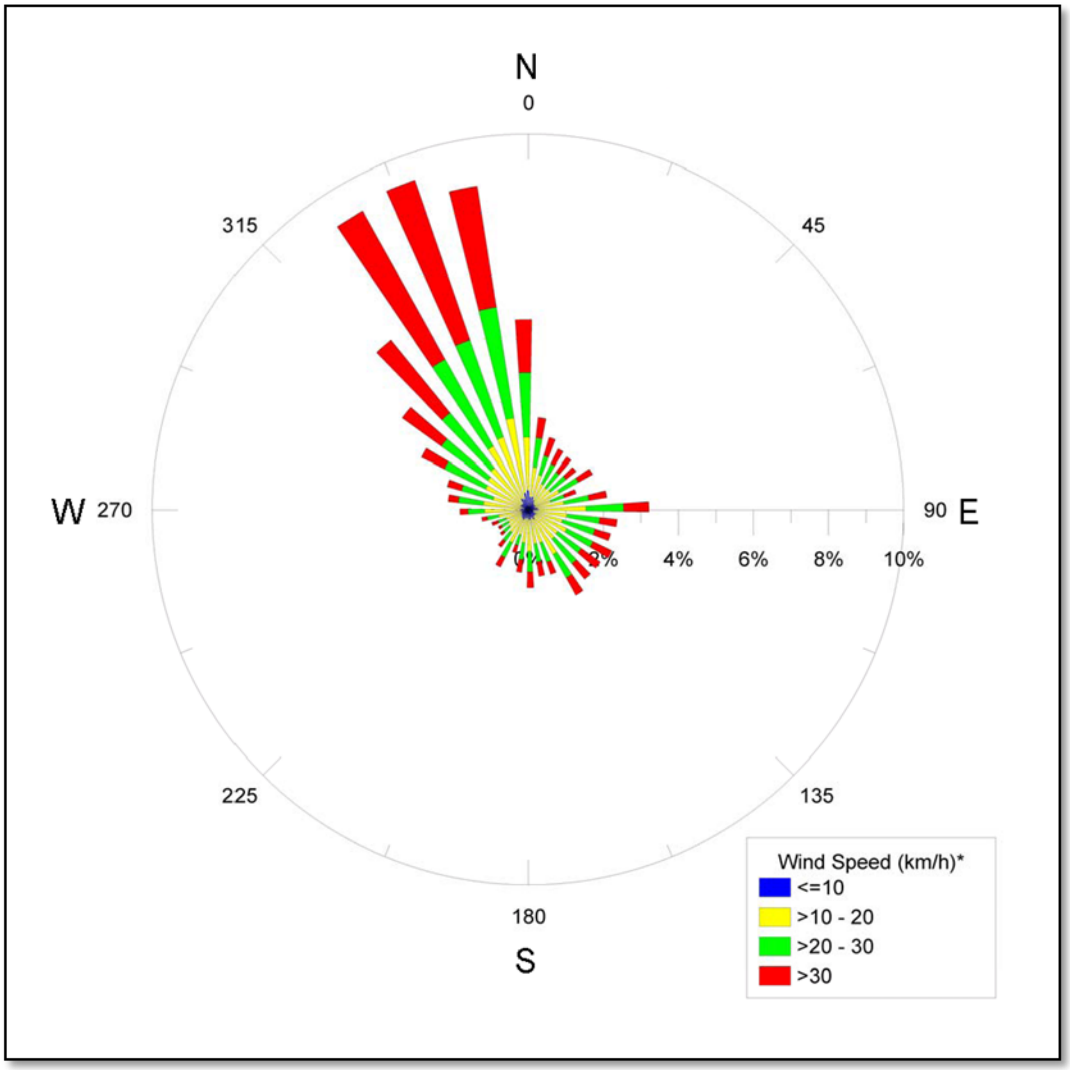
An automatic weather station operated at the Meliadine Gold Project camp from May 1997 through June 2002. It recorded data for the following climate parameters: air temperature; ground temperature at five centimetres deep; relative humidity; precipitation (summer only); wind speed and direction; and net radiation. Historic climate data sets are available for Chesterfield Inlet, 80 kilometres northeast of the camp and Rankin Inlet, 25 kilometres to the south. Due to the proximity of the project to Rankin Inlet, climatic data collected in the hamlet is directly applicable to the project. Mean wind speeds and direction are important considerations in the positioning of various components the mine/mill complex. Figure 3.1 presents a wind rose diagram for Rankin Inlet.

3.2.5 Terrain

The Meliadine project is located in lowlands near the northwest coast of Hudson Bay. The landscape is generally composed of drumlinoid relief on a till plain (Aylsworth, et al., 1984). There are few rock outcrops. Topography is gently rolling with a mean elevation of 65 metres above sea level and a maximum relief of 20 metres. Postglacial uplift still continues.

The terrain in the project area is of glacial and marine origins: most of the area is covered by glacial overburden, marine sediments from Hudson Bay, and lineated glacial eskers. Glacial till soils are generally sandy and silty clay with unsorted aggregate materials. Low-lying areas are poorly drained as a result of a low slope in the landscape, and intermittent streams connect numerous shallow ponds and lakes.

Figure 3.1 Wind Rose Diagram for Rankin Inlet



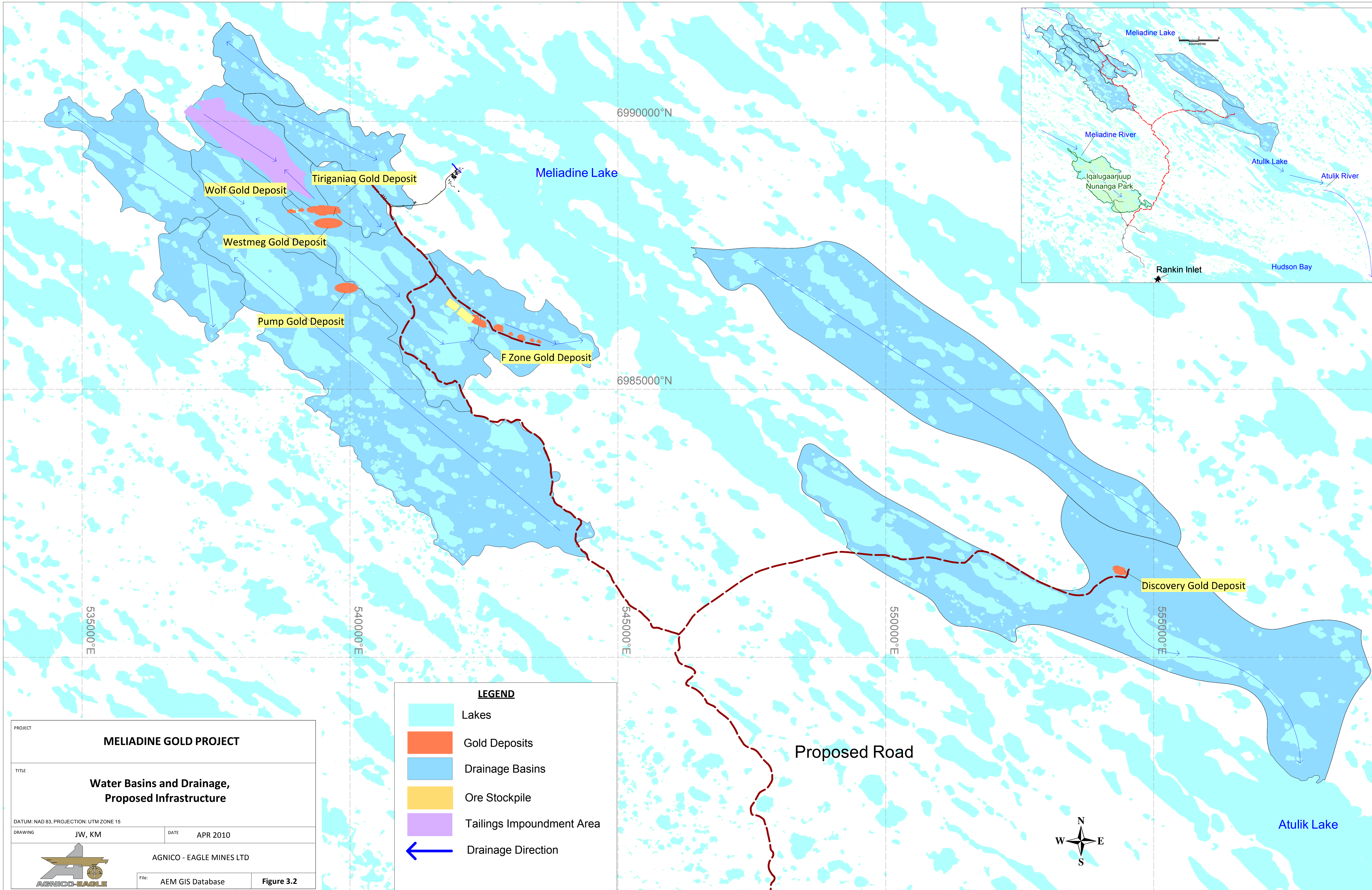
Potential quarries and till borrow pits were identified and investigated (for geochemical and geotechnical considerations), mainly for the purpose of road construction, but also because some are located in the vicinity of the projected surface infrastructure (Golder Associates, 2009b, 2011).

3.2.6 Hydrology

The Meliadine Lake watershed covers 586 square kilometres. The southeast basin of Meliadine Lake, from which water for this mining project would be drawn, is assumed for planning purposes to be isolated from the main lake in late winter, due to the freezing (to the bottom) that occurs across the shallow narrows between the basins. The residual water volume of the basin, not including the two-metre-thick ice, has been calculated at 63.66 million cubic metres.

Hydrometric studies at Meliadine project established stations to monitor water level and flow in order to document the annual hydrologic regime. The results of these studies, from 1997 to 2000 and in 2008, include both “dry” and “wet” years, and show precipitation and runoff patterns similar to those described for other tundra watersheds that have been monitored for many years.

Meliadine Lake has two outlets; the Meliadine River carries about 80 per cent of the flow, and an outlet to Peter Lake on the Diana River takes the balance. The domestic water supply of Rankin Inlet does not come from either of these watersheds. The water-balance studies on the Meliadine system show that the long-term average annual precipitation at Rankin Inlet was 297 millimetres. In a hydrologic year of historic low precipitation (172 mm in 1996-97), the yield was 78 mm or 45 per cent of the annual precipitation; by contrast, in a hydrologic year with historic high precipitation (385 mm in 1998-99), the yield was 239 mm or 62 per cent of the annual precipitation. An evaporation pan showed that summer evaporation was roughly equivalent to summer precipitation, with little if any net input from summer rain. The net input to the annual water balance of the Meliadine River watershed comes from spring runoff, which recharges the lakes and ponds in the sub-basins above Meliadine Lake. The streams draining these water bodies usually run dry after the spring runoff before the late-summer rains. The water basins close to the mine and their directions of flow are shown in Figure 3.2 below.



Meliadine Lake
6990000°N
6985000°N
Tiriganiaq Gold Deposit
Wolf Gold Deposit
Westmeg Gold Deposit
Pump Gold Deposit
F Zone Gold Deposit
Discovery Gold Deposit
Proposed Road
Atulik Lake
535000°E
540000°E
545000°E
550000°E
555000°E
Meliadine Lake
Meliadine River
Iqalugaarjuup Nunanga Park
Atulik Lake
Atulik River
Rankin Inlet
Hudson Bay
LEGEND
Lakes
Gold Deposits
Drainage Basins
Ore Stockpile
Tailings Impoundment Area
Drainage Direction
N
W
E
S
PROJECT
MELIADINE GOLD PROJECT
TITLE
Water Basins and Drainage, Proposed Infrastructure
DATUM: NAD 83, PROJECTION: UTM ZONE 15
DRAWING JW, KM
DATE APR 2010
AGNICO - EAGLE MINES LTD
File: AEM GIS Database
Figure 3.2

3.2.7 Potential for Acid Generation/Metal Leaching

Limited static testing[10] was carried out in 1998 and 2001 as part of metallurgical assessments taking place at the time. In 2005, further static testing was carried out, which added to the basic understanding of the potential for the gold-bearing ore and surrounding waste rock to generate acid and leach trace metals. Generally, test results were conclusive in showing that the host rock types were non-acid-generating; this has been corroborated by more recent testing. The ratios of neutralizing potential to acidifying potential varied from 1:1 to 6:3. The lower values are from ore with a high sulphide content. The sulphide portion of the ore is acid-generating, and the handling of this material will be detailed in the draft Environmental Impact Statement. Shake-flask tests investigated the chemical-leaching potential of the waste rock and mineralized rock; they indicated that some trace metals, in particular arsenic, slightly exceeded the Canadian Water Quality Guidelines for the protection of freshwater aquatic life. Background arsenic levels (1996) are anomalously high on a regional level in soil and water samples collected in the Meliadine region, as shown in Figure 3.3.

In 2008, a detailed geochemical study was initiated using recommended guidelines to characterize the geochemistry of the Tiriganiaq, F Zone and Discovery deposits with a completion date of December 2009. This study obtained a number of samples of waste rock, overburden and ore from each deposit, based on the tonnage of each rock type mined. Static tests and a representative number of kinetic tests[11] will be conducted on this material. Concentrates from large samples of the ore derived from the 2007-2008 bulk-sampling program are also being tested. It is expected that this work will have a bearing on the design of the tailings impoundment area and mill processes.

Testing is continuing in 2011 at the Tiriganiaq, F Zone, Wesmeg, Pump and Wolf deposits. The results of this work will be presented in the draft Environmental Impact Statement.

3.3 Aquatic Environment

3.3.1 Water Quality

The Meliadine River watershed did not host commercial or industrial activity prior to this project. The water quality should therefore be close to pristine, factoring in normal global atmospheric pollutants. Aquatic environment studies for the Meliadine West area have established a comprehensive baseline for water quality in the project area. Parameters for analyses included metals, simple hydrocarbons and levels of exotic airborne pollutants deposited by long-range atmospheric transport. Analytical data include water samples from winter, spring, and summer collections. Data for dissolved oxygen under ice were also collected, and in some cases the concentrations of dissolved oxygen were found to be

[10] Static tests indicate the total potential capacity of the tailings to release metals and acid, by assessing concentrations of acid-generating and acid-neutralizing minerals, sulphur and carbon. Static tests cannot be directly correlated to the natural environment, but provide clues about potential behaviour.
[11] Kinetic tests aim to determine the rates of acid generation and neutralization together with the drainage chemistry over a period of time, usually 20 weeks.

naturally low and below the CWQG guidelines. Additional work is being carried out in 2011 to better characterize the water quality under ice in small lakes surrounding the mining area.

The sampling network also established a “control” area outside the basins of active exploration and future operations.

3.3.2 Fish

Fish populations were studied in Meliadine Lake, the Meliadine River and specific ponds and lakes on the peninsula above Meliadine Lake. Nine fish species were identified: lake trout, Arctic char, round whitefish, Arctic grayling, cisco, three and nine-spine stickleback, burbot, and sculpin. The seasonal distribution of fish was studied by deploying various sampling techniques, including gill nets, seines, backpack electrofishing and minnow traps, as well as a fish fence and fyke nets, which allowed the live capture and release of tagged fish. Radio telemetry monitored the distribution and movement of lake trout and Arctic char, which are important resources for local fishermen. A significant stratification of species was noted between Meliadine Lake and the water bodies on the peninsula above it. The distribution of lake trout (all cohorts) was generally restricted to Meliadine Lake, with occasional individuals captured in the first stream or lake above Meliadine Lake. Round whitefish, like trout, were generally restricted to Meliadine Lake. The remaining species, with the exception of Arctic char, were generally found throughout the basins above Meliadine Lake.

Arctic char are typically anadromous within the study area and their distribution and movements were documented by live capture and tagging with both floy tags and telemetry radios. Like lake trout, they were rarely found beyond the first lake above Meliadine Lake.

A fish fence was set up near the mouth of the Meliadine River in 1997, 1998 and 1999 to capture, measure and tag Arctic char returning from the ocean. A reward program offered $5 per floy tag and $25 per telemetry radio to provide a local incentive for returning tags collected from harvested fish. This program was initiated in the fall of 1997 and was terminated at the end of December 2001. A total of 2,543 Arctic char were tagged; more than 850 tags were recovered from local fishers and 656 tagged Arctic char were recaptured either at the Meliadine fish fence or by net during the normal course of the study. The distribution of Arctic char as shown by telemetry data suggest that Arctic char may spawn at numerous locations in Meliadine Lake. Also, telemetry data show that the migration of Arctic char from Meliadine Lake to Hudson Bay is via the Meliadine River and the Peter Lake/Diana River.

Fish-population studies also included developing baseline data for the quality of fish tissue. Samples of Arctic char and lake trout were collected to assay levels of metals and organic contaminants. Due to lake trout longevity, a data-set for lake trout tissue was taken from Parallel Lake; it is intended to serve as a “control” for fish studies. Figure 3.4 shows where fish studies have been carried out from 1997 to 2009. To date, no species of fish at risk was found in the project area.

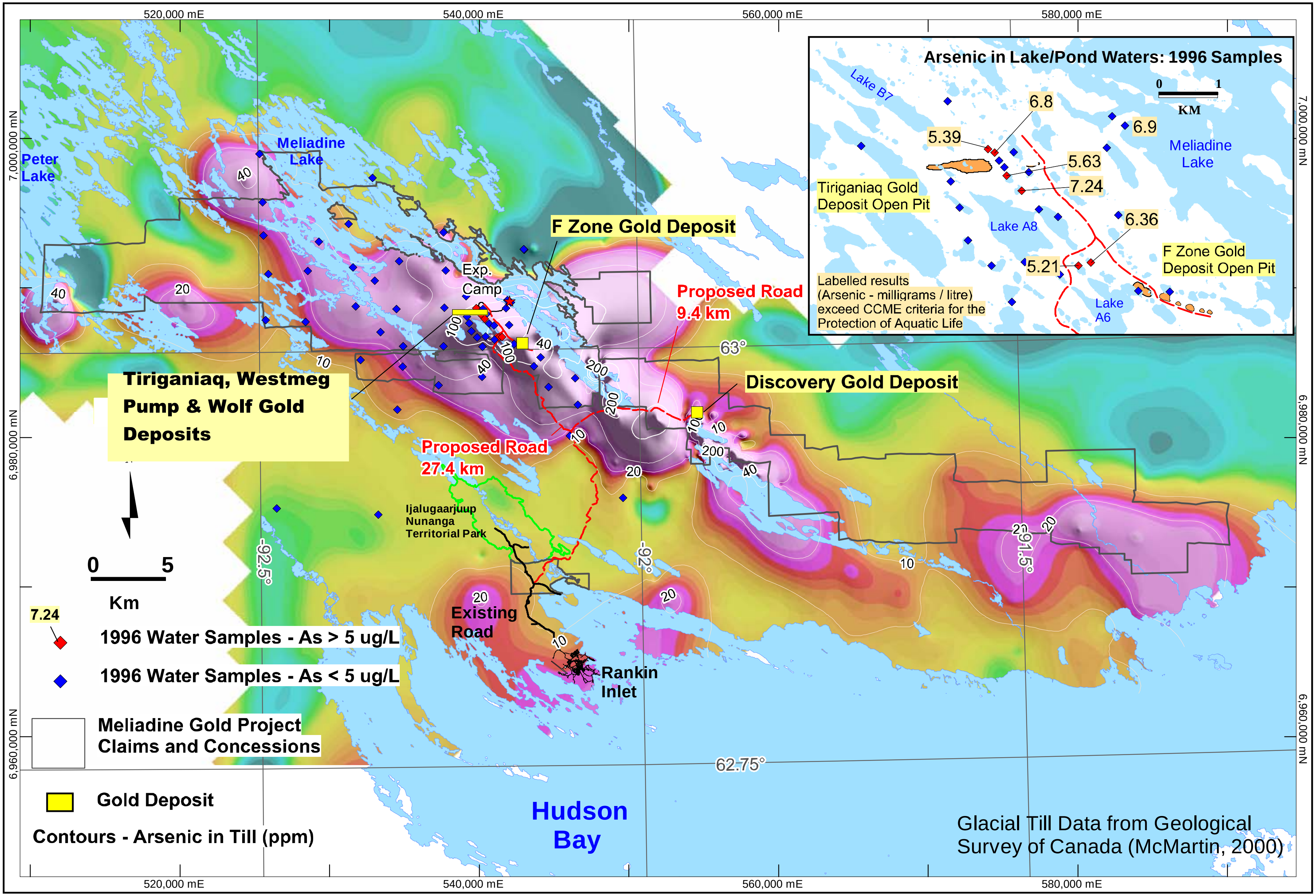


Figure 3-3: Regional Arsenic in Glacial Till and 1996 Lake Water

3.3.2.1 Fish Habitat

Studies of fish habitat focused on the physical and biological parameters of the lakes and streams in the project area. Physical parameter studies documented the shorelines and stream habitats that may be at risk of alteration during the construction and operations of the gold mine, including the water crossings that would be required by an all-weather road from Rankin Inlet to the proposed mine site. The bathymetric profiles of numerous lakes and ponds, including parts of Meliadine Lake, were mapped. Biological parameter studies documented winter oxygen levels in several ponds and lakes, as well as the relative abundance of primary and secondary producers in the aquatic ecosystem of the project area. Although winter oxygen levels in the lakes above Meliadine were very low, several species of fish were found to over-winter there, including Arctic grayling. The diversity of primary and secondary producers found was typical for subArctic aquatic systems.

3.4 Terrestrial Environment

3.4.1 Vegetation

Vegetation studies over the exploration area were initially conducted in 1998 by Page Burt of Rankin Inlet. A comprehensive list of plant species and a description of habitats were prepared. A description of habitat types throughout the project area with a map showing their distribution was developed. Similar efforts were completed in 2008 and 2009 to describe the vegetation and habitats along the proposed roads to the Discovery gold deposit, to the F Zone area and along the proposed all-weather road alignment between Rankin Inlet and the project. Figure 3.5 shows the distribution of various types of vegetation along the road routes and the larger general area. The dominant factor shaping the distribution of habitat types seems to be the amount of moisture available, with wetter areas having more vegetation and ridge tops the least. The greatest species diversity occurs in the transition zone between the wet meadows and the well drained communities on slopes. No plant species at risk of extinction were found in the project area.

3.4.2 Wildlife

The area of the project is within the ranges of 40 bird species and 17 mammal species. An inventory of wildlife species in the region was developed from existing information on the distribution of birds and mammals in Nunavut, and from baseline study results and observations by project staff as recorded in the camp wildlife log.

Wildlife studies of the caribou herds using the project area were initiated in the fall of 1997; the Meliadine project collaborated with the former Government of the Northwest Territories (now Nunavut), in deploying satellite telemetry collars on female caribou. Systematic wildlife studies in the project area were initiated in the spring of 1998, when Arc Wildlife Services Ltd. of Calgary undertook bird and mammal studies. These studies continued through the summer of 2000. Annual data reports were submitted for 1998, 1999 and 2000. Golder Associates continued the studies in 2008 and 2009.

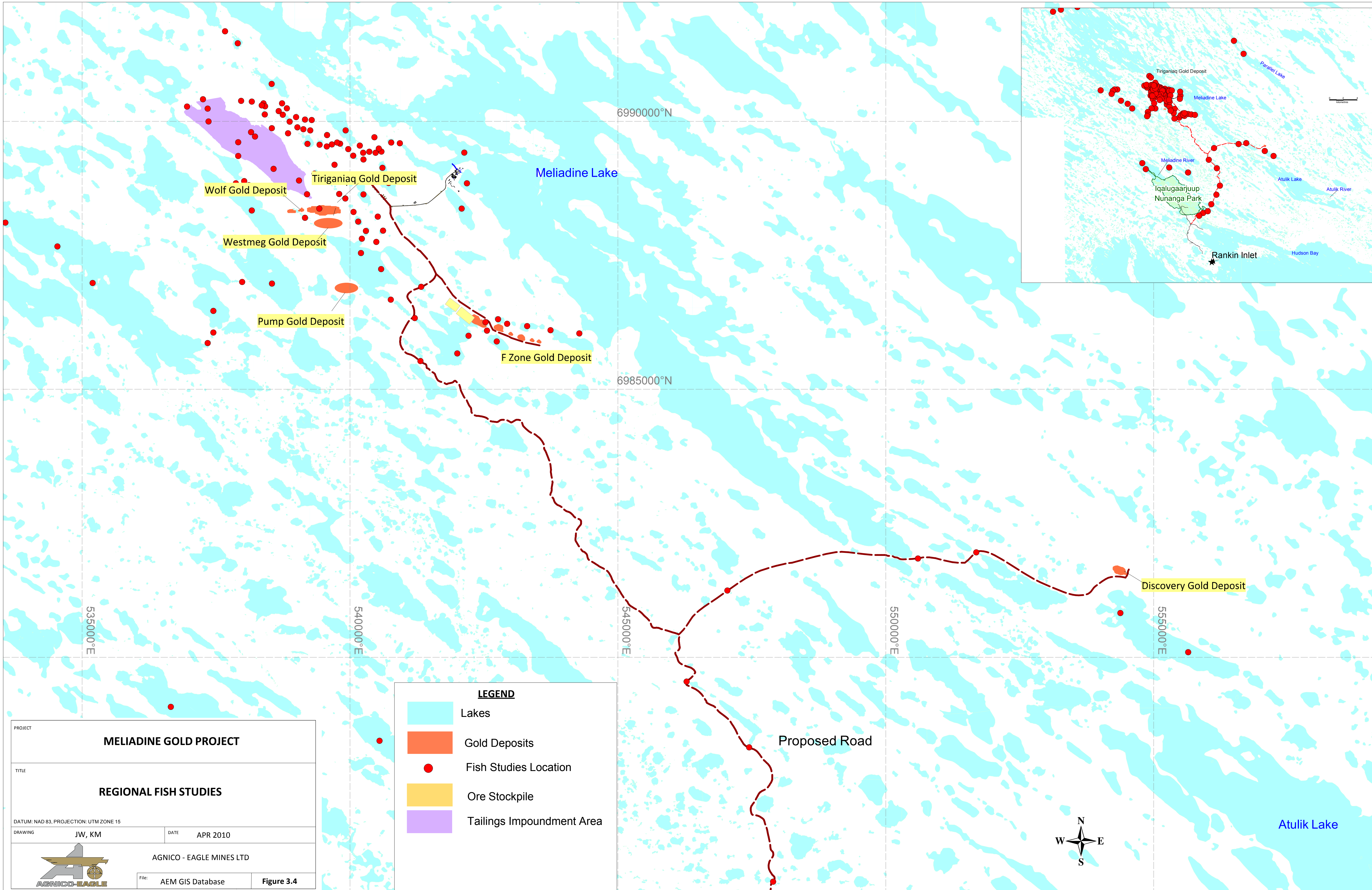
The normal assemblage of bird and mammal species expected for subArctic tundra ecosystems was found. Large birds, such as sandhill cranes, loons and tundra swans, were studied in more detail than other waterfowl and passerines. Swans exhibit high fidelity to their nest sites, returning to the same area each year. Raptors were noted, including rough-legged hawks and peregrine falcons, but no nests were located within the active exploration area of the project. Searches for raptor nest sites along the proposed road alignment were included in 2008 surveys. Mammals present include lemming, ground squirrel, red fox and caribou.

Aerial surveys showed that the project area is on the periphery of the ranges of two caribou herds. Portions of the Qaminirjuaq herd may pass through the project area very quickly in spring - summer and occasionally be present in some years from late October through March. It is at this time of year that most caribou are harvested by Rankin Inlet hunters. Telemetry data also showed that the caribou present in the fall of 1997 included females that travelled north of Chesterfield Inlet for calving in the spring of 1998, which indicates that they may belong to the herd(s) calving in the Lorillard River/Wager Bay area. Figure 3.6 shows the area surveyed for caribou and other large mammals. There are no known caribou calving grounds in or near the general area that could be affected by building and operating the Meliadine gold mine.

No bird or mammal species at risk were found in the project area. No critical habitat for any local wildlife species has been identified in the course of completed baseline studies in the project area. Additionally, no critical wildlife habitat in the local area was identified by the Nunavut Planning Commission in its preparation of the Keewatin Regional Land Use Plan (NPC 1991, revised and submitted for approval by the federal and territorial ministers in June 2000).

3.5 Marine Environment

The Meliadine project will not require any changes to the port facilities in Rankin Inlet. During construction and operations phases of the project there will be an increase in barge traffic. In spite of this, the increase in barge traffic for the mine is not expected to conflict with the barge traffic for the Rankin Inlet community. The project is not, therefore, anticipated to affect the marine environment. However, baseline environmental data of the Itivia harbour area will be collected in 2011.



PROJECT	MELIADINE GOLD PROJECT
TITLE	REGIONAL FISH STUDIES
DATUM: NAD 83, PROJECTION: UTM ZONE 15	
DRAWING JW, KM	DATE APR 2010
AGNICO-EAGLE	AGNICO - EAGLE MINES LTD
File: AEM GIS Database	Figure 3.4

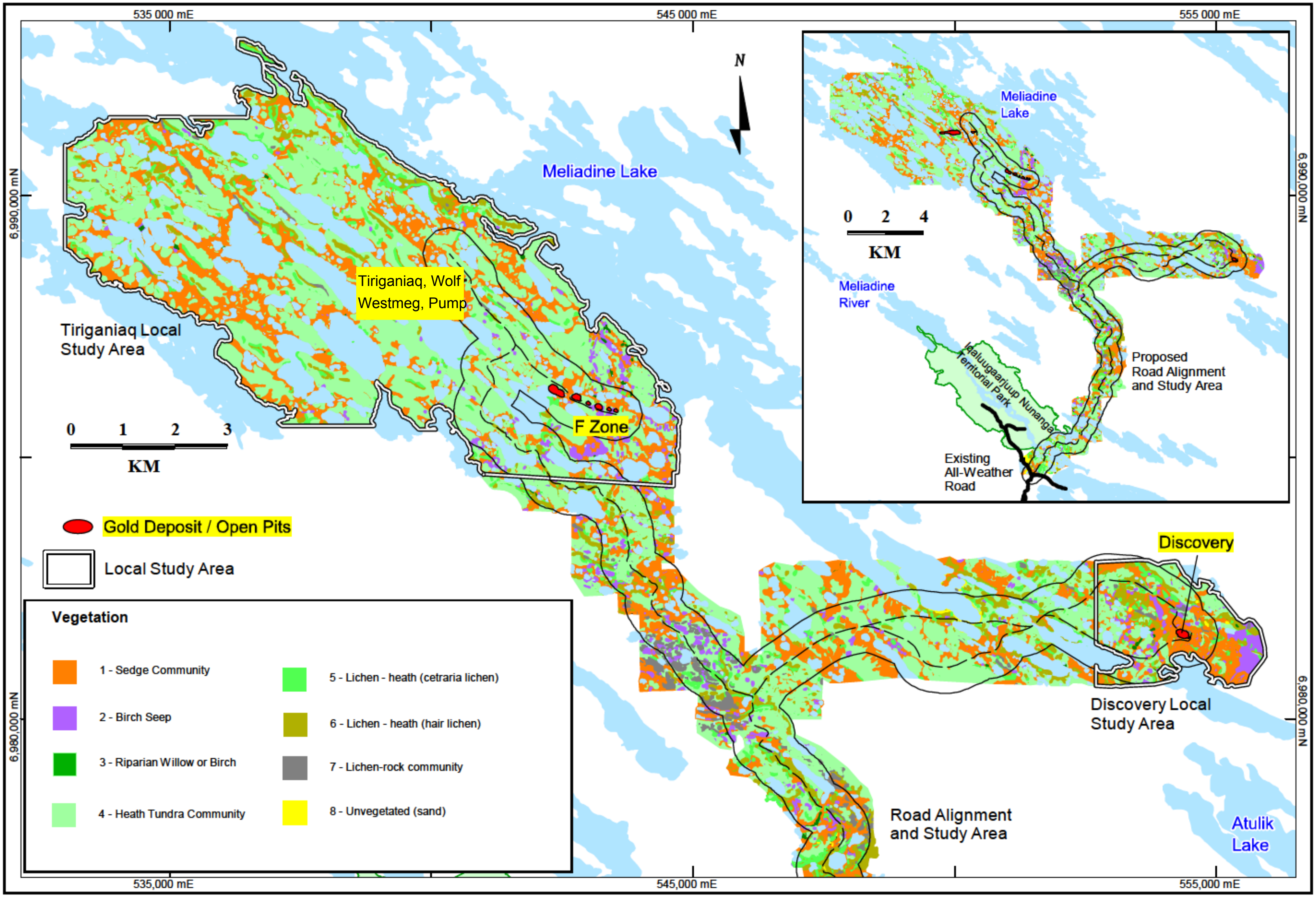


Figure 3-5: Vegetation Studies

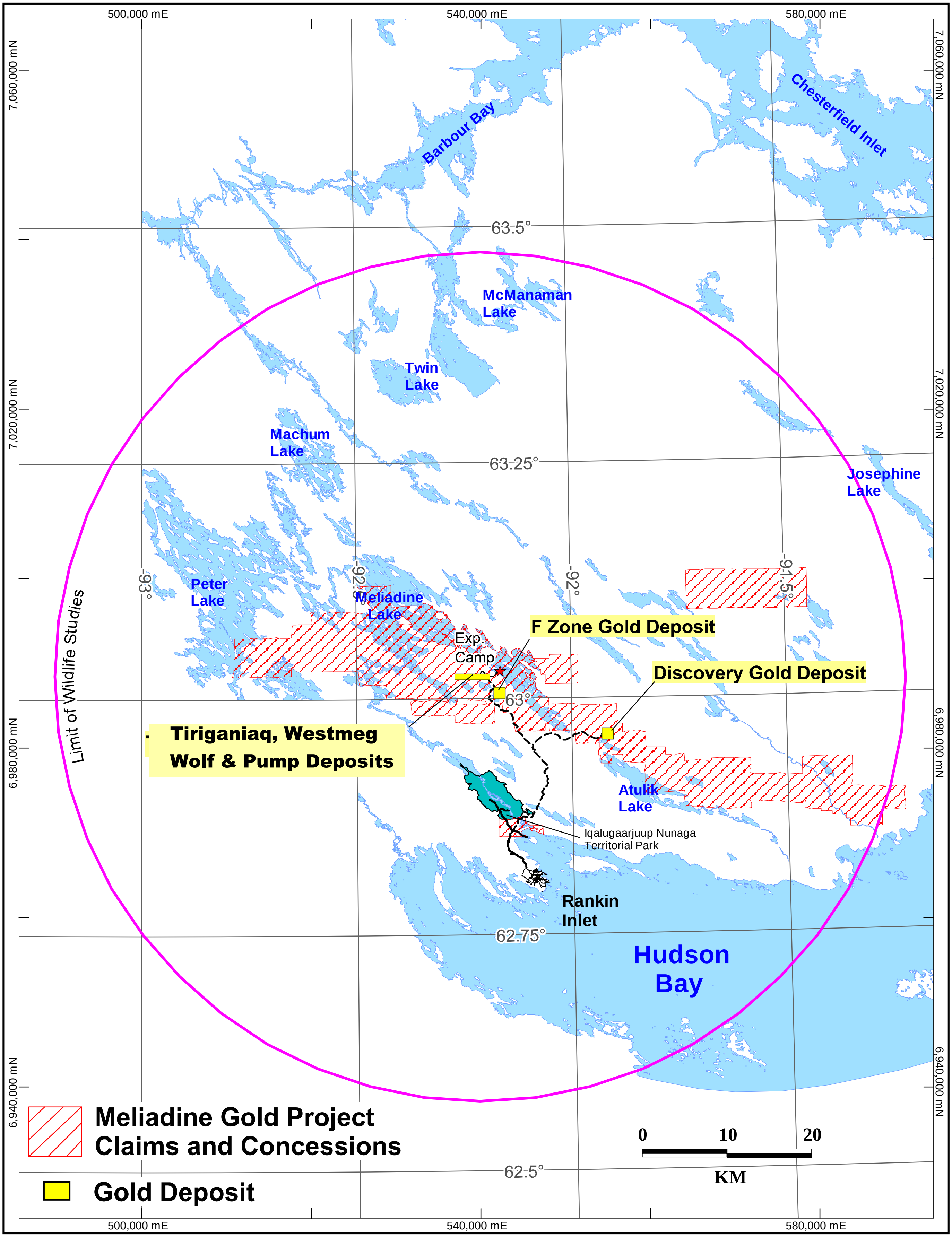


Figure 3-6: Wildlife Survey Area

SECTION 4 EXISTING SOCIO-ECONOMIC STATUS AND LAND USE

Rankin Inlet was established as a mining community in the early- to mid-1950s with the discovery and subsequent development of a nickel mine. It is now the regional centre and the largest community of the Kivalliq Region. Rankin Inlet is the second-most-populated community in Nunavut after the capital of Iqaluit, with approximately 2,400 people, 80 per cent of whom are Inuit and 20 per cent non-Inuit. The community has developed strong entrepreneurship and serves as a regional business centre.

4.1 Local Community Demographics

Table 4.1 describes the population change for Kivalliq communities between 2001 and 2006. Further collection of baseline socio-economic data was initiated in January 2010 and will be reported in the draft Environmental Impact Statement.

Table 4.1 Comparative Kivalliq Community Population Totals for 2001 & 2006

Community	2006	2001	Change	% Change
Arviat	2060	1899	161	8.5
Baker Lake	1728	1507	221	14.7
Chesterfield Inlet	332	345	-13	(3.8)
Coral Harbour	769	712	57	8.0
Rankin Inlet	2358	2177	181	8.3
Repulse Bay	748	612	136	22.2
Whale Cove	353	305	48	15.7
Total	**8,348**	**7,557**	**791**	**10.5**

Data Source: Statistics Canada 2008

4.2 Traditional Knowledge

In September 1997, the Meliadine Gold Project initiated a study of traditional Inuit knowledge (*Inuit Qaujimajatuqangit*) in the project area. The study was governed by a steering committee of elders from Rankin Inlet and Chesterfield Inlet. Work by the committee included reviewing the interview guide used to gather local knowledge of the area, especially from elders who lived in the area in the early days or before the establishment of Rankin Inlet in the 1950s.

The study provided insight into socio-economic concerns about the development of a mine, as well as into the traditional Inuit use of Meliadine Lake where historic caribou trails are found in the vicinity of the proposed mine. Figure 4.1 depicts traditional knowledge of the area around the proposed mine.

One issue raised during the course of the traditional knowledge study was the naming of local sites. While several sites have been named by the Meliadine project for operational purposes, these were reviewed with the elders. It was decided that a map of local place-names should be prepared and a process developed for new names that may be required to describe landmarks and locations associated with the mining project. It is hoped that the protocol for naming the different facets of the Meliadine project will incorporate local knowledge in such a way that non-Inuit-speaking people can pronounce local names properly, and so affirm and encourage the Inuit language and heritage.

Further studies of *Inuit Qaujimajatuqangit*, or local knowledge, were initiated in January 2010 as part of the work plan for the draft Environmental Impact Statement. The results will be used to improve the design of environmental-effects monitoring programs and operational features of the mine, and to identify valued environmental and socio-economic components.

4.3 Heritage/Archaeology Studies

The prospect of underground exploration and related surface disturbances at the Meliadine Gold Project required that a survey of heritage sites at risk in the area be undertaken. Elisa Hart, a professional archaeologist, undertook this examination assisted by a local Inuit field assistant. The study was conducted with the assistance of both an elders' committee and by Moses Aliyak, a noted elder recognized for his intimate knowledge of local heritage resources. Numerous sites that could be affected were found in the area of the prospective mine portal. Upon examination and review of these sites by the elders' committee, it was determined that they represented recent land use, and were not significant. The elders advised the Kivalliq Inuit Association of their assessment. Also examined were other sites closer to Meliadine Lake and well beyond the area at risk of alteration by the proposed mine development. These sites were found to be of considerable age and determined to be "off limits" by the elders' committee. A summary report of findings in Inuktitut was prepared for review by the elders' committee.

The search for local heritage sites was enlarged in 2008 to include all prospective mine land-use areas not previously studied, including the tailings impoundment areas under consideration, the Discovery deposit and the proposed road alignment to Rankin Inlet. This work was completed by Golder Associates in early 2009. Figure 4.2 provides a general overview of where heritage surveys were carried out and generally where archaeological sites were found.

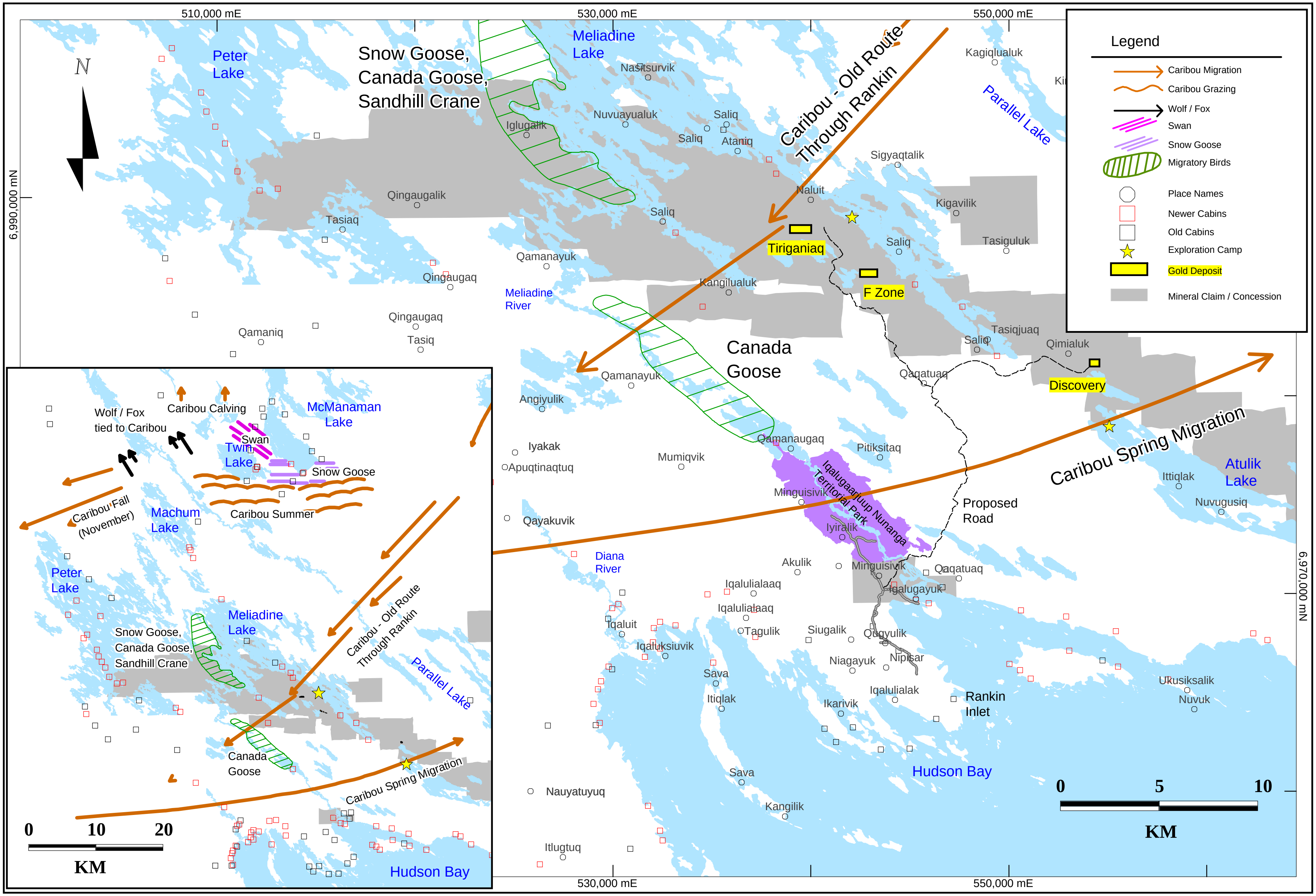


Figure 4-1: Traditional Knowledge

4.4 Regional Conservation Land Use

Current and future land use and related issues were reviewed by the Nunavut Planning Commission in the preparation of the Keewatin Regional Land Use Plan in 2000. The conservation interests of federal and territorial agencies were reviewed and are described below.

4.4.1 Parks Canada

The Keewatin Regional Land Use Plan did not indicate any Parks Canada interests or intentions in the area of the Meliadine Gold Project.

4.4.2 Territorial Parks

The Iqalugaarjuup Nunanga Territorial Park was in the planning stage since 1990 and was formally introduced as a Territorial Park in 1998. The geographic extent of this park lies entirely within the Municipality of Rankin Inlet. The proposed all-weather road to the proposed mine would not enter the park at any point and would cross the Meliadine River downstream of the park.

4.4.3 Canadian Wildlife Service (CWS)

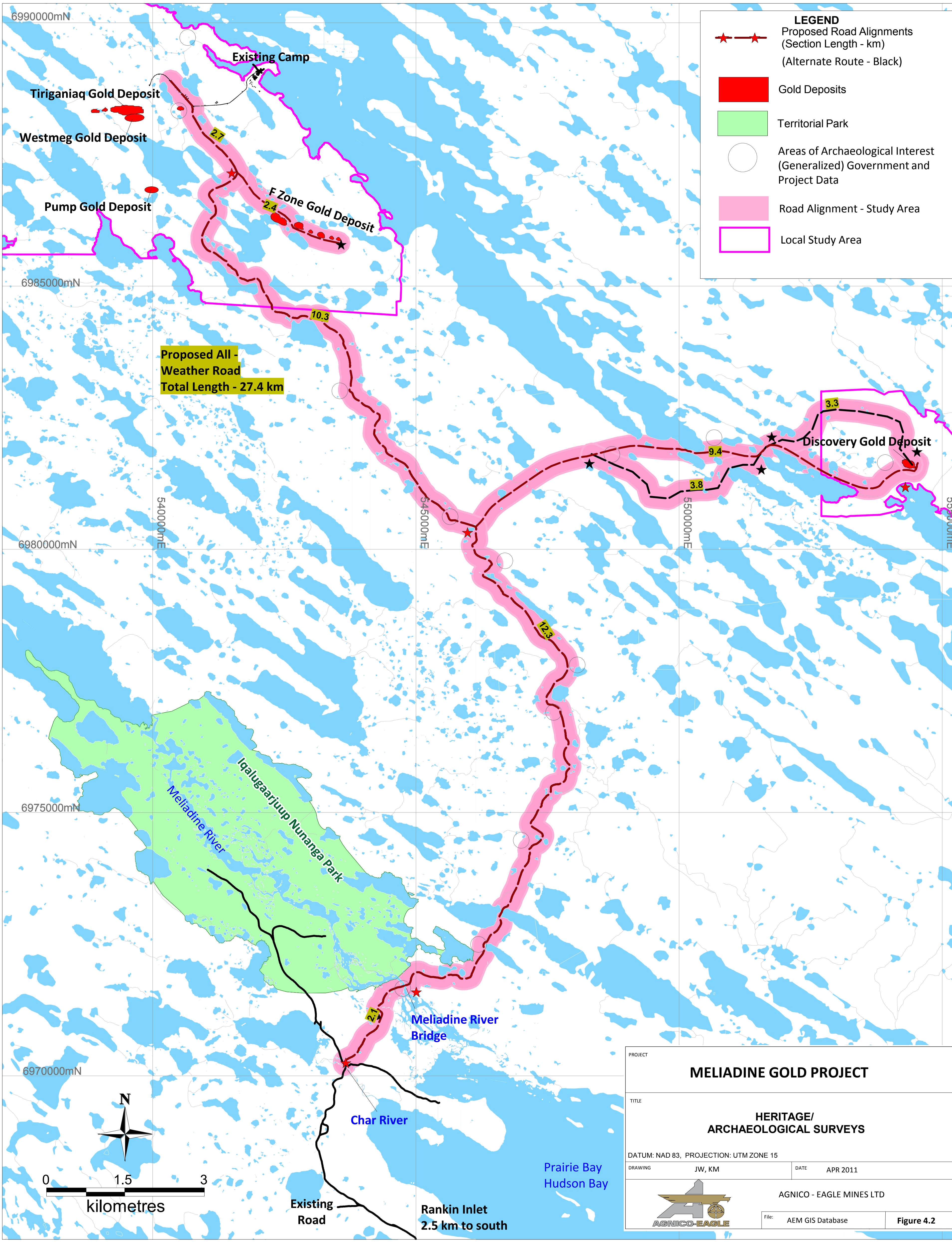
The current site-specific conservation initiatives by CWS concentrate on migratory bird habitat and do not include any lands in the general vicinity of Rankin Inlet or Meliadine Lake.

4.4.4 Department of Fisheries and Oceans (DFO)

The Meliadine River and the bay at its mouth has been the site of subsistence fishing by Rankin Inlet residents for many years. These are not designated as priority habitat by DFO in the Keewatin Regional Plan (NPC 1991, revised in 1997 and approved in 2000).

4.4.5 Department of Sustainable Development, Government of Nunavut

Birds of prey are not included in the Migratory Bird Convention Act and so their protection and management, along with that of terrestrial mammals, comes under the Nunavut Wildlife Act. No lands associated with the Meliadine project have been proposed for a conservation designation for any species.



LEGEND
Proposed Road Alignments (Section Length - km)
(Alternate Route - Black)
Gold Deposits
Territorial Park
Areas of Archaeological Interest (Generalized) Government and Project Data
Road Alignment - Study Area
Local Study Area
6990000mN
6985000mN
6980000mN
6975000mN
6970000mN
540000mE
545000mE
550000mE
Existing Camp
Tiriganiaq Gold Deposit
Westmeg Gold Deposit
Pump Gold Deposit
F Zone Gold Deposit
Discovery Gold Deposit
2.7
2.4
10.3
12.3
9.4
3.8
3.3
2.1
Proposed All - Weather Road Total Length - 27.4 km
Iqalugaarjuup Nunanga Park
Meliadine River
Meliadine River Bridge
Char River
Prairie Bay Hudson Bay
Existing Road
Rankin Inlet 2.5 km to south
N
0 1.5 3
kilometres
PROJECT
MELIADINE GOLD PROJECT
TITLE
HERITAGE/ ARCHAEOLOGICAL SURVEYS
DATUM: NAD 83, PROJECTION: UTM ZONE 15
DRAWING JW, KM
DATE APR 2011
AGNICO - EAGLE MINES LTD
File: AEM GIS Database
Figure 4.2

SECTION 5 PUBLIC PARTICIPATION AND CONSULTATION

5.1 Schedule of Public Consultation and Participation

AEM has actively engaged and consulted all interested parties on a regular basis since acquiring the Meliadine project in July 2010. Prior to that, Comaplex initiated a series of meetings with the local people of Rankin Inlet, beginning in 2004. In addition to town-hall-style meetings, AEM has kept the Kivalliq Inuit Association abreast of all substantial developments with the project. AEM has a history of open and honest communication and has always tried to resolve issues quickly and effectively.

Visits to the site and other AEM operations by various groups, including elders, youth and council members, are continuing, and these give AEM feedback about how the project should be developed as it moves toward feasibility and production.

See Appendix C for a complete list of consultations and meetings with the local community, regulatory agencies, and elders from 1995 to 2011, inclusive.

5.2 General Responses to the Proposed Meliadine Gold Project

AEM recognizes and appreciates the impact that a gold-mining operation of the scale proposed for the Meliadine project will have on several of the local communities, predominantly Rankin Inlet and secondarily, Chesterfield Inlet and Whale Cove. The three communities are seen as the Local Study Area (LSA), while the Kivalliq region is seen as the Regional Study Area (RSA). A detailed evaluation of the response to the project by Rankin Inlet and other affected communities will be included in the draft Environmental Impact Statement. However, based on AEM's discussions and interactions with local community members to date, there is strong support for the project.

Meetings with the elders, especially those familiar with mining or who are ex-miners, have been overwhelmingly supportive of the project. The primary concern from the elders is to find employment for "the young people". This sentiment is also consistently expressed in all meetings. People in the affected communities want to be meaningfully employed in the operation.

5.3 Future Consultation

The Meliadine project has carried out consultation in the Kivalliq region and throughout Nunavut since 1997. It has informed the public, community organizations, community land and resource committees, government, local businesses, traditional land users, and hunters' and trappers' organizations of activities carried out at the exploration site. In return, the proponent was made aware of the social and environmental concerns about the exploration and possibility of a mine in the future. The meetings have been a learning experience for both sides and a free exchange of ideas. Meetings with the communities, civic leaders and administrators will continue as the project moves towards production.

The project is entering a new phase with this Project Description, advancing beyond exploration toward the development of a mine. This Project Description outlines the future development of the mine and is being presented to the locally affected public, community organizations, community leaders and government. With the environmental-assessment process getting under way, preproject consultation will be broader in scope and have a further reach than it did previously. It will focus on providing timely and useful information to locally affected public and community organizations so that they can have meaningful input into the environmental-assessment process. The company will find out what social and environmental concerns the public has with regard to the mine’s development, and it will endeavour to put measures in place to address these concerns. The forthcoming consultations will draw on the consultation guidelines of the Nunavut Impact Review Board in order to meet the requirements of the environmental-assessment process.

Meaningful public participation is necessary for successful consultation. Public participation has been a common feature of all consultation that the Meliadine project has carried out over the past 12 years, and is expected to continue throughout the environmental-assessment process and onward. It has been a two-way exchange of ideas with the company responding to the ideas raised by the public and vice-versa.

To have effective public participation, the public needs to be informed of upcoming consultation events. Care will be taken not to schedule these when people are likely to be out on the land; during times of celebration or sorrow in the community; or when a consultation meeting would conflict with another important meeting in the community. AEM will continue to use broad advertising, through local papers, radio, posters and by invitation, before any consultation meeting. Public consultation will not end with the completion of the environmental-assessment process. AEM believes that consultation should play an integral and continuing role in running the mine. Public meetings in Rankin Inlet and any other affected communities will allow mine officials to explain what they are doing with the project, to address social and environmental concerns, to listen to what is being said by the public, and to learn and work through issues collaboratively.

SECTION 6 SOCIO-ECONOMIC OPPORTUNITIES

Rankin Inlet will be the primary area of positive impact should the project proceed. The hamlet was established as a mining community in the early- to mid-1950s with the discovery and subsequent development of a nickel mine. It is now the regional centre and the largest community of the Kivalliq Region. Rankin Inlet is the second-most-populated community in Nunavut after the capital of Iqaluit, with a population of approximately 2,400 people, 80 per cent of whom are Inuit and 20 per cent non-Inuit. The community has developed strong entrepreneurship and serves as a regional business centre.

Currently, the Rankin Inlet area offers limited, and usually seasonal, employment opportunities. The proposed mine has the potential to offer year-round employment to interested Nunavummiut. At this level of study, it is estimated that more than 8,000 person-years of employment would be established over the life of the mine. Substantial spinoff employment from the provision of local goods and services could also be realized. The mine would enhance opportunities for business and other economic-development activities in the Kivalliq region. The current financial analysis suggests that over the currently estimated 10-year lifespan of the mine, the project could pay, within an order-of-magnitude, \$100-million in direct taxes to territorial and federal governments, and an additional \$200-million in personal income tax and sales taxes from direct employment alone.

To forgo the development of the mine would mean losing this revenue stream.

6.1 Local Opportunities

The Meliadine project has undergone active exploration north of Rankin Inlet for almost 20 years. Over that time, a large number of Nunavut-based workers have been employed at the project. These workers were drawn mainly from Rankin Inlet, but also from the Nunavut communities of Chesterfield Inlet, Whale Cove and Arviat. Equally vital to the exploration process was the use of local contractors, businesses and Inuit partnerships that have contributed to the development of the project by supplying goods and services.

The development of the Meliadine property would greatly benefit Rankin Inlet and nearby communities by providing employment and training opportunities, and developing businesses that would supply goods or services to the mining operation. Indirect spinoffs such as hotels, restaurants, hardware stores and cultural businesses would also see a positive impact. Many currently active industries, such as tourism, mineral exploration and expediting, are seasonal, resulting in a winter slack period with limited employment opportunities. The proposed mine would provide continuous employment and impact year-round.

Table 6.1 below illustrates how exploration alone on the Meliadine West property has contributed more than \$23-million to the Kivalliq Region as of October 2009. Locally hired workers have been a mainstay of the project since its inception. It is fully expected that the training of local workers, in combination with a willingness to work and learn, would provide substantial long-term employment opportunities for Inuit and other Northerners.

Discussions with Arctic College and other northern educators about training initiatives have been started in order to prepare students and prospective workers for employment in the mining industry.

Table 6.1 Cumulative Project Expenditures and Local Employment (Meliadine West 1995-2009)

Activity	2009*	2008	2007	2006	2005	2004	2003	1995-2002 (WMC)
Locals employed	13	18	16	9	11	11	14	
Wages	$245,479	$421,011	$292,784	$108,360	$122,980	$181,263	$130,615	$1,526,171
Freight/ expediting	$589,714	$1,815,173	$472,979	$232,323	$130,065	$164,815	$150,088	$1,752,880
Fuel	$272,351	$731,472	$1,240,057	$343,930	$235,760	$253,000	$62,643	$1,180,519
Equipment/ supplies	$47,131	$89,574	$86,109	$23,700	$12,831	$11,000	$1,203	$326,314
Food / lodging	$168,078	$467,913	$337,815	$142,000	$119,500	$23,312	$18,781	$1,005,488
Construction	$250,677	$2,271,372	$1,055,853	$141,900	$22,410	$8,503	$57,494	$274,952
Drilling	$50,000	$0	$79,634	$1,500	$51,129	$74,182	$45,589	$415,205
Community/gov	$19,447	$19,664	$30,623	$93,298	$97,226	$63,680	$97,719	$1,024,361
Environment	$32,834	$83,904	$0	$8,800	$0	$8,500	$2,150	$33,456
Other (air, etc.)	$155,020	$262,061	$391,084	$47,945	$95,315	$24,400	$10,116	$91,109
Total (Kivalliq)	**$1,830,729**	**$6,162,145**	**$3,986,938**	**$1,143,756**	**$887,216**	**$812,655**	**$576,398**	**$7,630,455**
% local of total	19%	20%	22%	17%	17%	25%	18%	13%
Total (project)	$9,826,850	$30,090,272	$18,218,864	$6,739,004	$5,167,550	$3,300,027	$3,150,493	$58,403,666
Cumulative (Kivalliq)	$23,030,293	$21,199,564	$15,037,418	$11,050,480	$9,906,724	$9,019,508	$8,206,853	$7,630,455
Cumulative (project)	$134,896,726	$125,069,876	$94,979,604	$76,760,740	$70,021,736	$64,854,186	$61,554,159	$58,403,666

* Expenditures to end of September, 2009

6.2 Workforce Requirements

Workforce requirements have been estimated during the preliminary assessment for both the construction and operation phases of the project. These estimates will change as additional planning and engineering is completed, but the numbers below offer a general guide to the expected scale of the operation and number of people needed.

The total payroll is estimated at between 700 and 1,000 people during operations, with a total workforce of about 500 on-site at any time. These people would be employed from local Inuit communities to the greatest extent possible, with regard to available skills and experience, and the balance of the workforce would be recruited for a fly-in/fly-out rotation from other parts of Canada. Recruitment would maximize employment opportunities for inhabitants of Rankin Inlet and other Kivalliq communities.

Employment opportunities will comprise:

- Entry-level positions requiring no previous skills.

- A wide range of craftsman-level positions, including miners; mill operators; equipment operators; welders; fabricators; electricians; mechanics; carpenters; pipefitters; cooks and many others requiring previous experience and certification.
- Managerial, supervisory and technical positions, requiring advanced education, certification and previous experience.

The Meliadine project is likely to operate for long enough that motivated Nunavut-based employees can advance through these categories and gain skills usable elsewhere. The project has worked, and will continue to work, with the Rankin Inlet trade school in identifying training opportunities.

Details specific jobs will emanate from future studies and be presented in greater detail in the draft Environmental Impact Statement.

6.3 Education Requirements and Training

The primary source of mine employees will be Canada, because residents have the required technical skills and are also accustomed to working at remote sites. Before production begins, training programs will be instituted that will allow the local workforce to attain the skill levels required to work at the mine. These are expected to form part of the negotiations toward an Inuit Impact Benefits Agreement.

It would be beneficial for all involved to have early discussions with the Northern trade school aimed at co-ordinating graduation times with the mining project’s employment timelines. Considerations would include:

- Meaningful long-term employment opportunities for a local workforce;
- Appropriate and comprehensive training programs for the local workforce for all positions;
- The creation of local economic development opportunities; and
- The need to ensure the protection of Inuit culture and traditional resources.

6.4 Rotational Shift Work and Proximity to Rankin Inlet

The proposed mine will be active 24 hours per day, 365 days a year. The production schedule is based on 328 days a year (a 90-per-cent efficiency), which makes allowance for interruptions due to bad weather, mechanical breakdowns, and planned shutdowns for maintenance.

The project will run on two shifts, day and night, which is typical for remote, northern operations. In order to maintain this schedule, employees will work every day for a period on-site, followed by a period of rest at home. This is commonly known as a “fly-in/fly-out” rotation. Shifts of 14 days on and 14 days off are a common and preferred rotation for similar northern sites.

With a fly-in/fly-out rotation, manual and supervisory positions can be rotated in and out as complete crews. Managerial and technical positions need to overlap the ends of their rotations to provide an adequate transfer of information.

The proximity of Rankin Inlet to the Meliadine Gold Project site is advantageous in that neither an airport nor a port need be built for the mine. This proximity allows for collaboration on services, products and facilities with organizations such as the Hamlet of Rankin Inlet, the Kivalliq Inuit Association, local entrepreneurs, Crown corporations and the Government of Nunavut. The Meliadine project will explore all potential avenues for contracting-out services and purchasing products that could reasonably be provided locally in a cost-competitive, qualified, consistent, and competent manner.

6.5 Social and Economic Effects on Rankin Inlet and the Kivalliq Region

The Meliadine project is situated entirely on land owned by the Kivalliq Inuit Association, so the KIA will derive an income stream for land leases and other provisions that may flow from rights established in the Nunavut Land Claims Agreement.

The size of the project workforce will be variable, with 700-800 workers on-site during the construction period. During mining operations, this will decrease to approximately 500 on site at any one time for mining, processing and related activities. Depending on work rotations, the total number of people on the payroll will be between 700 and 1,000.

The project's exploration programs over the years have benefited from a reliable and capable labour force from Rankin Inlet. The project's managers wish to hire as many Inuit as are suitably qualified for the construction, operations and reclamation phases of the project. It is possible that a substantial portion of the project's payroll can remain in the Kivalliq region.

Much of the construction work and some of the mining and site services at the project may be contracted out. An inventory of businesses in the region will be developed and used to assess the regional capacity for supplying goods and services to the project. Contract bids will be configured in ways that encourage businesses in the region to participate and openly compete in the bidding process.

All participants in the project, both workers and businesses, will be required to provide safe, competitive, reliable, and cost-effective goods and services. Participation in the project by people and businesses from the Kivalliq region is very important to the project management. Management will expect the same standards of effort, conduct and commitment from all employees and contractors, regardless of where they may be based.

The Meadowbank project has had a substantial positive socio-economic effect on Baker Lake. It therefore seems unlikely that substantial numbers of people will travel from Baker Lake to work at the Meliadine project. The Meliadine project will add to the workload, employment and revenues of existing businesses in Rankin Inlet, both in absolute terms and by providing year-round employment possibilities.

SECTION 7 ENVIRONMENTAL & SOCIO-ECONOMIC IMPACTS AND MITIGATION

7.1 Project Effects and Mitigation Measures

The project as described in this Project Description will operate for a period of approximately 16 years. This consists of approximately three years in development, 10 years in operations, and three years for mine closure and reclamation.

As proposed, the Meliadine Gold Project will have environmental and social effects, which are tabulated and described along with their appropriate mitigation measures in Appendices D4 and D5.

7.2 Residual and Cumulative Effects

Cumulative effects are changes to the biophysical and socio-economic environments that are caused by one development in combination with other past, present and future developments. The nearest industrial operation to the Meliadine Gold Project—planned or actual—is the Meadowbank mine, some 285 kilometres to the northwest. The two mines are not located in the same drainage basins, do not use the same road, and do not share a common nearest community and are, therefore, unlikely to bring about cumulative effects.

Exploration for diamonds by Shear Minerals abuts the east end of the Meliadine properties, but results to date do not suggest that a mine will be established there. The Meliadine project does not at this time add to the environmental effects of any other industrial operations in the area; conversely, there is nothing to suggest that other industrial operations will become established in the vicinity of the project, either independently or as a result of its existence.

One common concern relates to cumulative effects on the migration of the Qaminirjuaq or other caribou herds passing through both the Meadowbank and Meliadine development areas. The Meliadine Gold Project will have a no-hunting policy. Employees will not be able to hunt while working at the mine. Also, caribou will have the right-of-way on any mine roads, so that the project does not interfere with their movement. The combination of these two policies will significantly reduce any impacts on caribou caused by the development. The Meadowbank gold mine already has similar policies in place.

The Meliadine project will have positive effects on regional employment, incomes and business opportunities, in effect changing the broad regional socio-economic environment. These changes will, however, not be without some negative effects, as outlined in Appendices D4 and D5. It is expected that these negative effects will be addressed by government and other agencies with participation from the Meliadine Gold Project.

AEM is currently an active member of the Kivalliq Socio-economic Monitoring Committee (SEMC). The SEMC was set up by the Government of Nunavut with the mandate to monitor and report positive and negative effects of mineral resource development in the Kivalliq Region. The SEMC brings together representatives of the Territorial and Federal Governments, local municipal governments and resource developers. The SEMC has been in operation since late 2008 and has reported annually to the Government of Nunavut and to the Nunavut Impact Review Board on regional socio-economic effects in 2009 and again in 2010 with the focus primarily being on those observed since the Meadowbank Gold Mine came into production. AEM expects that the SEMC will continue to be the primary mechanism to monitor socio-economic effects of resource development in the Kivalliq Region as the Meliadine Gold Project moves through construction and into operation.

The draft Environmental Impact Statement will provide greater detail on the residual and cumulative effects of the Meliadine project.

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Appendix A Synopsis of Exploration History

1987-2010

Year	Activities
1969-1972	North Rankin Nickel Mines does initial exploration; reports gold occurrence at Tonic Lake, 28 km southeast of the Tiriganiaq deposit.
1987	Asamera Minerals Inc. investigates the gold occurrence at Tonic Lake reported by the Rankin Nickel Syndicate in 1972 and obtains a sample of quartz vein carrying arsenopyrite that yields 5.0 g/t Au.
	Initial claims are staked on the Meliadine property.
1989	Asamera and Comaplex follow-up the 5.0 g/t Au sample collected in 1987 by prospecting along the strike of the iron formation and find the Discovery deposit with chip samples of up to 4.4 g/t Au over 4.0 m.
	Asamera and Comaplex acquire 405,000 hectares in claims and permits under a 50%-50% joint venture.
1990	Asamera and Comaplex complete 14 drillholes (1,115 m) to evaluate the gold potential in the Discovery deposit area.
	Airborne geophysical surveys are flown over the entire eastern portion of the property (Meliadine East).
1991	Rio Algom Inc. signs a joint venture agreement to earn 60% of western portion of the property (Meliadine West).
	Rio Algom Inc. drills six drillholes totalling 728 m on Meliadine West.
	Detailed airborne survey over the present Meliadine West property and extensive boulder sampling is carried out. The Wesmeg boulder field is discovered. 710 boulders are sampled of which 75 have assays greater than 34 g/t Au.
	Asamera and Comaplex conduct regional and detailed mapping, trenching, airborne and ground geophysics and 4,957 m of diamond core drilling on the Meliadine East property. Snow Goose showing is discovered.
1992	Asamera and Comaplex complete 5,148 m of diamond core drilling on the Meliadine East Joint Venture.
	Rio Algom Inc. relinquishes option on Meliadine West, which reverts back to 50-50 joint venture between Comaplex and Asamera.
1993-1994	Comaplex drills 85 short drillholes (6,869 m) on Meliadine West. DDH 93-38 drilled on the as yet undiscovered Tiriganiaq deposit intersects 17.2 g/t Au over 1.1 m in mineralized Upper Oxide Iron Formation. F Zone and Pump deposits are discovered
	Asamera sells its interest in the Meliadine property to Cumberland Resources Ltd. All of Meliadine property converts to a 50-50 joint venture between Comaplex and Cumberland.
1995	WMC options the Meliadine West property and drills 7,171 m in 33 drillholes including the Tiriganiaq gold deposit.
	Comaplex and Cumberland conduct prospecting and sampling on the Meliadine East claims NAT 51, NAT 53-56. A total of 44 samples are collected with eight samples having values greater than 0.5 g/t Au with a high of 29.0 g/t Au.
1996	WMC drills 18,196 m in 77 holes on the Meliadine West property.
	WMC performs geochemical and geophysical exploration on the NAT 16-19 and NAT 40 claims.
1997	WMC conducts mapping geochemical exploration and geophysical exploration over the entire Meliadine West property.

Year	Activities
	WMC drills 33,000 m in 123 drillholes, mostly at Pump and Wolf deposits.
	A Bombardier mounted ground magnetic survey and an IP survey is performed over claims NAT 9, 10, 11, 12, 32, 33 and 34 in Meliadine West.
1998	WMC drills 36,268 m in 147 drillholes, mostly at Pump, Wolf and Tiriganiaq.
	A Bombardier-mounted ground magnetic survey is completed over NAT 8, 13, 14, 15, 31, 34, 35 and 41 claims.
	WMC drills 4,417 m in 20 drillholes in the Peter Lake to Meliadine Lake portion of the Meliadine West property.
1999	WMC drills 21,000 m in 128 drillholes at Tiriganiaq deposit (123) and at F Zone deposit (5).
2000	WMC drills a total of 10,753 m in 49 drillholes with 6,360 m in 31 drillholes completed on the Tiriganiaq deposit and 4,393 m in 18 widely spaced drillholes on exploration targets.
2001	WMC completes an aeromagnetic survey over concessions held on Inuit Owned and Federal lands in both the Meliadine West and East properties. The survey identifies several prospective gold areas and identifies a number of small magnetic anomalies thought to be potential kimberlites.
2002	Additional electro-magnetic airborne geophysical surveys are completed to help define possible gold and base metal bearing targets.
2003	Comaplex and WMC complete a program of diamond drilling of 17 drillholes for 4,650 m on the Tiriganiaq deposit.
	In a deal finalized in October, Comaplex agrees to buy the WMC 56% interest in the Meliadine West property.
2004	Comaplex completes 21 drillholes totalling 9,297 m in Meliadine West. Results as high as 166 g/t Au over 16.1 m are reported from the western parts of the Tiriganiaq gold deposit.
	Regional assessment work is completed on outlying concessions.
2005	Comaplex completes 48 drillholes totalling 15,851 m on the property.
	Surface assessment work on the outlying claims claims/concessions returns high grade gold values (>30 g/t Au) in the east half of the CWM claims.
	Strathcona prepares the first mineral resource estimates reported in compliance with CIM Definition Standards for the Tiriganiaq deposit. Indicated resource: Tiriganiaq main zone totalling 2.47 Mt grading 10.8 grams per tonne of gold.
2006	Comaplex completes 75 drillholes totalling 18,043 m on the property. Of this amount, 16,124 m in 62 drillholes were completed on the Tiriganiaq deposit, with the remaining drillholes completed on the reconnaissance Aklak and Aqpik targets on the CWM claim block.
	A total of 249 till samples and tightly spaced magnetic geophysical surveys for diamond exploration were taken on the eastern end of the CWM claims.
2007	Comaplex completes 85 drillholes totalling 21,528 m at Tiriganiaq.
	Limited surface prospecting for gold and diamonds is also completed.
2008	Comaplex completes 79 drillholes totalling 23,537 m on the Meliadine West property, of which 90% was completed into the Tiriganiaq zone, 8.5% in the F Zone, and 1.5% on reconnaissance targets.

Year	Activities
2008	In July, Agnico-Eagle obtains 11% interest in the Meliadine project by purchasing an equity interest in Comaplex from Troy Resources.
	The underground exploration and bulk sampling program is completed at the end of August with a total of 1,044 m of ramp development, 404 m of drifting on the 1000 and 1100 lodes, 97 m of cross-cuts, and 80 m of raises. Bulk samples are collected from the 1000 and 1100 lodes.
	Resources Capital Fund completes 22 drill holes for 3,879 m in the area of the Discovery deposit and prepares a mineral resource estimate for Discovery. Indicated resource: Discovery totalling 0.9 Mt grading 8.28 grams per tonne of gold.
	Snowden prepares a mineral resource estimate for the Tiriganiaq deposit. Indicated resource: Tiriganiaq main zone totalling 7.65 Mt grading 7.27 grams per tonne of gold.
2009	The results of the Tiriganiaq underground exploration and bulk sampling program are released in a January 2009 Technical Report (Snowden, 2009), which includes the first NI 43-101-compliant resources estimate for the F Zone. Indicated resource: F Zone totalling 0.7 Mt grading 4.8 grams per tonne of gold and 7.0 Mt grading 7.27 grams per tonne of gold in the Tiriganiaq main zone.
	Comaplex completes 106 drillholes totalling 23,600 m on the Meliadine West property, of which 71% is completed in the Tiriganiaq zone, 11% completed in the F zone, 13% on reconnaissance targets and 5% on geotechnical drilling.
	Resource Capital Fund completes 25 holes (3,066 m) of diamond drilling on the Discovery deposit. Measured and indicated resource: totalling 12.5 Mt grading 7.9 grams per tonne of gold.
	Golder completes geotechnical studies of the proposed open pit deposits.
	A Preliminary Economic Assessment is done by Micon International Ltd., which recommends that the Meliadine project be advanced to the stage of a prefeasibility or feasibility level study.
	Late in the year, Meliadine West and East are consolidated to form the Meliadine property, with Comaplex as its 100% owner.
2010	A Technical Report (Snowden, 2010) released in February gives new mineral resource estimates for the Tiriganiaq, Discovery and F zone deposits, plus first estimates for the Pump and Wolf deposits.
	In April Agnico-Eagle signs an agreement with Comaplex to acquire 100% interest in the property; the transaction is completed in July 2010.
	187 holes (33,104 m) are drilled on the Meliadine property of which 15,447 m drilled by Comaplex before July 7 and the rest drilled by Agnico-Eagle after this date. Of the total, Tiriganiaq receives 63% of the drilling, F Zone 19%, Wolf 11% and Wesmeg 4%. The other 3% of drilling was geotechnical and twinned holes.
	A regional prospecting program collects 209 grab samples from several historical gold occurrences on ANT 1, ANT 3, TAN 1, Felsic 1 and FAY 2, plus 34 channel samples totalling 33.6 m. Eight 10-kg till samples and 149 250-g soil samples are also collected.

Appendix B Acts, Regulations and Guidelines

Applicable

to the

Meliadine Gold Project

Act	Regulation	Guideline
Federal		
Canadian Environmental Protection Act (1999, c.33)	Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations	CCME - Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products
		Notice with respect to substances in the National Pollutant Release Inventory
	Environmental Emergency Regulations	(threshold for hydrochloric acid 6.8 tonnes)
	Interprovincial Movement of Hazardous Waste and Hazardous Recyclable Material Regulations	
Canada Water Act (1985, c.11)		
Canada Wildlife Act (1985, w9)		
Species at Risk Act (2002, c.29)		(Eskimo Curlew – endangered)
Migratory Birds Convention Act (1994, c.22)	Migratory Birds Regulations (C.R.C., c. 1035)	
Fisheries Act (1985, c. F-14)	Metal Mining Effluent Regulations	The Policy for the Management of Fish Habitat
		Guidelines for the Use of Explosives In or Near Canadian Fisheries Waters
		Freshwater Intake End-of-Pipe Fish Screen Guideline
		Standard Operating Procedure – Clear Span Bridges
Explosives Act (1985, c.E-17)	Ammonium Nitrate and Fuel Oil Order	
	Explosives Regulations – Licence for Magazine, Explosives Transportation Permit	
Navigable Waters Protection Act (R.S. 1985, c. N-22)	Navigable Waters Works Regulations	
Transport of Dangerous Goods Act		
Territorial Lands Act	Northwest Territories and Nunavut Mining Regulations	
Nunavut Waters and Nunavut Surface Rights Tribunal Act (2002, c. 10)		
Nunavut Act (1993, c.28)		
Nunavut Land Claims Agreement Act (1993, c. 29)		

Act	Regulation	Guideline
Territorial - Nunavut		
Environmental Protection Act	Spill Contingency Planning and Reporting Regulations	
		Guideline on Dust Suppression
	The removal of hazardous materials will require the registration with the Government of Nunavut, Department of Environment as a waste generator as well as carrier (if applicable) prior to transport	Guideline for the General Management of Hazardous Waste in Nunavut
		Guideline for Industrial Waste Discharges in Nunavut
		Guideline for Air Quality – Sulphur Dioxide and Suspended Particulates
		Guideline for the Management of Waste Antifreeze
		Guideline for the Management of Waste Batteries
		Guideline for the Management of Waste Paint
		Guideline for the Management of Waste Solvents
		Guideline for Industrial Projects on Commissioner’s land
		Canada-Wide Standards for Particulate Matter (PM) and Ozone
		Canada-Wide Standards for Petroleum Hydrocarbons (PHC) In Soil
Historical Resources Act		
Wildlife Act	Wildlife General Regulations	
	Wildlife Licences And Permits Regulations	
	Wildlife Management Barren-Ground Caribou Areas Regulations	
	Wildlife Management Grizzly Bear Areas Regulations	
	Wildlife Management Zones Regulations	
	Wildlife Regions Regulations	
Territorial Parks Act	Territorial Parks Regulations	
Scientists Act	Scientists Act Administration Regulations	
Commissioner’s Land Act	Commissioner's Airport Lands Regulations	
	Commissioner's Land Regulations	

Act	Regulation	Guideline
Mine Health And Safety Act	Mine Health And Safety Regulations	
Workers' Compensation Act	Workers' Compensation General Regulations	
All-Terrain Vehicles Act	All-Terrain Vehicles Regulations	
Apprenticeship, Trade And Occupations Certification Act	Apprenticeship, Trade And Occupations Certification Regulations	
Electrical Protection Act	Electrical Protection Regulations	
Explosives Use Act	Explosives Regulations	
Fire Prevention Act	Fire Prevention Regulations	
Hospital Insurance And Health And Social Services Administration Act	Territorial Hospital Insurance Services Regulations	
Labour Standards Act	Various	
Motor Vehicles Act	Large Vehicle Control Regulations	
	Motor Vehicle Registration And Licence Plate Regulations	
Petroleum Products Tax Act	Petroleum Products Tax Regulations	
Public Health Act	Camp Sanitation Regulations	
	General Sanitation Regulations	
Public Highways Act	Highway Designation And Classification Regulations	
Safety Act	General Safety Regulations	
Transportation Of Dangerous Goods Act (1990)	Transportation Of Dangerous Goods Regulations	
Nunavut Act	Nunavut Archaeological and Paleontological Sites Regulations	

Appendix C Consultations and Meetings for

Community, Regulatory Agencies and Elders

1995-2011

Date	Place	Parties present and subjects of meeting
1995		
1 May	Rankin Inlet	KIA, WMC, Cumberland, Comaplex; history of exploration and prospect of WMC entering the Project on western lands.
1996		
10 January	Rankin Inlet	KIA, WMC, Cumberland, Comaplex; Project status report and notice of manpower needs.
29-31 March	Rankin Inlet	Nunavut Mining Forum; Project status report; Project booth at trade fair.
1 April	Chesterfield Inlet	Public, KIA, Hamlet, HTO, CLARC; Project status report and notice of manpower needs.
2 April	Rankin Inlet	Public, KIA, CLARC, HTO's, Fed. & Ter. govt, WMC; day long review of environmental studies.
2 December	Chesterfield Inlet	Public, KIA, CLARC, Hamlet, HTO; Project status report and notice of manpower needs.
3 December	Rankin Inlet	Public, KIA, CLARC, HTO; Project status report and notice of manpower needs.
1997		
21-23 March	Rankin Inlet	Kivalliq Mining Round Table; Project status and emphasis on mine readiness training.
25 March	Rankin Inlet	Public, CLARC, KIA Board.
19-20 April	Iqaluit	Nunavut Mining Conference; Project status report.
13 May	Rankin Inlet	Public, KIA, CLARC, HTO; current year exploration program and manpower needs.
14 May	Chesterfield Inlet	Public, KIA, Hamlet, HTO, CLARC; current year exploration program and manpower needs.
11 June	Coral Harbour	Briefing KIA Board of Directors on regional demography research and how it relates to mine work force needs.
28 June	Rankin Inlet	Public reception for Sir Arvi Parbo, Chair to WMC Limited Board.
28 August	Rankin Inlet	Public reception with WMC senior management visiting from Australia.
23 October	Rankin Inlet	Inaugural dinner meeting with Elders' Steering Committee for Traditional Knowledge.
6 November	Rankin Inlet	Project briefing to Keewatin Wildlife Fed. executive committee.
9 December	Rankin Inlet	Meeting #2 of the Elders' Steering Committee for Traditional Knowledge.
1998		
7 January	Rankin Inlet	Public, Hamlet, KIA, HTO, CLARC; Project status report.
8 January	Chesterfield Inlet	Public, KIA, Hamlet, CLARC; Project status report.
28 March	Cambridge Bay	Nunavut Mining Symposium; Project status report.
2 April	Rankin Inlet	HTO's for Rankin and Chesterfield, KIA, CLARC, DFO, DRWED; review

Date	Place	Parties present and subjects of meeting
		environmental baseline studies.
23 June	Rankin Inlet	Joint meeting of the Rankin Inlet and Chesterfield Inlet CLARCs to review underground exploration application (since withdrawn); public meeting in afternoon and evening to brief Rankin Inlet businesses and residents on underground exploration application.
25 June	Chesterfield Inlet	Project briefing to Chesterfield Inlet Hamlet Council; evening meeting to brief Chesterfield residents on underground exploration application (since withdrawn).
6 July	Rankin Inlet	Brief Rankin Inlet Hamlet Council on underground exploration program and need to store fuel in barge overwintering in Melvin Bay (plans since cancelled).
8 July	Meliadine Camp	Overall Project briefing to DIAND Minister, the Hon. Stewart and Nunavut leadership- Josie Karetak-Lindell MP for Nunavut; NWT Finance Minister and MLA for Rankin Inlet, the Hon. John Todd.
5 August	Rankin Inlet	Dinner meeting #3 of the Elders' Steering Committee for Traditional Knowledge; review Project and proposed archaeological survey of proposed test pit area.
2 October	Rankin Inlet	Dinner meeting #4 of the Elders' Steering Committee for Traditional Knowledge; review Project and results of archaeological survey of proposed test pit area.
21 October	Rankin Inlet	Meeting with Hamlet Coordinating Committee (reps. of all the service agencies in Rankin Inlet) to review Project and its current effects on the social fabric of the community.
1999		
13 January	Rankin Inlet	KIA, CLARC, public; review Project results for 1998 and plans for 1999.
14 January	Chesterfield Inlet	KIA, CLARC, public; review Project results for 1998 and plans for 1999.
14 April	Rankin Inlet	Workshop with stakeholders from Rankin Inlet, Chesterfield 1997. Inlet and Kivalliq region plus relevant government agencies to review environmental study results of 1998 studies and plans for 1999.
11 April	Arviat	Review regional gold exploration program for 1999 with Hamlet Council and HTO.
14 September	Rankin Inlet	Meeting #5 of the Elders' Steering Committee for Traditional Knowledge; review Project and receive final report on completed Traditional Knowledge Study of Project area.
2000		
7 January	Rankin Inlet	KIA, CLARC, public; review Project results for 1999 and plans for 2000.
22 May	Arviat	Review regional gold exploration program for 1999 with Hamlet Council and HTO.
23 May	Rankin Inlet	Workshop with stakeholders from Rankin Inlet, Chesterfield Inlet and Kivalliq region plus relevant government agencies to review environmental study results of 1998 studies and plans for 1999.

Date	Place	Parties present and subjects of meeting
23 May	Chesterfield Inlet	KIA, CLARC, public; review Project results for 1999 and plans for 2000.
13 November	Rankin Inlet	Nunavut Mining Symposium public talk on the need for mine related training; Project update to symposium delegates.
2001		
10 April	Rankin Inlet	Workshop with stakeholders from Rankin Inlet, Chesterfield Inlet and Kivalliq region plus relevant government agencies to review environmental study results of 2000 studies and plans for 2001; public meeting to review Project results for 2000 and plans for 2001.
2002		
7 January	Rankin Inlet	KIA, CLARC, public meeting to review 2001 work and Project status.
8 January	Chesterfield Inlet	KIA, CLARC, public meeting to review 2001 work and Project status.
27 June	Rankin Inlet	KIA commercial lease signing.
26 November	Chesterfield Inlet	KIA, CLARC, public meeting to review 2002 work and Project status.
28 November	Rankin Inlet	KIA, CLARC, public meeting to review 2001 work and Project status including camp closure.
2003		
12 May	Rankin Inlet	KIA, CLARC, public meeting to review Project status focusing on impending sale of Project
13 May	Chesterfield Inlet	KIA, CLARC, public meeting to review Project status focusing on impending sale of Project.
16 July	Rankin Inlet	Teleconference from KIA between Rankin Inlet, Chesterfield Inlet, Denver (WMC), and Calgary (Comaplex) to announce and discuss Comaplex/WMC agreement on sale of WMC Canadian interests to Comaplex.
3 November	Rankin Inlet	KIA, CLARC, public review of new directions of Project under Comaplex control
2004		
27 July	Rankin Inlet	Brief KIA on status of the Project.
21 October	Rankin Inlet	Presentation on Project status to KIA Board of Directors with a request for a proposal of motion to support a future road from Rankin to the Tiriganiaq deposit site.
21 October	Rankin Inlet	Town hall public meeting presenting the results of the 2004 exploration program and the proposed plans for 2005.
2005		
3 June	Rankin Inlet	Presenting the plans for the 2005 exploration program.
29 July	Rankin Inlet	Present Project update to the KIA.
2006		

Date	Place	Parties present and subjects of meeting
30 July	Rankin Inlet	Project presentation to the Rankin Inlet Hamlet Council.
27 March	Rankin Inlet	Town hall public meeting on the Project plans for the 2006 exploration program.
2007		
26 March	Chesterfield Inlet	Presentation to the KIA Board of Directors on the proposed underground program and 2007 Meliadine West exploration plans. Verbal Motion of Support from the Board.
27 March	Rankin Inlet	Presentation of the proposed 2007 Meliadine West exploration program to the Rankin Inlet CLARC.
28 March	Rankin Inlet	Presentation of the proposed 2007 Meliadine West exploration program to the Kivalliq Chamber of Commerce.
28 March	Rankin Inlet	Town hall meeting - presentation of the proposed 2007 Meliadine West exploration program.
4 July	Rankin Inlet	Elders Luncheon at Nunavut Arctic College. Project overview and immediate project plans for U/G exploration was presented by Mark Balog with a PPT slide show. Issues that were raised: - employment opportunities for young people, - all-season road location and utility for other projects, - soapstone from Nfld. Attendees: Hamlet Elders including Mr/Mrs Tatty, Mr/Mrs. Itinuar, Mr/Mrs Kabvitok, Mrs. Pissuk, others: Comaplex Minerals: Mark Balog, Ben Hubert. Arranged by John Hickes.
4 July	Rankin Inlet	Briefing on Project Status to Hamlet Council with specific discussions on road alignment and overwinter fuel storage in barge.
26 July	Rankin Inlet	Town hall type meeting with NTCL to discuss winter fuel storage in barge.
23 August	Rankin Inlet	Town hall type meeting with NTCL to discuss winter fuel storage in barge (cancelled due to weather).
27 September	Rankin Inlet	Town hall type meeting with NTCL to discuss winter fuel storage in barge.
28 September	Rankin Inlet	KIA meeting with J. Lindell. Update on the meetings of the last few days.
24 October	Rankin Inlet	KIA meeting with L. Manzo, J. Lindell, update on the Project and discussion of ongoing issues with various groups.
25 October	Rankin Inlet	KIA Board of Directors – update on the Project with projections of possible future plans.
2008		
26 March	Rankin Inlet	Presentation to the Kivalliq Inuit Association personnel and the Rankin Inlet CLARC on progress at Meliadine West.
27 March	Rankin Inlet	Presentation of the Meliadine West Project progress to the Kivalliq Chamber of Commerce at their AGM.

Date	Place	Parties present and subjects of meeting
8 April	Iqaluit	Nunavut Mining Symposium; presentation to industry and all regulatory boards with Project update.
10 April	Camp	Kivalliq Outreach Program (Kevin Sanguine); 8 young people, 3 elders into camp by snowmobile for visit, including underground.
8 July	Rankin Inlet	Presentation to the Kivalliq Inuit Association on the Project and discussion on the environmental and regulatory issues.
16 July	Camp	Elders' tour to the Meliadine West Project site. People who attended were Moses Aliyak, Robert Tatty, Remi Nakokti, Paul Kanuyak, John Hickes. All were taken underground for a full tour.
25 August	Rankin Inlet	Meet Kivalliq Inuit Association with KIA.
26 August	Camp	Underground tour for Kivalliq Inuit Association. Manzo Kivalliq Inuit Association Director, L. Kusugak (Rankin Inlet mayor), T. Manernaluk (elder) and H. Tatty (elder).
28 August	Rankin Inlet	Town hall update meeting on status of Project.
11 September	Rankin Inlet	Meeting with the KIA.
2009		
March 31	Iqaluit	Nunavut Mining Symposium; presentation to industry and all regulatory boards with Project update.
May 6-8	Rankin Inlet	Multidisciplinary Advisory Group (MDAG), chairs be Bernie MacIssac, INAC: all regulatory groups in attendance. Presented the Project and All-Weather Road to regulators. Met regulators who will work on Project, including Jackson Lindell and Stephen Hartman, KIA, and Keith Morrison and Jorgan Aitaok, NTI.
May 21	Rankin Inlet	Town hall update meeting. 13 people.
June 17	Rankin Inlet	Presentation to the CLARC on the Project. Attendees: Hamish Tatti, Celestino Mukpah, Jack Karitok, Jerome Tattuinee, Paul Kanayok.
June 17	Rankin Inlet	Meeting with Manager CED (Robert Connelly) and Nunavut Transport (Alan Johnson) regarding proposal to access federal infrastructure money for the Meliadine River bridge and Comaplex fund the road. Visit to the bridge site.
June 18	Rankin Inlet	Discussion with Rankin mayor John Hicks, the SAO, and several council members. Project update and proposed application for road and bridge funding.
July 30	Rankin Inlet	John Witteman met with Paul Waye, Senior Administrative Officer for Rankin Inlet to discuss locations for mine infrastructure and a quarry within the municipality. John Witteman toured the town with M&T Enterprises to look at locations for possible mine infrastructure and to see existing quarries.
September 1	Camp	John Witteman and Jacek Patalas (Golder Associates) met with Gary Cooper and Nicola Johnson of DFO to discuss fisheries habitat and compensation issues relating to the development of the Meliadine Gold Project. Compensation for road crossing was also discussed.
September 4	Rankin Inlet	Tour of industrial areas of the municipality with John Hicks to look at

Date	Place	Parties present and subjects of meeting
		possible location of the tank farm.
October 3	Rankin Inlet	Presentation of the current Meliadine Gold Project to the Social Economic Monitoring Committee (chaired by Nunavut Economic Development and Transportation).
2010		
June 10	Chesterfield Inlet	Mark Balog and John Witteman from Comaplex sponsored a town hall meeting providing an update on the Project and the building of an All-Weather Road. The road would link to the planned road to Chesterfield Inlet.
June 10	Rankin Inlet	Mark Balog and John Witteman from Comaplex sponsored a town hall meeting providing an update on the Project and the building of an All-Weather Road. The meeting was particularly well attended and there were no objections to the routing to the All-Weather Road. The spur road to Meliadine Lake was of particular interest.
August 9-31	Rankin Inlet	11 meetings were held in Rankin Inlet to familiarize local leaders with AEM and to update them about AEM's preliminary plans for the Meliadine Gold Project. Organizations that participated in these meetings included: the Kivalliq Inuit Association, Kivalliq Chamber of Commerce, Hunters and Trappers Organization, Mayor and Hamlet Council, Board of Directors of Sakku Investments Corp., M.L.A. Lorne Kusugak, Shawn Maley of the Government of Nunavut Community, and representatives of government services. AEM also participated in a meeting of the Kivalliq Socio-economic Monitoring Committee.
September 15	Rankin Inlet	AEM hosted a one-day visit to the Meadowbank gold mine by 40 community leaders and elders from Rankin Inlet, including the mayor and council, hunters and trappers, community elders (including a number who had worked underground at the North Rankin Nickel Mine in their younger days) and business leaders. The objective was to show the group the type of mining operation constructed and operated by AEM, and to let them see for themselves the number of Inuit already employed at Meadowbank.
October 18	Rankin Inlet	AEM hosted a dinner with invited community representatives and elders at the Sinniktarvik Hotel in Rankin Inlet. The dinner was an informal event to allow community members to meet the management team from Agnico-Eagle Mines and ask about the current status of the Meliadine Project. A total of 28 elders and community leaders attended.
2011		
January 6	Cambridge Bay	Eric Lamontagne, Denis Gourde and John Witteman met with Ryan Barry, Kelli Gillard, and one more staff member, NIRB, to describe the status of the Project and in particular the All-Weather Road. AEM described what had been done in regards to gathering baseline

Date	Place	Parties present and subjects of meeting
		information for the road, regulatory permits required and use of the road - having it open access.
February 7-9	Rankin Inlet	Larry Connell and John Witteman met with the Lands Division of KIA to discuss the road and other matters. A meeting with the HTO was cancelled due to a blizzard.
March 1	Rankin Inlet	John Witteman, Bertho Caron and Selma Eccles of AEM attended a meeting with the HTO in Rankin Inlet. The HTO raised a number of concerns with the route of the road, bridge location over the Meliadine River, wildlife monitoring along the road, plans for the Itivia port area, fish concerns with the bridge.
23-Mar	Rankin Inlet	Denis Gourde, Eric Lamontagne, Larry Connell, Selma Eccles, John Witteman met with the Hamlet Council to describe the all-weather road and ongoing activities at the Meliadine site. The Hamlet council supports the all-weather road and a letter of support can be expected. The underground program was explained and what is hoped to be gained from carrying out this work - getting needed information on the deep ore. The question of dust control was raised and lands available in town for development. The underground development was discussed.
23-Mar	Rankin Inlet	Denis Gourde, Eric Lamontagne, Larry Connell, Selma Eccles, John Witteman hosted a town hall meeting with the community to discuss the all-weather road and the proposed mine. A PowerPoint presentation in English and Inuktitut was presented. The meeting was well attended with over 100 persons present. The road is widely supported by the community as it offers access to Meliadine Lake and also is expected to lead to more economic activity. The question of jobs and careers was frequently raised and what must be done to get jobs such as supervisors and managers. Education was emphasized by AEM as well as on-the-job training. Support was voiced for the road and the proposed mine.

Issues raised in the Course of Public Consultation

The public meetings hosted by the project have focused on the exploration program and a hypothetical mine that may be developed in due course. The issues below are a capsule of those that emerged in discussions during the community consultations regarding the overall Meliadine West Gold Project.

Helicopter over-flights

The effects of over flights on both people and wildlife were raised at the first meeting. Project managers responded with an operating guideline to be followed (weather conditions permitting) that advises pilots to avoid passing over cabins and tents and also to maintain specified altitude over areas occupied by wildlife. This has not been a perfect solution and ongoing reminders to pilots have been necessary. The subject continues to be raised informally, indicating it to be an issue of ongoing public concern.

Water quality

The peculiar drainage configuration for Meliadine Lake was reviewed with the HTO and Elders' Committee who recognised that both major drainages in the Rankin area could be at risk of contamination in the event of disaster or bad practice. The project's environmental studies established a baseline for a comprehensive water quality monitoring program.

Standard industry diamond-drilling practice has been modified to remove all solids from drilling fluids before discharging these when drilling from lake ice platforms. In summer, sumps are developed to prevent drill cuttings from entering water bodies or water courses. These practices are a standard routine as prescribed in the Project Environmental Management System (EMS) filed with KIA.

Business and Employment opportunities

A recurring theme in discussion with leaders and elders was the need for employment for "our young people". The project has hired all unskilled help from the region and has provided on-the-job training as required. Long-term labour force development will require a major upgrading and training effort in partnership with government.

Fuel spills

Fuel management and threat of contamination to the environment is an ongoing public concern. The project EMS implements a rigorous inspection routine of all fuel storage vessels including ULC approved double-walled fuel vaults for bulk diesel fuel and Jet A storage.

Underground blasting effects on lakes and fish

This issue was raised in Chesterfield Inlet as a concern if mining were to go ahead. The physical effects of blasting on the surrounding rock and water at surface is controlled by the placement, sequence, and volume of explosive. This is planned to ensure that the maximum energy from the blast is released into the immediate area of the explosive and not into non-target areas as provided in usage guidelines for explosives. The effects of underground blasting on water bodies has not been a problem reported in the area of other operating mines; e.g. Giant and Con at Yellowknife and Lupin near Contwoyto Lake.

Experience elsewhere has shown that the particular area of sensitivity is fish eggs, which are sensitive to blasting vibrations in excess of 12 mm/s Peak Particle Velocity. The actual blasting of rock in or close to a river or lake bed can produce these vibration levels in immediately adjacent waters. It is, however, highly unlikely for blasting in the contemplated mine to produce these vibration levels in nearby fish-bearing waters. Guidelines for blasting in the vicinity of, and adjacent to, fish habitat have been established and will be followed.

Are there opportunities for women?

Both communities have a tremendous interest in the opportunities for employment in all aspects of project work. The project is an equal opportunity employer.

Is there exploration in the area of peoples' camps?

To date there has been very little drilling in the immediate vicinity of existing cabins or camps. Efforts are made to review the work with the persons at the campsite to learn if the exploration schedule can be adjusted so that disturbance and inconvenience can be avoided.

Work rotation

Time spent away from families is a concern for persons living at the camp for extended periods. While no rigid work rotation has been in place to date, rotations for local workers are flexible to meet both the work load and the individual needs of the employee. The preferred rotation for local employees for exploration work is 14 days in and 14 days out. The hours accumulated in the 14 days includes considerable overtime and so provides more income than regular hours per month in many seasonal community based jobs in the region.

Effects on caribou

Public concerns for wildlife are focused on caribou. Caribou are not regularly abundant in the area of the exploration program in any season. The project initiated a program of satellite telemetry in which five collars were put on female caribou to learn the calving ground affinity of the caribou in the area during winter. Are they of the Qamanirjuaq herd or a herd north of Chesterfield Inlet? Telemetry data showed that the caribou overwintering in the area of the exploration program in 1997-1998 were from at least two different calving areas - the Qamanirjuaq Lake calving ground to the southwest of Meliadine Lake, and a calving area north of Chesterfield Inlet. In 2008, Comaplex continued caribou surveys in the project area. AEM favours the regional monitoring of caribou that is presently carried out by the Government of Nunavut supplemented by observations of the Rankin Inlet HTO.

Temporary Fuel Storage

Safety concerns in storing fuel in an NTCL barge overwinter (2007-2008) was the subject of meetings with Rankin Inlet Hamlet Council and the public. This procedure was conducted for two winters without incident.

In general, the Project has received support and encouragement for its work from both Rankin Inlet and Chesterfield Inlet and has enjoyed a cooperative working relationship with the landlord, KIA.

In addition to the consultation meetings, presentations and annual Project Status Reports (in Inuktitut and English) have been prepared and provided at public meetings. Elders, students and community leaders have toured the property since 2006 to the present. This included touring the underground exploration workings while they were active and open.

Appendix D NIRB Forms

D1 – Nunavut Impact Review Board Screening Part 1 Form (English)
D2 – Nunavut Impact Review Board Screening Part 1 Form (Inuktitut)
D3 – Nunavut Impact Review Board Screening Part 2 Form
D4 – NIRB Table 1 – Identification of Environmental Impacts
D5 – Environmental Impact and Mitigation Matrix

PART 1 FORM
PROJECT DESCRIPTION INFORMATION REQUIREMENTS

For more information about the Nunavut Impact Review Board (NIRB) please visit our web site http://nirb.nunavut.ca/ or to access NIRB documents, project screenings, and project reviews please visit the Nunavut Impact Review Board ftp site http://ftp.nunavut.ca/nirb.

IMPORTANT!

Please be advised that your application will not be processed until the Sections 1 - 9 are completed in their entirety, in both English and Inuktitut (+ Inuinnaqtun, if in the Kitikmeot).

SECTION 1: APPLICANT INFORMATION

1. Project Name **Meliadine Gold Project: Gold Mine Construction, Operation and Reclamation**

2. Applicant's full name and mailing address:

Eric M. Lamontagne, Meliadine Project Manager
Agnico-Eagle Mines Ltd., Meliadine Project
P.O. Box 99
Rankin Inlet, Nunavut, X0C 0G0
Ph. 867-645-2920
Cell. 819-860-1693
eric.m.lamontagne@agnico-eagle.com

3. Primary contact's full name and mailing address:

John Witteman
Agnico-Eagle Mines Limited
601 – 2 Street
Canmore, AB T1W2K2

Phone 819 277 5444
jwitteman@agnico-eagle.com

SECTION 2: AUTHORIZATION NEEDED

1. Indicate all authorizations associated with the Project Description:

x	Regional Inuit Association (RIA)		Canadian Launch Safety (CLS)
x	Nunavut Water Board (NWB)	x	Environment Canada (EC)
x	Nunavut Planning Commission (NPC)	x	Government of Nunavut (GN)
x	Indian and Northern Affairs Canada (INAC)		Department of National Defense (DND)
x	Department of Fisheries and Oceans (DFO)	x	Hamlet
x	Community Government & Services (CG&S)		Parks Canada (PC)
x	Nunavut Research Institute (NRI)		Canadian Wildlife Service (CWS)
x	Department of Culture, Language, Elders, and Youth (CLEY)		**Other** (please specify):
		X	Navigable Waters – spod barge, water intake
		X	NRCan Canada – use of explosives

2. List the active permits, licenses, or other authorizations related to the Project Description, and their expiry date(s):

   Refer to Section 1.8, Table 1.2 in the Project Description.

3. List the pending permits, licenses, or other authorizations related to the Project Description:

   Refer to Section 1.9, Table 1.3 in the Project Description.

4. Has this project or <u>any components of this project</u> been previously screened or reviewed by NIRB?

X YES ☐ NO

If YES, indicate the previous project name and NIRB File No.

Meliadine West Gold Project: Application to Conduct Underground Mineral Exploration and Assemble a Bulk Sample, NIRB Files No. 07EN044, 10EN006 and 10EA018.

SECTION 3: PROJECT DESCRIPTION DESCRIPTION

1. **Indicate the type of Project Description (check all that apply)[1,2]: (See Appendix A for Project Type Definitions)**

1	All-Weather Road/Access Trail	☐	9	**Site Cleanup/Remediation**	X
2	Winter Road/ Winter Trail	☐	10	Oil and Natural Gas Exploration/Activities	☐
3	**Mineral Exploration**	X	11	Marine Based Activities	X
4	**Advanced Mineral Exploration**	X	12	Scientific/International Polar Year Research*	☐
5	**Mine Development /Bulk Sampling**	X	13	Harvesting Activities*	☐
6	**Pits and quarries**	X	14	Tourism Activities*	☐
7	Offshore Infrastructure (port, break water, dock)	☐	15	**Other[2]:**	☐
8	Seismic Survey	☐			

Please note:

1. All project types listed above, except those marked with an asterisk (*), will also require the Proponent to submit a **Part 2 Project Specific Information Requirement (PSIR) Form**. The NIRB application process will not be considered complete without the Part 2 PSIR Form.
2. Please be advised that in order to complete the NIRB process, the NIRB may request additional information at any time during the process.
3. If "Other" is selected, contact NIRB for direction on whether a Part 2 PSIR Form is required.

2. **If Project Type 3, 4 or 5 was selected above, please indicate the mineral of interest that is being extracted. Include a brief description.**

X	Metals (zinc, copper, gold, silver, etc) **Gold**
	Diamonds
	Uranium
	Other: ______

Refer to Section 1.4 in the Project Description.

3a. If Project Type 13, 14 or 15 was selected above, complete the table and questions below.

Transportation Type	Quantity	Proposed Use	Length of Use
E.g. Helicopter	*1*	*Site to site pick ups and drop offs*	*6 days*

3b. Describe any docks, piers, air strips or related structures that are to be used in conjunction with the proposed project activities. **Please note**: the building of new structures may require a Part 2 Form.

Refer to Section 2.3 of the Project Description.

3c. If a temporary camp site is to be established, describe the proposed structures in detail and indicate the type and source of power for the camp site if applicable.

Refer to section 2.5.2 in the Project Description.

4. Personnel

Refer to Section 6 of the Project Description.

5. Timing

Period of Construction:	*from*	**2012**	To	**2015**
Period of operation:	*from*	**2015**	To	**2026**
Proposed term of authorization:	*from*	**2012**	To	**2030**

6a. Region (check all that apply):

☐	North Baffin	X	**Kivalliq**	☐	Kitikmeot	☐	Transboundary: ______
☐	South Baffin	☐	National Park				

6b. Describe the location of the proposed project activities in a regional context, noting the proximity to the nearest communities and any protected areas.

Refer to Section 1.1 of the Project Description. There are no protected areas in the immediate vicinity of the Project site.

6c. Discuss the history of the site if it has been used for any project activities in the past.

Refer to Section 1.2 and Appendix A of the Project Description.

6d. Indicate if there are any known archaeological/paleontological historical sites in the area.

Refer to Section 4.3 of the Project Description.

7. Land Status (check all that applies):

X	Crown	X	Commissioners'	X	Municipal
X	Inuit Owned Surface Lands	X	Inuit Owned Sub-Surface Lands		

8a. Co-ordinates:
The Project is centered on the mine portal coordinates at

Min Lat (degree/minute)	**63° 01' 30" N**	Min Long (degree/minute)	**92° 10' 20" W**
Max Lat (degree/minute)		Max Long (degree/minute)	

NTS Map Sheet No: **55 N/1 – Refer to Figure 1.1 in the Project Description.**

(Please ensure that maps of the project are attached (1:50,000 **if available**, 1:250, 000 **Mandatory**) available from Natural Resources Canada)

8b. If the Project Description includes a **camp**, please provide the coordinates of the camp location

The accommodation complex serving the Project will be located immediately adjacent to the mill complex. Refer to Section 2.5.7, Figure 2.4 in the Project Description.

Min Lat (degree/minute)	**63° 01' 30" N**	Min Long (degree/minute)	**92° 10' 20" W**

Max Lat (degree/minute) ______________________ Max Long (degree/minute) ______________________

If different from above for the camp:

NTS Map Sheet No: **The Natural Resources Canada map is 55 N/1**

Please ensure that maps of the project are attached (1:50,000 **if available**, 1:250, 000 **Mandatory**) available from Natural Resources Canada

Please note that additional location information may be required in a subsequent Project Specific Information Requirement (PSIR) submission. This may take the form of a digital Geographic Information Systems (GIS) file.

SECTION 4: NON-TECHNICAL PROJECT DESCRIPTION

Please include a non-technical description of the Project Description, no more than 500 words, in English and Inuktitut (+Inuinnaqtun, if in the Kitikmeot). The project description should outline the following:

- The project activities, their necessity and duration;

The proposed Meliadine gold mine is located approximately 25 km northwest of Rankin Inlet. It will be an open pit and underground mine; ore will be extracted from 6 different deposits on the property. A mill and camp will be built near the largest gold deposit. The mill will extract the gold from the rock and then collect it to be shipped out as gold bars from site. The present exploration camp, plus additional temporary camps, will be used to house up to 700-800 workers during a 2-3 year construction period.

Once the mine is up and running, it will require about 500 workers at the mine site at any one time. With workers on a regular rotation of (typically) 14 days work on the site and 14 days rest off the site, a total of up to 700-1000 workers will be on the payroll of the mine. Mining should last around 10 years based on current estimates, but will continue for additional years if more gold is found. The mine will operate 24 hours per day (2 shifts), 7 days a week, 52 weeks per year. Once mining is completed, the buildings and equipment will be removed and there will be a 2-3 year period of reclamation at the mine site.

- Method of transportation;

An all-weather road will be built from Rankin Inlet to the mine site to support the advanced exploration program. Shorter spur roads will be built to access the different deposits. Construction and materials re-supply for the mine will mainly be brought in by barge or open marine vessels. The materials will be moved directly from the barge/ship to the site. It is expected that there will be an increase in ocean vessel traffic during construction and when the mine is in operation. The existing dock and barge ramp at Itivia will be sufficient for the project and the community combined.

The project will necessitate fuel storage in Rankin Inlet of up to 100 million litres. Fuel and supplies will be trucked from Rankin Inlet to the mine site on the all-weather road on a regular basis throughout the year.

Workers from outside Rankin Inlet will be flown to/from the Rankin Inlet airport and be transported to the mine site by bus.

• Any structures that will be erected (permanent/ temporary);

A group of buildings will be built at the mine site. A tank farm and laydown area will be built in Rankin Inlet. All mine buildings at site will be dismantled on closure of the mine. The access road would remain after closure of the mine. The Rankin Inlet tank farm would likely be sold or leased back to the town or government.

• Alternatives considered; and

There are limited to no alternative locations for where the actual mine can be located. Several alternatives are, however, being studied for the location of the tailings management area (tailings are the ground up rock that remains after the gold has been extracted from it) and the waste rock/overburden management area. Alternatives are also evaluated for some aspects of the project (ex. optimum mining rate, power supply, etc.) in an on-going feasibility study. Details on the alternative assessments will be provided in the Environmental Impact Statement.

• Long-term developments, the projected outcome of the development for the area and its timeline.

There is good potential for the discovery of additional gold bearing rock and an extension of the mine life over 10 years. This is very common with mines of this type. The long term effects of the project would include altering tundra and wetland/pond habitats in the immediate area of the mining infrastructure. It is estimated 1100 hectares of land will be disturbed by the mine.

The main elements in the project time line, based on technical considerations only and dependent on receipt of permits, are:
2011 - 2015 – project review, feasibility, permitting and design
2011 - 2015 – construction
2016 - 2026 – pit and underground mining
2016 - 2026 – ore processing
2011 - 2026 – mineral exploration on site and adjacent lands
2026 - 2029 – closure and monitoring (if exploration is not successful)

<u>IMPORTANT:</u> IF THE PROPOSED ACTIVITIES REQUIRE SUBMISSION OF A NIRB PART 2 PSIR FORM, PLEASE COMPLETE SECTION 8 ONLY, OTHERWISE CONTINUE ON WITH SECTION 5.

SECTION 5: MATERIAL USE

1. List equipment to be used (including drills, pumps, aircraft, vehicles, etc.):

2a. Detail fuel and hazardous material use:

2b. Describe the proposed Spill Prevention Plan.

3a. Detail the anticipated daily water consumption rates

3b. Have you applied for a Water License with the Nunavut Water Board?

O YES
O ...NO

If yes, what class of licence?

SECTION 6: WASTE DISPOSAL AND TREATMENT METHODS

1. **List the types of waste associated with the proposed project activities:**

2. **Describe the proposed Waste Management Plan.**

SECTION 7: COMMUNITY INVOLVEMENT & REGIONAL BENEFITS

1. **List the community representatives that have been contacted and provide the minutes of the meetings if available:**

SECTION 8: GENERAL QUESTIONS

1. **Will you be disturbing any known archaeological sites?**

☐ **NO** **X** **YES**

Please sign and date your application:

	Meliadine Project Manager	11 April 2011
Eric M Lamontagne	**Title**	**Date**

Appendix D2
Form 1 Inuktitut

ᐃᓚᖓ 1 ᑎᑎᕋᕆᐊᓕᒃ

ᐱᓕᕆᐊᕆᔭᐅᔭᕆᐊᖃᖅᑐᑦ ᑐᑭᖓ, ᑕᒪᑯᐊ ᑎᑎᕋᖅᑕᔭᕆᐊᖃᖅᑐᑦ

ᑐᑭᓯᑲᓂᕈᐊᕈᕕᑦ ᑎᒥᐅᔪᒥᒃ, ᓄᓇᕗᒥ ᐊᕙᑎᓕᕆᔨᖏᓐᓂᒃ ᑲᑎᒪᔨᖏᓐᓂᒃ, ᖃᕋᓴᐅᔭᕐᒥ ᐅᓇ ᑎᑎᕋᓗᒍ http://nirb.nunavut.ca/
ᐅᕙᓗᓂᑦ ᑎᑎᕋᖅᑕᐅᓯᒪᔪᓂᒃ ᕿᒥᕈᐊᕈᐊᐱᑦ, ᐅᔭᕋᖅᑕᓇᐊᕕᐅᓯᐊᕐᑐᓂᒃᑯ ᖃᐅᔨᓴᐅᔪᓂᒃᑯ, ᑐᑭᓯᓯᐊᕈᐊᕕᑦ ᐅᕙᖓ
ᖃᕋᓴᐅᔭᕐᒥ ᑕᑯᓗᒍ, site http://ftp.nunavut.ca/nirb.

ᐅᑯᐊ ᑎᑎᕋᖅᑕᐅᔭᕆᐊᖃᓚᕆᒃᑐᑦ

ᐅᑯᐊ ᓇᓴᐅᑎᓕᑦ ᑎᑎᕋᖅᑕᐅᔭᕆᐊᖃᖅᑐᑦ 1ᒥ-9ᒧᑦ ᑕᒪᕐᒥᒃ, ᐃᓄᒃᑎᑐᑦ ᖃᑉᓗᓇᑎᑐᑦ (ᕿᑎᕐᒥᐅᓂᑯᐱᑦ, ᐃᓄᐃᓇᖅᑐᑦ ᑎᑎᕋᒃᓯᒪᓗᒍ)

ᐱᒪᖓ 1: ᐅᔭᕋᒃᑕᕆᐊᑦ ᐱᓕᕆᐊᖓᓂᒃ ᑎᑎᕋᒃᑐᖅ

1. ᐱᓕᕆᐊᖑᓂᐊᕐᑐᖅ **ᑕᓯᕐᔪᐊᒥ ᑯᓗᒧᑦ ᐱᓕᕆᐊᖅ:**
ᑯᓗ ᐅᔭᕋᒃᑕᕆᐊᖓᓄᑦ ᓴᓇᔭᐅᓂᖓ, ᐃᖏᕋᓂᖓᓗ, ᓄᓇᐅᑉᓗ ᐃᐸᒋᒃᓴᕐᓂᖓ

2. ᐅᔭᕋᒃᑕᕆᐊᑦ ᐊᑎᖓ ᑐᕋᑎᖓᓗ:

Eric M. Lamontagne, Meliadine Project Manager
Agnico-Eagle Mines Ltd., Meliadine Project
P.O. Box 99
Rankin Inlet, Nunavut, X0C 0G0
Ph. 867-645-2920
Cell. 819-860-1693
eric.m.lamontagne@agnico-eagle.com

3. ᐅᔭᕋᒃᑕᕆᐊᓂ ᐱᓕᕆᔨ ᑎᑎᕋᕕᐅᔪᒃᓇᕐᑐᖅ :

John Witteman
Agnico-Eagle Mines Limited
601 – 2 Street
Canmore, AB T1W2K2

Phone 819 277 5444
jwitteman@agnico-eagle.com

ᐃᓚᖓ 2: ᐅᑯᐊ ᑎᒥᐅᔪᑦ ᐊᖏᖅᑕᐅᔭᕆᐊᖃᖅᑐᑦ

1. ᑎᒥᐅᔪᑦ ᑕᒪᕐᒥᒃ ᐊᖏᖅᑐᑦ ᓇᓗᓇᐃᔭᕐᓗᑎᒃ, ᐅᔭᕋᒃᑕᕆᓂᐊᕐᑐᑦ ᐱᓕᕆᐊᖏᓐᓂᒃ:

x	ᐊᐱᒃᑐᖅᓯᒪᔪᓂ ᐃᓄᐃᑦ ᑎᒥᖁᑎᖏᑦ (RIA)		ᑲᓇᑕᒥ ᐱᓕᕆᐊᓄᑦ ᐊᓂᖅᑕᐃᓕᔨᑦ (CLS)
x	ᓄᓇᕗᒥ ᐃᒪᓕᕆᔨᑦ ᑲᑎᒪᔨᖏᑦ (NWB)	x	ᑲᓇᑕᒥ ᐊᕙᑎᓕᕆᔨᑦ (EC)
x	ᓄᓇᕗᒥ ᐸᕐᓇᒃᑎᑦ ᑎᒥᖁᑎᖏᑦ (NPC)	x	ᓄᓇᕗᑦ ᑲᕙᒪᖓ (GN)
x	ᑲᕙᒪᑐᖃᒃᑯᖏᑦ ᐃᓄᓕᕆᔨᑦ (INAC)		ᑲᓇᑕᒥ ᐅᖓᑖᖅᑐᓕᕆᔨᑦ (DND)
x	ᑲᕙᒪᑐᖃᒃᑯᖏᑦ ᑕᕆᐅᓕᕆᔨᑦ (DFO)	x	ᕼᐊᓪᓚᑯᑦ
x	ᓄᓇᕗᑦ ᑲᕙᒪᖓᓂ, ᕼᐊᓪᓚᓕᕆᔨᑦ (CG&S)		ᑲᓇᑕᒥ ᒥᖑᐊᓯᖅᑐᓕᕆᔨᑦ (PC)
x	ᓄᓇᕗᒥ ᖃᐅᔨᓴᖅᑐᓕᕆᔨᒃᑯᑦ ᑎᒥᖓ (NRI)		ᑲᓇᑕᒥ ᓂᕐᔪᑎᓕᕆᔨᑦ ᑎᒥᖁᑎᖓ (CWS)
x	ᓄᓇᕗᑦ ᑲᕙᒪᒃᑯᖏᓐᓂ, ᐃᓚᒃᑯᓯᓕᕆᔨᑦ, ᐅᖃᐅᓯᓕᕆᔨᑦ, ᐃᓄᑐᖃᓕᕆᔨᑦ ᐊᒻᒪ ᒪᒃᑯᑦᑐᓕᕆᔨᑦ (CLEY)		ᐊᓯᖏᑦ ᑎᑎᕋᓗᒋᑦ (please specify):
		X	ᑕᓯᕐᓂ ᐅᐊᔭᕐᓂᕐᒧᑦ, ᓯᑲᐅᑦ, ᐃᒪᐅᑉ ᐊᑐᕐᓂᖓ
		X	ᑲᓇᑕᒥ ᖃᒃᑕᖅᑐᓕᕆᔨᑦ, NRCan

2. ᑎᑎᕋᓗᒋᑦ ᓚᐃᓴᑦ ᐊᖏᖅᑕᐅᓯᒪᔪᑦ, ᓚᐃᓴᓗᒃᑕᑦ, ᐊᓯᖏᑦᓗ ᐊᖏᖅᑕᐅᓯᒪᔪᑦ ᐅᔾᕋᒃᑕᕆᐊᕐᓂᒧᑦ, ᐊᒻᒪᓗ ᐱᐊᓂᒃᑲᕆᐊᖅᑕᖓᑦᓗ ᐃᓱᓕᑲᕆᓂᐊᕐᑕᖓᑦ:

ᖃᐅᔨᒋᐊᕐᕕᒋᓗᒍ ᐃᓚᖓ 1.8, ᐊᑎᖑᐊᖓ 1.2 ᐅᔾᕋᒃᑕᕐᕕᐅᓂᐊᕐᑐᑉ ᑎᑎᕋᒃᓯᒪᓂᖓᓂ

3. ᐊᖏᒐᐅᔭᕆᐊᖃᖅᑐᑦ ᓚᐃᓴᑦ ᑎᑎᕋᕐᓗᒋᑦ, ᓚᐃᓴᓗᒃᑕᑦ, ᐊᓯᖏᑦᓗ ᐊᖏᖅᑕᐅᔭᕆᐊᖃᖅᑐᑦ ᐅᔾᕋᒃᑕᕆᐊᕐᓂᕐᒧᑦ

ᖃᐅᔨᒋᐊᕐᓗᒍ ᐃᓚᖓ 1.9, ᐊᑎᖑᐊᖓ 1.3 ᐅᔾᕋᒃᑕᕆᐊᕐᕕᐅᓂᐊᕐᑐᑉ ᑎᑎᕋᒃᓯᒪᓂᖓᓂ

4. ᐅᔾᕋᒃᑕᕆᐊᕐᕕᐅᓯᐊᕐᑐᖅ ᖃᐅᔨᓴᒐᐅᓯᒪᓕᖅᐸ ᐱᓕᕆᐊᕆᔭᐅᓂᐊᕐᓂᖏᑦ ᑕᒪᕐᒥᒃ, ᓄᓇᕗᑦ ᐊᕙᑎᓕᕆᔨᑦ ᑲᑎᒪᔨᖏᓂᑦ ?
X ᐄ ☐ ᐋᒃ
ᐊᖏᖅᓯᒪᒃᐸᑦ, ᐅᔾᕋᒃᑕᕆᐊᑦ ᐊᑎᕆᓚᐅᖅᑕᖓ ᐊᒻᒪᓗ ᓄᓇᕗᒥ ᐊᕙᑎᓕᕆᔨᑦ ᑲᑎᒪᓕᖓᓂ, ᓇᓴᐅᑎᖓ.

ᑕᓯᕐᔪᐊᕐᒥ ᑯᓗᒧᑦ ᐱᓕᕆᐊᖅ: ᐅᔾᕋᒃᑕᕆᐊᕐᓂᕐᒧᑦ ᓄᓇᐅᑉ ᐃᓗᐊᓂ ᐱᓂᓗᒍᑦ ᐊᒻᒪᓗ ᐅᔾᕋᐃᑦ ᓄᓇᒥᑦ ᐱᔪᑦ ᖃᐅᔨᓴᕐᓂᖏᑦ, ᓄᓇᕗᑦ ᐊᕙᑎᓕᕆᔨᑦ ᑲᑎᒪᔨᖏᓂ ᓇᓴᐅᑎᖓ NIRB Files No. 07EN044, 10EN006 and 10EA018.

ᐃᓚᖓ 3: ᐅᔾᕋᒃᑕᕆᐊᕕᐅᓯᐊᕐᑐᑉ ᑐᑭᖓ ᑎᑎᕋᒃᓯᒪᔪᖅ

1. ᑐᑭᖃᕐᓗᒍ ᑎᑎᕋᓯᒪᓗᓂ ᐅᔾᕋᒃᑕᕆᐊᕐᕕᐅᓯᕐᑐᑉ ᐱᓕᕆᐊᕆᓂᐊᕐᑕᖏ (ᓇᓗᓇᐃᕐᓗᒋᑦᓗ ᐱᓕᕆᐊᕆᔭᐅᓂᐊᕐᑐᑦ) : (ᑕᑯᓗᒍ ᑎᑎᕋᒃᓯᒪᔪᑉ ᐃᓚᖓᓂ “ᐊ” ᐅᔾᕋᒃᑕᕆᐊᕐᕕᐅᓂᐊᕐᑐᑉ ᑐᑭᓕᐅᖅᓯᒪᓂᖓᑕ ᑎᑎᕋᒃᓯᒪᔪᓂ)

1	ᐅᑭᐅᓗᒃᑕᒥ ᐅᑐᕈᓇᖅᑐᖅ ᐊᑉᑎᖏᑦ	☐	9	ᐅᔾᕋᒃᑕᕆᐊᕕᐅᑉ ᐊᕙᑕᓂ ᓴᓗᒪᖅᓴᕐᓂᖅ, ᐃᐸᒋᒃᓴᕐᓂᕐᓗ	X
2	ᐅᑭᐅᒥ ᐊᑉᖁᑎᓕᐅᒐᐅᓯᒪᓂᖏᑦ	☐	10	ᐅᖅᓱᐊᓗᐃᑦ, ᐊᒻᒪᓗ ᐅᖅᓱᐊᓗᐃᑦ ᓄᓇᐅᑉ ᐊᑕᓂ ᕿᓂᒐᐅᔪᑦ, ᐱᓕᕆᐊᕆᔭᐅᔪᑦᓗ	☐
3	ᐅᔾᕋᓂᒃ ᓴᕕᒃᓴᓕᓂᒃ ᕿᓂᕐᓂᖅ	X	11	ᑕᓯᕐᓂᓗ, ᐃᒪᕐᒥᓗ ᐱᓕᕆᐊᕆᔭᐅᔪᑦ	X
4	ᕿᓂᒐᐅᔪᑐᖃᐃᑦ ᓴᕕᒃᓴᓕᑦ ᐅᔾᕋᐃᑦ	X	12	ᖃᐅᔨᓴᒐᐅᔪᑦᓗ, ᓄᓇᕐᔪᐊᕐᒥ ᐅᑭᐅᖓᓂ ᖃᐅᔨᓴᒐᐅᔪᑦ, ᐱᓕᕆᐊᕆᔭᐅᔪᑦ *	☐
5	ᐅᔾᕋᒃᑕᕆᐊᕕᐅᓂᐊᕐᑐᑉ ᐱᕙᓕᐊᓂᖓ, ᐅᔾᕋᓂᒃᓗ ᖃᐅᔨᓴᕐᓂᖅ	X	13	ᓂᕐᔪᑎᑦ ᐊᖑᓇᓱᒐᐅᕙᒃᑐᑦ ᐱᓕᕆᐊᕆᔭᐅᔪᑦ*	☐
6	ᓄᓇᒥ ᐃᑎᖅᓴᓕᒃᒥ ᐅᔾᕋᒃᑕᕐᕕᑦ, ᓯᐅᕋᒃᑕᕐᕕᑦᓗ	X	14	ᐸᓚᕋᓂᕐᒧᑦ ᑎᑭᐸᒃᑐᓄᑦᓗ ᐱᓕᕆᐊᑦ *	☐
7	ᓯᒡᔭᒥ ᓴᓇᔭᐅᓯᒪᔪᑦ, (ᑐᓚᕕᑦ, ᐃᒪᕐᒥᑦ ᓴᐳᒥᕕᑦ, ᓯᑲᐅᑦᓗ ᑐᓚᕖᖏᑦ)	☐	15	ᐊᓯᖏᑦ (2):	☐
8	ᓄᓇᐅᑉ ᓴᔪᐱᓚᓂᖓᓄᑦ ᖃᐅᔨᓴᕐᓂᖅ	☐			

<u>**ᐅᑯᐊ ᐅᕝᕚᕐᓗᒋᑦ :**</u>

4. ᐅᔾᕋᒃᑕᕆᐊᓂᑦ ᐊᑎᒋᖏᑐᑦ ᐱᓕᕆᐊᖏᑦ ᖁᓚᓂ ᑎᑎᕋᒃᓯᒪᔪᑦ, ᓇᓗᓇᐃᑯᑕᓇᓕᑦ ᐃᐊᓇᐃᑐᒥᑦ * ᑭᓯᒥᒃ ᐅᔾᕋᒃᑕᕆᐊᓂᑦ ᑎᑎᕋᒃᓯᒪᔪᒥᒃ ᑐᓂᓯᔭᕆᐊᓕᑦ. ᐅᑯᐊ ᑐᓂᔭᐅᓗᑎᒃ, **ᐃᓚᖓ 2 ᐅᔾᕋᒃᑕᕆᐊᑦ ᐱᓕᕆᐊᕆᓂᐊᕐᑕᖏᑦ, ᑕᑕᑎᕆᐊᓕᑦ.** ᓄᓇᕗᑦ ᐊᕙᑎᓕᕆᓂᕐᒧᑦ ᑲᑎᒪᔨᖏᓂᑦ, ᐱᓕᕆᓇᓯᐊᕈᑎᒋᔭᐅᔪᖅ ᑎᑎᕋᕆᐊᓕᒃ, ᐃᓚᖓ 2 ᑎᑎᕋᒃᓯᒪᖏᑉᐸᑦ ᐱᐊᓂᓚᖏᑐᖅ.

5. ᓄᓇᕗᒥ ᐊᕙᑎᓕᕆᔨᑦ ᑲᑎᒪᔨᖏᑦ ᑎᑎᕋᑯᖓᑕ ᐱᓕᕆᐊᖏᑦ ᐱᓕᕆᐊᕆᖁᔭᖏᑦᓗ, ᐱᐊᓂᒃᓯᒪᖏᑉᐸᑕ ᐱᐊᓂᕆᐊᖃᖅᑐᑦ. ᑕᒪᑯᐊᓗ ᓄᓇᕗᒥ ᐊᕙᑎᓕᕆᓕᑦ ᑲᑎᒪᔨᖏᑕ ᐱᓕᕆᐊᕆᖁᔭᖏᑦ, ᑎᑎᕋᖁᔭᐅᔪᑦᓗᓂᑦ ᐱᐊᓂᒃᑕᐅᔭᕆᐊᖃᖅᑐᑦ.

6. ᐅᓇ “ᐊᓯᖓ” ᑎᑎᕋᒃᓯᒪᐸᑦ, ᖃᐅᔨᑎᑕᐅᓕᑦ ᓄᓇᕗᑦ ᐊᕙᑎᓕᕆᓕᑦ ᑲᑎᒪᔨᑦ ᑎᑎᕋᕕᖓᑦ, ᐊᓯᖏᓂᒃ ᑎᑎᕋᕆᐊᖃᕐᒪᖔᑕ, ᐃᓚᖓᓂ 2ᒥ, ᑎᑎᕋᑕᐅᑲᓂᕆᐊᖃᕐᒪᖔᑦ.

2. ᐅᑯᐊ ᐊᑎᒋᖏᑐᑦ ᐱᓕᕆᐊᕆᔭᐅᓂᐊᕐᑐᑦ ᓇᓴᐅᑎᓕᑦ 3, 4, ᐊᒻᒪᓗ 5 ᓇᓗᓇᐃᕈᓯᖅᑕᐅᐸᑕ, ᓱᓇ ᓴᕕᒃᓴᖅ ᐅᔾᕋᒃᑕᒐᐅᒪᖔᑦ ᓇᓗᓇᐃᕐᓗᒍ. ᑎᑎᕋᓗᒍᓗ ᐅᔾᕋᒃᑕᒐᐅᓂᐊᕐᑐᑉ ᐱᓕᕆᐊᕆᔭᐅᓂᐊᕐᓂᖓ.

X	ᓴᕕᑦ (ᓴᕕᓴᖅ ᓯᒃ, ᑲᐳ, ᑯᓗ, ᕿᐸᓕᖅᑐᖅ ᓴᐳᒃ, ᐊᓯᖏᑦᓗ) **ᑯᓗ** Metals (zinc, copper, gold, silver, etc) **Gold**
	ᐊᓕᒍᔭᐃᑦ Diamonds
	ᔫᖑᓯᐃᑐᖅ Uranium
	ᐊᓯᖏᑦ---Other:

ᑕᒻᓇ ᖃᐅᔨᒋᐊᕐᓗᒍ ᐃᓚᖓᓂ 1.4ᒥ, ᐅᔭᕋᒃᑕᒐᐅᓂᐊᕐᑐᑉ ᑎᑎᕋᒃᑕᐅᓯᒪᓂᖓᓂ.

3a. ᖃᐅᔨᒋᐊᕐᓗᒍ ᐃᓚᖓᓂ 13, 14, ᐅᕙᓗᓂᑦ 15 ᑕᑯᐊ ᓇᓗᓇᐃᖅᓯᒪᐸᑕ. ᐅᑯᐊᓗ ᐊᐱᕐᑯᓯᑦ ᑭᐅᓗᒋᑦ.

ᖃᓄᖅᑲ ᐃᖏᕋᑎᑕᐅᓂᐊᕐᐸᑦ	ᐊᒥᓱᓂᖏᑦ	ᐊᑐᒐᐅᓯᕐᓂᖓ	ᐊᑐᖅᑕᕐᓂᖓ
ᐅᑦᑐᑎᒋᓗᒍ, ᖁᓚᒥᒍᓚᑯᑦ	*1*	*ᐱᓕᕆᕙᒃᓄᑦ ᐊᔪᖅᑐᖅᑕᐅᓂᖏᑦ, ᐊᓯᖏᑦᓗ*	*ᐅᑉᓗᑦ 6*

3b. ᑎᑎᕋᓗᒋᑦ ᓯᕐᔭᒥ ᑐᓚᕕᐅᓂᐊᕐᑐᑦ, ᓯᕐᔭᒧ ᐊᑐᓚᒃᓴᑦ, ᑎᖕᒥᓯᑦ ᒥᕕᖏᑦ, ᐊᓯᖏᑦᓗ ᐊᑐᓚᐅᓂᐊᕐᑐᑦ ᐅᔭᕋᒃᑕᓇᐊᕐᓂᕐᒧᑦ. **ᐅᔾᖅᑐᓇᕐ:** ᓄᑦᑦ ᐱᓕᕆᓂᕐᒧᑦ ᐊᑐᕐᓂᐊᑦ ᑎᑎᕋᐅᓯᐅᐸᑕ, ᑎᑎᕋᕆᐊᓕᒃ 2, ᑎᑎᕋᓗᒍ ᐃᓚᐅᖅᑕᐅᓗᒍ.

ᖃᐅᔨᒋᐊᕐᓗᒍ ᐃᓚᖓ 2.3, ᐅᔭᕋᒃᑕᕆᐊᕐᕕᐅᓂᐊᕐᑐᑉ ᐅᓂᑲᐅᓯᖓᓂ ᑎᑎᕋᒃᓯᒪᔪᓂ

3c. ᐊᐅᔭᒥᓗᓂᑦ ᓄᓇᓕᐅᕋᓚᓇᕐᓂᐊᖅᑐᖅ ᐅᔭᕋᒃᑕᕆᐊᕐᓂᕐᒧᑦ, ᑐᑭᖃᕐᓗᒍ ᑎᑎᕋᐅᑎᒋᒍᒃ, ᐊᒪᓗ ᓱᓇᑦ ᓄᓇᓕᒃᒥ ᓴᓇᔭᐅᓂᐊᕐᒪᖔᑕ, ᖃᓄᖅ ᐃᑯᒪᖅᐅᑎᖃᕐᓂᐊᕐᒪᖔᑦ. ᐃᑯᒪᖅᐅᑎᖃᕐᓂᐊᕐᐸᑦ.

ᖃᐅᔨᒋᐊᕐᓗᒍ ᐃᓇᖓ 2.5.2, ᐅᔭᕋᒃᑕᕆᐊᕕᐅᓂᐊᕐᑐᑉ ᑎᑎᕋᐅᓯᐅᓯᒪᓂᖓᓂ

4. ᐱᓕᕆᔩᑦ

ᖃᐅᔨᒋᐊᕐᓗᒍ ᐃᓚᖓ 6, ᐅᔭᕋᒃᑕᕆᐊᕕᐅᑉ ᑎᑎᕋᐅᓯᐅᓯᒪᓂᖓᓂ

5. ᐅᔭᕋᒃᑕᕆᐊᕐᓂᐅᑉ ᐅᑭᐅᖏᑦ

ᓴᓇᔭᐅᕙᓚᐊᓂᖓ	*from*	**2012**	To	**2015**
ᐅᔭᕋᒃᑕᕆᐊᕐᓂᖓ	*from*	**2015**	To	**2026**
ᐅᔭᕋᒃᑕᕆᐊᕐᓂᐅᑉ ᐊᖏᒐᐅᓯᒪᓂᖓ	*from*	**2012**	To	**2030**

6a. **ᓄᓇᓕᐅᑉ ᐊᕕᒃᑐᖅᑕᐅᓯᒪᓂᖓ (ᑎᑎᕋᓗᒃᑕᕐᓗᒋᑦ ᐱᓕᕆᕕᐅᔪᒃᑕᑦ)**

- [ ] ᕿᑭᖅᑕᓗᑉ ᐊᑦᑐᐊᓂ
- [ ] South Baffin
- [X] **ᑭᕙᓪᓕᖅ**
- [ ] ᑲᓇᑕᒥ ᒥᖑᐃᓯᕐᕕᒃ
- [ ] ᕿᑎᕐᒥᐅᓂ
- [ ] Transboundary: ____________

6b. ᐅᔭᕋᒃᑕᕆᐊᕐᕕᐅᓂᐊᕐᑐᑉ ᐱᓕᕆᐊᖏᑦ, ᓇᓂᓗ ᐊᕕᒃᑐᖅᓯᒪᔪᒥ ᓄᓇᒥ ᐱᓕᕆᐊᖑᓂᐊᕐᒪᖔᑦ ᑎᑎᕋᓗᒍ, ᐊᒪᓗ ᓄᓇᓕᒃ ᖃᓂᓂᕐᐸᖅ ᑎᑎᕋᓗᒍ ᐊᒪᓗ ᐅᔭᕋᒃᑕᕆᐊᕕᐅᑕᐃᓕᔪᑦ ᓄᓇᑦ ᑎᑎᕋᓗᒋᑦ.

ᖃᐅᔨᒋᐊᕐᓗᒍ ᐃᓚᖓ 1.1 ᐅᔭᕋᒃᑕᕆᐊᕐᕕᐅᓂᐊᕐᑐᑉ ᑎᑎᕋᐅᓯᐅᓯᖓᓂ. ᓄᓇᑦ ᐱᓕᕆᕕᐅᑕᐃᓕᔪᑦ ᐅᖓᓯᒃᐸᑕ, ᐅᔭᕋᒃᑕᕆᐊᕐᕕᐅᓂᐊᕐᑐᒥᑦ ᓇᒪᒃᑐᖅ.

6c. ᐅᔭᕋᒃᑕᕆᐊᕐᕕᐅᓂᐊᕐᑐᖅ ᐅᓂᑉᑲᐅᓯᓇᓗᒍ, ᑭᖑᓂᕐᒥᓗ ᐅᔭᕋᒃᑕᕆᐊᕕᐅᓚᐅᖅᐸᑦ ᑐᑭᓯᓇᕐᓗᖑ.

ᖃᐅᔨᒋᐊᕐᓗᒍ ᐃᓚᖓ 1.2 ᐊᒪᓗ ᑎᑎᕋᒃᓯᒪᔪᑦ ᐃᓚᖓᓂ "ᐊ « ᐅᔭᕋᒃᑕᕆᐊᕐᕕᐅᓂᐊᕐᑐᑉ ᑎᑎᕋᐅᓯᐅᓯᖓᓂ

6d. ᑎᑎᕋᓗᒋᑦ ᐃᑦᓴᕐᓂᑕᖅᑲᕐᕕᑦ, ᐅᔭᕋᓂᓗ ᓂᕐᔪᑎᕕᓂᑦ ᑐᒥᖃᕐᐸᑕ, ᐅᔭᕋᒃᑕᕆᐊᕐᕕᐅᓂᐊᕐᑐᑉ ᓴᓂᐊᓂ.

ᖃᐅᔨᒋᐊᕐᓗᒍ ᐃᓚᖓ 4.3 ᐅᔭᕋᒃᑕᕆᐊᕕᐅᓂᐊᕐᑐᑉ ᑎᑎᕋᐅᓯᐅᓯᖓᓂ

7. ᓄᓇᐅᑉ ᐊᑐᕐᓂᖓ (ᓇᓗᓇᐃᕐᓗᒋᑦ ᑕᒪᕐᒥᒃ ᓄᓇᐃᑦ ᐊᑐᕐᓂᖏᑦ, ᑭᑐᑦᓗ ᐊᑐᕐᒪᖔᑕ):

- [X] ᑲᕙᒪᑐᖃᑯᑦ ᓄᓇᖓᑦ
- [X] ᓄᓇᐅᑉ ᖃᖓ, ᐃᓄᐃᑦ ᓇᒥᓂᖓᑦ
- [X] ᓄᓇᕗᑦ ᑲᕙᒪᑯᖏᑕ ᓄᓇᖓᑦ, ᑲᒥᓴᓄ
- [X] ᓄᓇᐅᑉ ᐃᓗᐊᓂ ᓄᓇᑦ, ᐃᓄᐃᑦ ᓇᒥᓂᖓᑦ
- [X] Hᐊᒻᓚᑦ ᓄᓇᖁᑎᖓᑦ

8a. ᓄᓇᐃᑦ ᓇᓗᓇᐃᖅᓯᒪᓂᖓᑦ ᓄᓇᖑᐊᕐᓂ
ᓄᓇᐃᑦ ᓇᓗᓇᐃᖅᓯᒪᔪᑦ, ᐅᔭᕋᒃᑕᕆᐊᑦ ᖃᐅᔨᒋᐊᕐᕕᖓᓂ ᖃᓇᑕᐅᔭᒥ ᐅᕙ

Min Lat (degree/minute) **63° 01' 30" N** Min Long (degree/minute) **92° 10' 20" W**
Max Lat (degree/minute) ______ Max Long (degree/minute) ______

NTS Map Sheet No: **55 N/1 – Refer to Figure 1.1 in the Project Description.**

(ᓄᓇᖑᐊᑦ ᐃᓕᖅᑕᐅᓗᒋᑦ, ᑕᑯᓄᖓ ᐅᔾᕿᒃᑕᕆᐊᕈᒧᑦ ᐱᓕᕆᐊᖑᓂᐊᕐᑐᓄᑦ (1:50,000 **if available**, 1:250, 000 **Mandatory**) ᓄᓇᖑᐊᑦ ᐱᔭᐅᔪᒃᓇᕐᑐᑦ ᑲᕙᒪᑐᖅᑯᓂᑦ, ᓄᓇᓕᕆᔩᖏᓂᑦ)

8b. ᐅᔾᕿᒃᑕᕆᐊᕐᓂᕐᒧᑦ ᐱᓂᓗᒍᑦ ᑎᑎᕋᒃᓯᒪᔪᒥ, ᐅᔾᕿᒃᑕᕆᐊᕐᓂᐅᑉ ᓄᓗᓇᐃᓂᖏᑦ ᓄᓇᖑᐊᕐᓂ ᐃᓚᐅᖅᑕᐅᓗᒍ, ᓄᓇᓕᐊᓚᖅᕐᓂᐊᕐᐸᑦ.

ᐅᔾᕿᒃᑕᕆᐊᕐᕕᒃᒥ ᓄᓇᓕᐊᓚᖅ, ᓴᓂᐊᓂᓴᕆᐊᖅᖅᑐᖅ ᐅᔾᕿᓂᒃ ᓯᕐᑯᑎᕆᕖᒃ. ᑕᒻᓇ ᖃᐅᔨᒋᐊᕐᓗᒍ ᐃᓚᖓᓂ 2.5.7, ᐊᑎᖑᐊᖓᓂ 2.4.

Min Lat (degree/minute) **63° 01' 30" N** Min Long (degree/minute) **92° 10' 20" W**

Max Lat (degree/minute) ______ Max Long (degree/minute) ______

ᐅᔾᕿᒃᑕᕆᐊᕐᑯᐅᓂᐊᕐᑐᒥ ᓄᓇᓕᐊᓚᖑᓂᐊᖅ ᐊᓚᐅᒃᐸᑦ ᕐᑯᓚᓂᑦ

NTS Map Sheet No: **ᑲᓇᑕᐅᑉ ᑲᕙᒪᑯᖓᓂ ᓄᓇᖑᐊᖅ ᓇᓴᐅᑎᓕᒃ Canada map is 55 N/1**

ᐅᔾᕿᒃᑕᕆᐊᕐᕕᐅᓂᐊᕐᑐᖅ ᓄᓇᖑᐊᕐᒥ ᐊᑕᔭᕆᐊᓕᒃ (1:50,000 **if available**, 1:250, 000 **Mandatory**) ᓄᓇᖑᐊᑦ ᐱᔭᐅᔪᒃᓇᕐᑐᑦ ᑲᕙᒪᑐᖅᑯᓂᑦ ᐅᕙᖓᑦ Natural Resources Canada

ᐅᔾᕐᑐᕆᑦ ᐃᓚᖏᑦ ᐅᔾᕿᒃᑕᕆᐊᕐᕕᒃᒥ ᐱᓕᕆᕖᐅᔪᑦ, ᓄᓇᖑᐊᕐᒥᖏᑐᑦ ᖃᐅᔨᔭᐅᑲᓂᕆᐊᖃᕐᓂᕈᒥᒃ ᐃᓕᔭᕆᐊᖃᕐᑐᑦ. ᑕᒪᑯᐊ ᓄᓇᖑᐊᕐᓂ ᐱᓕᕆᕖᑦ ᐃᓕᔭᐅᕗᒃᑕᑦ ᓄᓇᖓᐊᕐᓄᑦ ᖃᕆᑕᐅᔭᕐᒧᑦ digital Geographic Information Systems (GIS) file.

ᐃᓚᖓ 4: ᐅᔾᕿᒃᑕᕆᐊᕐᓂᕐᒧᑦ ᐱᓕᕆᐊᕆᔭᐅᓱᐊᕐᑐᑦ ᑐᑭᖓ

ᑎᑎᕋᓗᒍ ᐅᔾᕿᒃᑕᕆᐊᕐᕕᐅᓂᐊᕐᑐᒥ ᐱᓕᕆᐊᕆᔭᐅᓂᐊᕐᑐᓗᒃᑕᑦ, ᐃᓄᒃᑎᑐᑦᓗ ᖃᑉᓗᓇᑎᑐᑦᓗ (ᐃᓄᐃᓇᖅᑐᑦ ᕿᑎᕐᒥᐅᑕᐅᓚᕕᑦ). ᐱᓕᕆᐊᕆᔭᐅᓂᐊᖅᑐᓗᑕᑦ ᑎᑎᕋᔭᐅᓕᖅᐸᑕ, ᐅᑯᐊ ᑎᑎᕋᓚᐅᔭᕆᐊᖅᖅᑐᑦ:

ᖃᐅᔨᒋᐊᓗᒍ ᐱᓕᕆᐊᕆᔭᐅᓂᐊᕐᑐᓗᒃᑕᑦ ᑎᑎᕋᒃᓯᒪᓂᖓᓂ.

- ᐅᔾᕿᒃᑕᕆᐊᕐᕕᐅᓂᐊᕐᑐᒥ ᐱᓕᕆᐊᖑᓂᐊᕐᑐᑦ, ᐊᑐᕐᓂᐊᖅᑐᑦ ᐊᒪᓗ ᖃᓄᕐᓗ ᐱᓕᕆᐊᕆᔭᐅᖅᑕᖅᑎᒋᓂᐊᕐᐸ;
  ᐅᔾᕿᒃᑕᕆᐊᕐᕕᐅᓯᐊᕐᑐᖅ ᑕᓯᕐᔪᐊᕐᒥ ᑯᓗᒥᒃ, ᐅᖓᓯᒃᑎᒋᔪᖅ ᑲᖏᖅᓱᓂᕐᒥᑦ 25 ᑭᓚᒥᑐᑦ, ᑕᒻᓇ ᖃᖏᖅᓱᓂᐅᑉ ᐊᑦᒍᐊᓂ. ᓄᓇᐅᑉ ᐃᓗᐊᓂ ᐅᔾᕿᐃᑦ ᑯᓗᖃᖅᑐᑦ 6ᖑᒧᑕ. ᓄᓇᐅᑉ ᐃᓗᐊᓂ ᐊᖏᓂᖅᐸᖅ ᑯᓗᖃᖅᑐᑉ ᓴᓂᐊᓂ, ᐅᔾᕿᓂᒃ ᓯᕐᑯᑎᕆᕖᒃ ᐊᒪᓗ ᐃᒡᓗᔪᐊᓗᕿᑦ ᓴᓇᔭᐅᓂᐊᕐᑐᑦ. ᐅᔾᕿᓂᒃ ᓯᕐᑯᑎᕆᕖᒃᒥ, ᐅᔾᕿᐃᑦ ᓯᕐᑯᑎᓚᐅᓗᑎᒃ ᑯᓗ ᐊᒍᔭᐅᑕᕐᓂᐊᖅᑐᖅ, ᐊᒪᓗ ᑯᓗ ᐊᐅᓚᖅᑎᑕᐅᑕᕐᓗᓂ ᑕᓯᕐᔪᐊᕐᒥᑦ. ᑕᓯᕐᔪᐊᕐᒥᑐᑦ ᐃᒡᓗᔪᐊᓗᕿᑦ, ᓄᓇᓕᐊᓚᕐᓗ, ᐊᓯᖏᑦᓗ, ᐃᓄᖅᑲᓂᐊᕐᓂᐊᖅᑐᖅ ᐱᓕᕆᔩᓂᒃ. ᐱᓕᕆᔩᑦ ᐊᒥᓱᑎᒋᔪᑦ 700-800 ᖃᓂᖓᓂ, ᑕᓯᕐᔪᐊᕐᒥ ᐅᔾᕿᒃᑕᕆᐊᕐᕕᒃᓴᖅ ᓴᓇᔭᐅᓕᕈᒥ. ᓴᓇᔭᐅᓂᐊᕐᑐᖅ ᐅᑭᐅᓂᒃ 2 ᓂᒃᓗ 3ᓗ ᖃᓂᖓᓂ.

  ᑕᓯᕐᔪᐊᕐᒥ ᐅᔾᕿᒃᑕᕐᕕᒃ ᐃᖏᕋᓕᕈᒥ, ᐱᓕᕆᔩᑦ ᐊᒥᓱᑎᒋᓇᔭᖅᑐᑦ 500 ᖃᓂᖓᓂ. ᐱᓕᕆᔩᑦ ᑭᐳᒃᑕᐅᓇᔭᕐᑐᑦ, 14ᓂᒃ ᐅᓪᓗᓂᒃ ᐱᓕᕆᓗᑎᒃ ᐊᒪᓗ 14ᓂᒃ ᐅᓪᓗᓂᒃ ᓄᖅᑲᖓᓗᑎᒃ. ᐅᔾᕿᒃᑕᕐᕕᒃᒥ ᐱᓕᕆᔩᑦ ᑭᓇᐅᔭᓕᐅᕐᑐᑦ ᐊᒥᓱᑎᒋᓇᔭᖅᑐᑦ 700-1000 ᖃᓂᖓᓂ. ᐅᔾᕿᒃᑕᕆᐊᕐᕕᒃ ᐃᖏᕋᓇᔭᖅᑐᖅ ᐅᑭᐅᑦ 10 ᖃᓂᖓᓂ. ᐅᔾᕿᒃᑕᕆᐊᑦ ᓇᓂᓯᑲᓂᕐᐸᑕ ᑯᓗᒥᒃ ᑕᓯᕐᔪᐊᑉ ᓴᓂᐊᓂ, ᐅᔾᕿᒃᑕᕆᐊᕐᕕᒃ ᐃᖏᕋᑲᓂᕋᔭᖅᑐᖅ ᐊᒥᓱᓄᑦ ᐅᑭᐅᓄᑦ. ᐅᔾᕿᒃᑕᕐᕕᒃ ᐃᖏᕋᓇᔭᕐᑐᖅ ᐃᑲᕋᓄᑦ 24ᓄᑦ, 7 ᐅᓪᓗᑦ ᓴᓇᑕᐃᓕ ᐊᑯᓂᖓᓂ, ᐅᑭᐅᓗᒃᑕᖅ. ᑯᓗ ᓄᖓᐸᑦ ᑕᓯᕐᔪᐊᕐᒥ, ᐃᒡᓗᔪᐊᓗᕿᑦ ᐅᔾᕿᒃᑕᕐᕕᒃᒥ ᓯᕐᑯᑎᓚᐅᓗᑎᒃ, ᓄᓇᓗ ᐃᐸᒋᒃᓴᕐᓗᒍ ᐅᑯᐊᓚᐅᓇᔭᖅᑐᖅ. ᐅᑯᐊᐸᓕᐊᓕᖅᐸᑦ 2ᓗ 3ᓗ ᐅᑭᐅᓄᑦ ᐃᐸᒋᒃᓴᓗᕿᓇᔭᖅᑐᑦ.

- ᑕᓯᕐᔪᐊᕐᒧᑦ ᐅᐊᔭᕐᓂᖅ;
  ᐅᑭᐅᓗᒃᑕᒥ ᐊᑉᕐᑯᑦ ᐊᑐᕈᓇᖅᑐᖅ ᓴᓇᔭᐅᓂᐊᕐᑐᖅ ᖃᖏᖅᓱᓂᕐᒥᑦ ᐅᔾᕿᒃᑕᕐᕕᒃᒧᑦ ᑕᓯᕐᔪᐊᕐᒥ. ᐊᓯᖏᓄᑦ ᐅᔾᕿᒃᑕᕐᕕᒃᓄᑦ ᑕᓯᕐᔪᐊᑉ ᓴᓂᐊᓂ ᐅᕝᕐᑯᑎᑦ ᓇᐃᑐᑦ ᓴᓇᔭᐅᓂᐊᕐᒥᔪᑦ. ᑕᒪᑯᐊ ᐅᔾᕿᒃᑕᕆᐊᑦ ᐃᕐᑯᑎᖏᑦᓗ, ᐃᒡᓗᔪᐊᒃᓴᓗᕿᑦ, ᓯᑲᐅᑯᑦ ᑎᑭᑕᕐᓂᐊᖅᑐᑦ ᑲᖏᖅᓱᓂᕐᒧᑦ. ᑲᖏᕐᓱᓂᕐᒥ

ᐊᔭᒐᐅᑕᕐᓗᑎᒃᑯᓂᑦ ᑕᓯᕐᔪᐊᕐᒧᑦ ᐅᕙᓗᓂᑦ ᐅᔭᕋᒃᑕᖑᐊᑦ ᐱᕐᑯᑎᓂᒃ ᑲᑎᖅᓱᐃᕕᖕᒐᓄᑦ ᑲᖏᖅᖠᓂᐅᑉ ᐃᑎᕕᐊᓂ. ᓯᑲᐅᑦ ᐊᐅᔭᒥ ᑲᖏᕐᖠᓂᕐᒧᑦ ᑎᑭᐸᒃᑐᑦ ᐊᒥᔨᓂᖏᑦ ᔨᓂᓗᐊᓚᖏᑐᑦ, ᐅᔭᕋᒃᑕᖑᐊᑦ ᑎᑭᑎᑦᓯᑕᓕᖅᐸᑕ ᐱᕐᑯᑎᓂᒃ. ᑲᖏᕐᖠᓂᕐᒥ ᓯᑲᐅᓄᑦ ᑐᓚᕕᖕᒐ ᑕᖑᐅᑉ ᓯᒻᔭᖕᒐᓂ ᐃᑎᕕᐊᓂ, ᓇᒪᒃᑐᖅ, ᐅᔭᕋᒃᑕᖑᐊᑦ ᐱᕐᑯᑎᖏᑦ ᑎᑭᑕᕐᐸᓕᐊᓕᖅᐸᑕ.

ᐅᔭᕋᒃᑕᖑᐊᕕᒃᑲᕐᓂᐊᑎᓗᒍ ᑲᖏᖅᖠᓂᐅᑉ ᓴᓂᐊᓂ, ᖃᑕᐅᔭᕐᔪᐊᖃᖑᐊᖃᕐᑐᖅ ᐅᖅᓱᐊᓗᖃᕈᓇᕐᑐᓂᒃ 100 ᒥᓕᐊᓐ ᓚᑐᓂᒃ, ᑲᖏᕐᖠᓂᕐᒥ. ᐅᖅᓱᐊᓗᐃᑦᓗ ᐱᕐᑯᑎᕐᔪᐊᑦᓗ ᑲᖏᖅᖠᓂᕐᒥᑦ ᑕᓯᕐᔪᐊᕐᒧᑦ ᐊᔭᒐᐅᑕᖑᐊᖃᕐᓂᐊᖅᑐᑦ, ᐅᑭᐅᓗᒃᑕᒧᑦ ᐊᑐᕈᓇᖅᑐᑯᑦ ᐊᑉᕐᑯᑎᑯᑦ.

ᐱᓕᖑᐹᑦ ᑲᖏᖅᖠᓂᕐᒥᐅᑕᐅᖏᑐᑦ, ᑎᖏᓱᑯᑦ ᑎᑭᑎᑕᐅᑕᕐᓂᐊᖅᑐᑦ ᐊᒪᓗ ᑕᓯᕐᔪᐊᕐᒧᑦ ᐅᔭᕋᒃᑕᕐᕕᒃᒧᑦ ᓄᓇᑯᕈᑎᑯᑦ ᐊᔭᒐᐅᓗᑎᒃ.

- ᐃᒡᓗᔪᐊᑦ ᓴᓇᔭᐅᔭᖑᐊᖃᕐᐸᑦ (ᐊᑐᐊᓚᓚᐅᕐᓂᐊᖅᑐᑦᓗ ᐊᑐᒐᐅᖃᑦᕐᓂᐊᕐᑐᑦᓗ) ;

ᐃᒡᓗᔪᐊᑦ ᓴᓇᔭᐅᓂᐊᕐᑐᑦ ᐅᔭᕋᒃᑕᖑᐊᕐᕕᒃᒥ ᑕᓯᕐᔪᐊᕐᒥ. ᖃᑕᐅᔭᕐᔪᐊᖃᕐᕕᒃ, ᐱᕐᑯᑎᓂᒃ ᑐᕐᑯᕕᒃ ᒪᓂᕐᒥ, ᓴᓇᔭᐅᒥᓇᖑᐊᖃᕐᑐᖅ ᓯᕐᓗᐊᖅ ᑲᖏᖅᖠᓂᐅᑉ ᐃᒡᓗᔪᐊᖏᑕ ᑭᒡᓂᖕᒐᓂ. ᑕᓐᓇ ᓯᕐᓗᐊᖅ ᖃᖅᑕᖅᑐᓂᒃ ᐊᑐᕐᓂᐊᖅᑐᖅ. ᐅᔭᕋᒃᑕᕐᕕᒃ ᑕᓯᕐᔪᐊᕐᒥ ᐅᑯᐊᖑᐊᕐᐸᑦ, ᐃᒡᓗᔪᐊᓗᕿᑦ ᓯᕐᑯᑉᑎᒐᐅᓗᑎᒃ ᐊᓯᕙᒐᐅᓂᐊᕐᑐᑦ. ᐊᑉᕐᑯᑦ ᔨᓂᓚᖏᑐᖅ ᑕᓯᕐᔪᐊᖅ ᐅᑯᐊᕐᐸᑦ. ᖃᑕᐅᔭᕐᔪᐃᑦᓕ ᑲᖏᖅᖠᓂᕐᒥ ᓂᐅᕕᑕᐅᓇᔭᖅᑐᑦ, ᐅᕙᓗᓂᑦ ᐊᑐᒐᐅᓇᔭᖅᑐᑦ Hᐊᒻᓇᑯᓂᓗᓂᑦ, ᓄᓇᕗᑦ ᑲᕙᒪᑯᖏᓂᓗᓂᑦ.

- ᑕᓯᕐᔪᐊᕐᒥ ᐃᓂᒋᔭᐅᔪᓴᕐᑐᑦ ᐃᓱᒪᒋᔭᐅᔪᑦ: ᐊᒪᓗ
ᑕᓯᕐᔪᐊᕐᒥ ᐅᔭᕋᒃᑕᖑᐊᕐᕕᐅᓂᐊᕐᑐᖅ ᐃᓂᒃᓴᖕᒐ ᑕᐃᒪᐅᔪᖅ, ᑭᓯᐊᓂ ᓇᓂᑭᐊᖅ ᐃᓂᒃᓴᖃᓚᖏᑐᖅ. ᑭᓯᐊᓂᓕ ᐅᔭᕋᒃᑕᕐᕕᒃᒥ ᐊᑐᖏᓕᖅᑐᓂᒃ ᐃᒋᑦᓯᕕᐅᑕᕐᓂᐊᖅᑐᖅ, ᐃᓂᒃᓴᖏᑦ ᓂᕈᐊᒐᐅᔫᓇᕐᑐᖅ. ᑕᒪᑯᐊ ᐅᔭᕋᕐᓗᐃᑦ ᐊᑐᖏᓕᖅᑐᑦ, ᑯᓗ ᐊᒨᔭᐅᔭᕋᖕᒐᑦ, ᐃᖏᑕᐅᑕᕐᓂᐊᕐᒪᑕ ᑲᑎᖅᓱᒐᐅᕕᖕᒐᓄᑦ. ᑕᒪᑯᐊ ᐃᒋᑕᐅᓂᖏᑦ ᐊᐅᓚᓂᖕᒐ ᐸᕐᓇᒐᑕᐅᔪᖅ. ᐊᓯᖏᑦ ᐅᔭᕋᒃᑕᕐᓂᕐᒧᑦ ᐃᓗᔪᐊᑦ ᓇᓂᓂᐊᕐᒪᖕᒐᑕ ᐸᕐᓇᒍᑕᐅᔪᖅ. ᖃᓄᖅ ᐃᖏᕋᓂᐊᕐᒪᖕᒐᑦ ᐅᔭᕋᒃᑕᕐᕕᒃ ᒪᓇ ᐸᕐᓇᒍᑕᐅᔪᖅ. ᑕᒪᑯᐊ ᐸᕐᓇᒍᑕᐅᔪᑦ ᑐᑭᓯᓇᖑᐊᕐᓂᐊᖅᑐᑦ, ᐊᕙᑎᓕᖑᓂᕐᒧᑦ ᐸᕐᓇᒍᑕᐅᔪᑦ ᑎᑎᕋᒃᓯᒪᓕᖅᐸᑕ.

- ᓯᕗᓂᕐᒥ ᐱᕙᓕᐊᓂᐊᕐᑐᑦ, ᑕᓯᕐᔪᐊᑉᓗ ᐱᕙᓕᐊᓂᖕᒐ, ᐱᓕᖑᐊᖏᑦᓗ.

ᑕᓯᕐᔪᐊᑉ ᓴᓂᐊᓂᓗ ᐊᕙᑕᓂᓗ ᓇᓂᓯᑐᐃᓇᖑᐊᖃᕐᒥᔪᑦ ᑯᓗᒥᒃ ᐅᔭᕋᒃᑕᖑᐊᑕᐅᔫᒃᓇᕐᑐᒥᒃ. ᑕᓯᕐᔪᐊᑉ ᐃᖏᕋᓂᖕᒐ ᑕᑭᓕᖑᐊᕈᓇᖅᑐᖅ ᖁᓕᓂᒃ (10) ᐅᑭᐅᓂᒃ. ᑕᒪᑯᐊ ᐅᔭᕋᒃᑕᖑᐊᕐᕕᐅᔪᑦ ᐊᒥᓱᓂᒃ ᐅᑭᐅᓂᒃ ᐃᖏᕋᓱᕐᒪᑕ. ᓄᓇ ᑲᖏᖅᖠᓂᐅᑉᓗᑉᓗ ᑕᓯᕐᔪᐊᑉᓗ ᐊᑯᓂᖕᒐᓂ ᐊᓚᖑᕐᑎᑕᐅᔫᒃᓇᕐᑐᖅ ᐅᔭᕋᒃᑕᖑᐊᕐᓂᕐᒧᑦ. ᓄᓇᓗ ᑭᓂᐸᓂᖅᖅᑐᑦᓗ ᓄᓇᐃᑦ ᐊᓚᖑᖅᓯᓇᖑᐊᖅᖅᑐᖅ. ᑕᓯᕐᔪᐊᕐᒥ ᐅᔭᕋᒃᑕᖑᐊᖅᑎᓗᒋᑦ ᓄᓇ ᐊᖏᑎᒋᔪᖅ 1100 **hectares** ᐊᒃᑐᒐᐅᓂᖅᑲᕐᓂᐊᖅᑐᖅ, ᐅᐊᑕᐅᓗᓂᓗ.

ᐅᑭᐅᑦ ᑕᐅᑐᒃᓗᒋᑦ ᐅᔭᕋᒃᑕᖑᐊᕐᓂᕐᒧᑦ ᐃᒪᓇᐃᓇᔭᖅᑐᑦ, ᓚᐃᓴᑦᓗ ᐊᖏᒐᐅᒃᐸᑦ ᐅᔭᕋᒃᑕᖑᐊᕐᓂᕐᒧᑦ :
2011 - 2015 – ᐅᔭᕋᒃᑕᖑᐊᕐᓂᕐᒧᑦ ᖃᐅᔾᔭᓴᒐᐅᓂᖕᒐ, ᖃᐅᔾᔭᓴᒐᐅᓂᓗᒃᑕᑦ, ᓚᐃᓴᑦᓂᖅ, ᓴᓇᔭᐅᓯᒪᓂᖕᒐ
2011 - 2015 – ᓴᓇᔭᐅᓂᖕᒐ
2016 - 2026 – ᓄᓇᒥ ᐅᔭᕋᒃᑕᖑᐊᕐᕕᒃ, ᓄᓇᐅᑉᓗ ᐃᓗᐊᓂ ᐅᔭᕋᒃᑕᖑᐊᕐᕕᒃ
2016 - 2026 – ᑯᓗᒥᒃ ᐅᔭᕋᒃᑕᕐᓂᖅ
2011 - 2026 – ᑯᓗᒥᒃ ᕿᓂᑲᓂᕐᓂᖅ, ᑕᓯᕐᔪᐊᑉ ᐊᕙᑕᓂᓗ ᓴᓂᐊᓂᓗ
2026 - 2029 – ᑕᓯᕐᔪᐊᑉ ᐅᑯᐊᕐᐸᓕᐊᓂᖕᒐ ᐊᒪᓗ ᖃᐅᔾᔭᕐᓂᖕᒐ (ᐅᔭᕋᒃᑕᖑᐊᑲᓂᖏᐸᑕ)

ᐅᔾᔭᖅᑐᖑᑦ: ᐅᔭᕋᒃᑕᖑᐊᕐᕕᐅᓯᐊᕐᑐᖅ ᑎᑎᕋᐅᓯᐅᑲᓂᕐᑯᔭᐅᐸᑦ ᓄᓇᕗᒥ ᐊᕙᑎᓕᖑᐹᑦ ᑲᑎᒪᔨᖏᓂᑦ, ᑎᑎᕋᓗᒍ ᐊᑎᓕᒃ ᐃᓚᖓ 2, ᓇᓴᐅᑎᓕᒃ 8 ᑭᓯᒥ ᑎᑎᕋᓗᒍ, ᐅᕙᓗᓂᑦ ᐃᓚᖕᒐᓄᑦ 5 ᑎᑎᕋᓗᒍ.

ᐃᓚᖓ 5: ᐱᕐᑯᑎᑦ ᐊᑐᕐᓂᐊᕐᑐᑦ

1. ᑎᑎᕋᓗᒋᑦ ᐱᕐᑯᑎᑦ ᐊᑐᕐᓂᐊᕐᑐᑦ (ᐃᑲᑕᐃᑦ, ᐃᒪᕐᓄᑦ ᒥᓗᒐᐅᑎᑦ, ᑎᖏᓱᑦ, ᓄᓇᑯᕈᑎᑦ, ᐊᓯᖏᑦᓗ) **:**

2a. ᑎᑎᕋᓗᒋᑦ ᐅᖅᓱᐊᓗᐃᑦᓗ ᐅᓗᕆᐊᓇᕈᓇᖅᑐᑦᓗ ᐊᑐᒐᐅᓂᐊᕐᑐᑦ **:**

2b. ᑎᑎᕋᕐᓗᒋᑦ ᓄᓇᒧᑦ ᑯᕕᔭᖅᐸᑦ ᐸᕐᓇᒃᓂᐅᔪᒥᒃ.

3a. ᑎᑎᕋᓗᒍ ᐅᐸᓗᑕᒪᑦ ᐃᒪᖅ ᐊᑐᒐᐅᓂᐊᕐᓂᖓ

3b. ᐃᒪᐅᑉ ᐊᑐᕐᓂᖓᓄᑦ ᓚᐃᓴᑦ ᐱᓂᓗᒃᐱᓯᐅᒃ, ᓄᓇᕗᑦ ᐃᒪᓕᕆᔨᑦ ᑲᑎᒪᔨᖕᒋᓂᑦ **?**

O YES
O ...NO

ᐃᒪᐅᑉ ᐊᑐᕐᓂᖓᓄᑦ ᓇᐃᓴᑕᕐᓂᓗᑯᕕᑦ, ᖃᓄᖅ ᐊᑐᕐᓂᖓᓄᑦ ᓇᓗᓇᐃᕐᓗᒍ **?**

ᐃᓚᖓ 6: ᐃᒪᐃᔭᐃᓂᕐᒧᑦ ᐊᒻᒪ ᓴᓗᒪᖅᓴᕐᓂᖓᓄᑦ

1. ᑎᑎᕋᓗᒋᑦ ᐊᒃᑕᑯᓂᐊᕐᑐᑦ, ᐃᒪᐃᔭᐃᓂᑯᑦ, ᐅᔭᕋᒃᑕᓇᐊᕐᕕᒃᒥ :

2. ᑎᑎᕋᓗᒍ ᖃᓄᖅ ᐊᒃᑕᑯᑦ ᐊᒻᒪ ᐃᒪᐃᔭᐃᓂᑯᑦ ᐊᐅᓚᑕᐅᓂᐊᕐᓂᖓᑕ ᐸᕐᓇᒃᓯᒪᓂᖓ.

ᐃᓚᖓ 7: ᓄᓇᓕᑦ ᐃᓚᐅᖃᑕᐅᓂᖏᑦ ᐊᒻᒪ ᐊᕕᖅᑐᖅᓯᒪᔪᓂ ᐱᕙᓕᐊᔪᑕᐅᔪᑦ ᐃᑲᔪᕐᓂᖏᑦ

1. ᑎᑎᕋᓗᒋᑦ ᓄᓇᓕᒃᓂ ᑲᑎᒪᔨᐊᓚᓄᑦ ᐃᓚᐅᔪᖃᖅᐸᑦ, ᐅᖃᓗᕕᐅᓯᒪᔪᑦ ᐊᒻᒪ ᑲᑎᒪᓂᑯᑦ ᑎᑎᕋᒃᓯᒪᓗᒋᑦ :

ᐃᓚᖓ 8: ᐊᐱᖅᓱᑎᒃᓴᑦ ᐊᒻᒪ ᐃᓱᒪᒋᔭᐅᔪᑦ

1. ᐃᓄᐃᑦ ᑭᖑᓂᕐᒥ ᓄᓇᕕᓂᖏᑦ ᐅᐊᑕᐅᓂᐊᕐᐸᑦ ᐊᒃᑐᖓᐅᓂᖃᕐᓂᐊᕐᐸᑦ ?

☐ **NO** **X** **YES**

ᑕᓐᓇ ᐊᑎᓕᐅᕐᓗᒍ ᐊᒻᒪ ᐅᐸᓗᖓ ᑎᑎᕋᓗᒍ :

	Meliadine Project Manager	11 April 2011
Eric M Lamontagne ᐃᐅᕆᒃ ᓚᒪᑕᒡᓂ	**Title** ᐱᓕᕆᐊᖓ	**Date** ᐅᐸᓗᖅ

ᐊᑕᔪᖅ A
ᐱᓕᕆᐊᕆᔭᐅᓂᐊᖅᑐᓄᑦ ᑐᑭᖏᑦ

ᐊᑐᕆᐊᒃᓴᓕᐅᕈᒪᓂᖅ: ᑐᒃᓯᕐᑑᑎᒃᑯᑦ ᐱᓕᕆᐊᕆᔭᐅᔪᒪᔪᖅ ᓄᓇᒃᑰᔫᓄᑦ ᐊᑐᕆᐊᖅᑕᖅᑲᕈᓐᓇᖅᑯᓪᓗᒍ ᓄᓇ ᓱᓐᓂᓗᐊᖅᑕᐅᑦᑕᐃᓕᒪᓗᓂ.

ᓯᕗᓪᒧᒋᐊᖅᑕᐅᓯᒪᔪᖅ ᓴᕕᕋᔭᒃᓴᖅᓯᐅᕈᒪᓂᖅ: ᑐᒃᓯᕐᑑᑎᒃᑯᑦ ᐱᓕᕆᐊᕆᔭᐅᔪᒪᔪᖅ ᓇᓗᓇᐃᖅᑕᐅᓇᓯᐊᕐᓗᓂ ᐊᖏᓂᖓ, ᐱᐅᓂᖓ, ᖃᓄᐃᑦᑑᓂᖓᓗ ᓴᕕᕋᔭᒃᓴᖅᑕᖅᑑᑉ ᐊᒻᒪᓗ ᑮᓇᐅᔭᓕᐅᕈᑕᐅᔪᓐᓇᕐᓴᕆᐊᖓᓐᓂᓗ ᐅᔭᖅᓯᐅᕐᕕᓕᐅᖅᑕᐅᔪᓐᓇᕐᓴᕆᐊᖓᓂᓗ ᓴᕕᕋᔭᒃᓴᖅᑕᖅᑐᖅ.

ᖃᓄᐃᑦᑐᑐᐃᓐᓇᒃᑯᑦ ᓯᓚᒃᑯᑦ ᐊᕐᑯᓯᐅᕈᒪᓂᖅ: ᑐᒃᓯᕐᑑᑎᒃᑯᑦ ᐱᓕᕆᐊᕆᔭᐅᔪᒪᔪᖅ ᐊᕐᖀᒍᓕᒫᖅ ᐊᑐᖅᑕᐅᖅᑲᑦᑕᕈᓐᓇᖅᓴᖅᑐᒥᒃ ᖃᓄᐃᑦᑐᑐᐃᓐᓇᒃᑯᑦ ᓯᓚᒃᑯᑦ ᐊᕐᑯᓯᐅᕐᕕᐅᔪᒪᓪᓗᓂ.

ᐅᔭᕋᒃᑕᒐᐃᑦ ᖃᐅᔨᓴᒐᒃᓴᐅᔪᒪᓂᖏᑦ: ᑐᒃᓯᕐᑑᑎᒃᑯᑦ ᐱᓕᕆᐊᕆᔭᐅᔪᒪᔪᖅ ᐅᔭᕋᐸᐅᔭᕐᓂᒃ ᐅᔭᕋᒃᑕᕐᓂᖅ ᓴᕕᕋᔭᒃᓴᖅᑕᖅᑲᓇᐊᖏᓐᓂᒃ ᖃᐅᔨᓴᒐᒃᓴᐅᓂᐊᖅᑐᓂᒃ ᑲᑎᑕᐅᒍᑎᒃ ᐅᖁᒪᐃᑦᑑᑎᓪᒪᕆᐅᓕᕈᓐᓇᖅᑐᓂᒃ ᐲᔭᐃᕕᐅᓗᓂ. (ᓯᕐᑲᓕᖅᑐᖅᑕᐅᑐᐃᓐᓇᕆᐊᖅᑲᖅᑐᑦ ᐅᔭᖅᓯᐅᕐᕕᒃᑕᖅᑲᙱᒃᑲᓗᐊᕐᒥᑎᓪᓗᒍ)

ᐊᖑᓇᓱᐊᕈᒪᓂᖅ: ᑐᒃᓯᕐᑑᑎᒃᑯᑦ ᐱᓕᕆᐊᕆᔭᐅᔪᒪᔪᖅ ᐊᖑᓇᓱᐊᕐᓂᒃᑯᑦ, ᑕᕆᐅᒥᓗ ᓂᕐᔪᑎᓂᓪᓗᓐᓂᑦ ᐊᒻᒪᓗ/ᐅᕝᕙᓗᓐᓂᑦ ᐃᖅᑲᓗᒃᓯᐅᕐᓂᕐᓗᓐᓂᑦ ᑕᒪᐃᓐᓂᒃ ᐊᑐᓂ ᐱᑕᖅᑲᖅᑐᓂᒃ ᐊᖑᓇᓱᐊᕐᓂᒃᑯᑦ ᒥᑭᒋᐊᖅᑕᕐᓂᒃᑯᑦ ᐃᓄᖕᓄᑦ ᓂᕆᔭᐅᓂᐊᖅᑐᓂᒃ ᐊᒻᒪᓗ ᓂᐅᕕᐊᒃᓴᐅᓂᐊᖅᑐᓂᓪᓗ.

ᑕᕆᐅᒥ ᐱᓕᕆᐊᕆᔭᐅᔪᒪᔪᖅᑕᖅᑲᕐᓂᖅ: ᑕᕆᐅᒥ ᐱᓕᕆᐊᕆᔭᐅᔪᓐᓇᖅᑐᖅ, ᐆᒃᑑᑎᒋᓗᒍ ᐅᒥᐊᒃᑯᑦ ᓄᓇᓕᒍᓐᓇᖅᑐᒃᑯᑦ ᑕᕆᐅᒥᓗᓐᓂᑦ ᐱᓕᕆᐊᖃᕈᓐᓇᕐᓗᓂ.

*ᖃᐅᔨᒪᔭᐅᔭᕆᐊᖅᑲᖅᑐᖅ ᓄᓇᓕᒋᔭᐅᔪᓄᑦ ᓂᐅᕕᒃᓴᓂᒃ ᐊᒡᔭᖅᑐᐃᓂᖅ ᐅᕝᕙᓗᓐᓂᑦ ᐃᓕᒃᑰᖅᑐᑦ ᐅᒥᐊᑦ ᐅᒥᐊᕐᔪᐊᓪᓗ ᑲᓕᒑᓪᓗ ᓄᓇᒥᓗ ᑐᒃᓯᕐᑑᑎᒃᑯᑦ ᐱᓕᕆᐊᕆᔭᐅᔪᒪᔪᓄᑦ ᐱᔾᔪᑎᖃᖕᒋᑦᑐᑦ ᓄᓇᕗᒥ ᐊᕙᑎᓕᕆᓂᕐᒧᑦ ᑲᑎᒪᔩᓄᑦ ᕿᒥᕐᕈᔭᐅᖃᑦᑕᕐᔫᖏᓐᓂᖏᓐᓂᒃ (ᐃᓚᖓᑦᑕ ᐃᓚᖓᓂᑦᑐᖅ 12.12.2 ᓄᓇᑖᕐᓂᕐᒧᑦ ᐊᖏᕈᑎᓂᑦᑐᖅ).

ᐅᔭᖅᓯᐅᕐᕕᓕᐅᕈᒪᓂᖅ: ᑐᒃᓯᕐᑑᑎᒃᑯᑦ ᐱᓕᕆᐊᕆᔭᐅᔪᒪᔪᖅ ᐅᔭᖅᑕᕐᓂᐊᕐᓗᓂ ᓯᕐᑯᑦᑎᖅᑕᐅᓯᒪᔪᓂᒃ ᓴᕕᕋᔭᒃᓴᖅᑕᖅᑲᖅᑐᓂᒃ ᐱᐅᓂᖅᑲᐅᖅᑐᓂᒃ ᐊᒥᓲᓂᓪᓗ ᑮᓇᐅᔭᓕᐅᕈᑕᐅᔪᓐᓇᕐᓂᐊᖅᑐᓂᒃ ᐅᔭᖅᓯᐅᕐᕕᒃᑕᖅᑲᓕᖅᐸᑦ ᓂᐅᕕᖅᑕᐅᔪᓐᓇᕐᓂᐊᖅᑐᓂᒃ (ᐅᐊᕐᓂᒃ). ᐅᐊᕐᑕᕈᓐᓇᖅᓴᕐᓗᑎᒃ ᓄᓇᐅᑉ ᖃᖓᓐᓂᒃ ᐊᒻᒪᓗ /ᐅᕝᕙᓗᓐᓂᑦ ᓄᓇᐅᑉ ᐃᑭᐊᖓᓂᓪᓗᓐᓂᑦ. ᐅᔭᖅᑕᖅᑎᓪᓗᒋᑦ ᓯᕐᑲᓕᖅᑐᖅᑕᐅᕙᓪᓕᐊᑐᐃᓐᓇᕆᐊᖅᑐᑦ. ᓯᕐᑲᓕᖅᑐᐃᓂᖅ ᓴᓗᒻᒪᖅᓴᖅᑕᐅᕙᓪᓕᐊᔪᓐᓇᕆᓪᓗᑎᒃ ᐊᐅᓚᐅᑎᖅᑲᖅᑐᑎᒍᑦ ᐃᓚᐅᖅᓱᖅᓯᒪᔪᒧᓪᓗᓐᓂᑦ ᐊᑭᑐᔫᑏᔭᖅᑕᐅᓗᑎᒃ ᑮᓇᐅᔭᓕᐅᕈᑕᐅᔪᓐᓇᖅᑐᐃᔭᕐᓗᑎᑦ.

ᓴᕕᕋᔭᒃᓴᖅᓯᐅᕈᒪᓂᖅ: ᑐᒃᓯᕐᑑᑎᒃᑯᑦ ᐱᓕᕆᐊᕆᔭᐅᔪᒪᔪᖅ ᐅᔭᕋᒃᑕᒐᐅᔪᓐᓇᖅᑐᓂᒃ ᐊᔾᔨᖅᑲᖏᑦᑐᓂᒃ ᕿᓈᔭᕕᐅᓗᓂ. ᓴᕕᕋᔭᒃᓴᕕᐅᔪᒪᔪᖅ ᕿᓂᕕᐅᔪᓐᓇᖅᑐᖅ (ᓄᓇᒃᑯᑦ ᐊᒻᒪᓗ /ᑎᖕᒥᓲᒃᑯᓪᓗᓐᓂᑦ) ᓴᕕᕋᔭᒃᓴᓂ ᑮᓇᐅᔭᓕᐅᕈᑕᐅᔪᓐᓇᖅᑐᖅᓯᐅᕕᐅᓗᓂ ᒃ.

ᑕᕆᐅᒥ ᓇᑉᐸᖅᑎᒐᐅᔪᒪᔪᑦ: ᑐᒃᓯᕐᑑᑎᒃᑯᑦ ᐱᓕᕆᐊᕆᔭᐅᔪᒪᔪᖅ ᓂᐅᖃᐃᔭᕕᐅᔪᓐᓇᖅᑐᑕᐅᕕᐅᓗᓂ ᓯᕚᓂ ᑕᕿᐅᑉ ᐅᕝᕙᓗᓐᓂᑦ ᑕᓯᕐᒥᓗᓐᓂᑦ. ᐆᒃᑑᑎᒋᓗᒋᑦ ᓂᐅᖃᐃᕖᑦ ᐅᓯᓕᖅᑐᐃᕝᕖᑦ ᑐᓚᒃᑕᕖᓪᓗ.

ᐅᖅᓯᕐᔪᐊᖅᓯᐅᕐᓂᖅ ᒐᓴᓃᖅᓯᐅᕐᓂᖅ/ᐱᓕᕆᐊᕆᔭᐅᔪᒪᓂᖏᑦ: ᑐᒃᓯᕐᑑᑎᒃᑯᑦ ᐱᓕᕆᐊᕆᔭᐅᔪᒪᔪᖅ ᐃᓚᖅᑲᓪᓯᓂ 1) ᓴᕕᕋᔭᒃᓴᖅᓯᐅᕐᓂᖅ, ᓄᓇᒥ ᐃᑭᐊᖓᓂᓗ ᐃᒪᖅᑕᖅᑐᒥᓗ ᓄᓇᙳᐊᓕᐅᒪᓂᖅ, 2) ᐅᖅᓯᕐᔪᐊᖅᓯᐅᕐᓂᖅ ᒐᓴᓃᖅᓯᐅᕐᓂᕐᓗ ᐃᑰᑕᒃᑯᑦ, 3) ᓱᓪᓗᑯᑖᓕᐅᕐᓂᖅ ᐊᑐᖅᑕᐅᓂᐊᖅᑐᒥᒃ, ᒐᓴᓕᒃᓴᓕᐅᕐᕕᒃ ᐅᖅᓯᐊᓗᖅᑲᐅᑎᖅᑲᕐᕕᒃᓴᓕᐅᕐᓂᖅ ᒐᓴᓃᓇᕝᕕᒃᓴᓕᐅᕐᓂᕐᓗ ᓄᓇᕗᒥ.

ᐃᑎᖅᓴᐃᑦ ᑐᐊᐸᒃᑕᖅᕖᓪᓗ ᓯᐅᕋᖅᑕᖅᕖᓪᓗ ᓄᓇᑕᖅᕕᓪᓗ : ᑐᒃᓯᕐᑑᑎᒃᑯᑦ ᐱᓕᕆᐊᕆᔭᐅᔪᒪᔪᖅ ᐃᑎᖅᓴᓕᐅᒪᓂᐊᕐᓗᓂ, ᓯᐅᕋᐃᔭᖅᑕᐅᕝᕙᓗᓂ ᑐᐊᐸᐃᔭᖅᑕᐅᕙᓪᓕᐊᓗᓂᓗᓐᓂᑦ ᐊᒻᒪᓗ ᑐᐊᐸᒃᑕᕐᓂᓗ, ᓯᐅᕋᖅᑕᕐᓂᓗ ᓄᓇᑕᕐᕕᐅᓂᐊᕐᓗᓂᓗ ᕿᓪᔪᐃᔭᖅᑕᐅᓗᓂ ᖃᐃᖅᑐᐃᔭᖅᑕᐅᓗᓂᓗᓐᓂᑦ ᓯᕐᒥᔭᖅᑕᐅᓗᓂᓗᓐᓂᑦ.

ᑭᓱᑐᐃᓐᓇᐃᑦ ᖃᐅᔨᓴᕈᑕᐅᔪᒪᓂᕐᒥᑦ: ᑐᒃᓯᖅᑑᑎᒃᑯᑦ ᐱᓕᕆᐊᕆᔭᐅᔪᒪᔪᖅ ᐊᔾᔨᐅᖏᑦᑐᓂᒃ ᐊᔾᔨᖃᙱᑦᑐᓂᒃ ᖃᐅᔨᓴᖃᑦᑕᕐᓂᐊᕐᓗᓂ ᐱᓕᕆᐊᕆᓪᓚᐅᔪᓂ ᖃᐅᔨᔭᐅᕙᓪᓕᐊᔪᓪᓗ ᑎᑎᕋᖅᑕᐅᓯᒪᔪᑦ ᑲᑎᖅᓱᖅᑕᐅᕙᓪᓕᐊᓗᑎᒃ ᐆᒃᑐᕋᐅᑎᓄᓪᓗ ᐆᒃᑐᖅᑕᐅᖃᑦᑕᕐᓗᑎᒃ ᑭᒡᓕᓕᖅᑐᖅᑕᐅᓯᒪᓚᐅᖃᕐᓗᓂ ᖃᐅᔨᓴᖅᑕᐅᓂᐊᖅᑐᑦ.

ᓄᓇᒥ ᑕᕆᐅᒥᐅᓐᓃᑦ ᓄᓇᙳᐊᓕᐅᕈᒪᓂᖅ: ᑐᒃᓯᖅᑑᑎᒃᑯᑦ ᐱᓕᕆᐊᕆᔭᐅᔪᒪᔪᖅ ᕿᙳᑎᖃᖅᑐᓘᑦ ᑕᐅᑐᒐᐅᖃᑦᑕᕐᓗᓂ ᖃᓄᑎᒋ ᓄᓇᐅᑉ ᐃᑭᐊᑐᐃᓐᓇᖕᖓᓂ ᐅᔭᕋᐃᑦ ᖃᐃᖅᑐᐃᓪᓗ ᐃᓗᑐᓂᖃᖅᑎᑦᔭᕆᐊᖏᑦ ᖃᐅᔨᓴᐅᒻᒧᑦ ᖃᐅᔨᓴᖅᑕᐅᓪᓗᑎᒃ ᓯᕿᙳᔭᐅᑉ ᐃᖕᒋᕐᕋᔪᒐᓛᖕᖓᓐᓄᑦ ᓂᐱᓕᐅᑉ ᓂᐱᑐᓂᖓ ᐅᑎᕐᓂᕆᓛᖓ ᒪᓕᒃᓗᒍ ᓄᓇᐅᑉ ᖄᖕᖓᓐᓅᖕᖔᖅᑐᖅ. ᑕᕿᐅᒥ ᖃᐅᔨᓴᑐᐃᓐᓇᕆᐊᖃᓱᙳᕐᒥᔪᑦᑕᐅᖅ (13 ᒪᐃᓕᑦ ᐃᓗᐊᓂᒋᐊᖃᙱᑦᑐᖅ ᓇᒥᑐᐃᓐᓇᖅ ᓯᒃᔭᒥᑦ), ᓯᒃᔭᖅᐸᓯᐅᑉ ᖃᓂᒋᔮᓂᒃ, ᓄᓇᓪᓚᕆᖕᒥᒃᑯ.

ᐱᓕᕆᐊᕆᓪᓚᐅᔪᑦ ᓴᓗᒻᒪᖅᓴᖅᑕᐅᔪᒪᓂᕐᒥᑦ: ᑐᒃᓯᖅᑑᑎᒃᑯᑦ ᐱᓕᕆᐊᕆᔭᐅᔪᒪᔪᖅ ᐱᓕᕆᐊᕆᓪᓚᐅᔪᓂᒃ ᓴᓗᒻᒪᖅᓴᐃᓂᖅ (ᑎᐅᓚᐃᖅᑲᖅᕓᑦ ᐃᓚᖅᑲᓯᐅᑎᓗᒋᑦ), ᐃᓚᐅᖅᓱᖅᓯᒪᐃᔭᖅᕓᐅᓗᑎᒃ ᓄᓇᑦᑕᖅᑕᐅᕙᓪᓕᐊᔪᑦ, ᓄᓇᑦᕓᐅᓗᑎᓪᓗ ᓄᑖᓂᒃ ᒪᓂᒃᓴᖅᑕᐅᑦᓯᐊᖅᓗᑎᓪᓗ ᐊᒻᒪᓗ ᐊᒃᑕᕓᑦ, ᐃᒡᓗᕓᓂᑦ ᐊᖁᓯᐊᕓᓃᑦ ᒥᕝᕓᕓᓃᓪᓗ ᐃᑐᑦᑎᖅᑕᐅᓗᑎᓪᓗ/ᐃᒥᐅᖃᖅᑕᐅᓗᑎᓪᓗ ᐊᒃᑕᑯᓪᓗ ᓄᓇᒥ ᑲᑕᒐᖅᑕᐅᓂᕓᕓᓂᑦ ᐊᒻᒪᓗ ᓇᐅᑦᓯᖅᑐᖅᑕᐅᔭᖅᑐᖃᑦᑕᕐᓗᓂᓗ ᓴᓗᒻᒪᖅᓴᖅᑕᐅᓯᒪᔭᕇᖅᓯᒪᓕᕈᓂ.

ᐳᓚᕋᖅᑐᓕᕆᓂᖅ: ᑐᒃᓯᖅᑑᑎᒃᑯᑦ ᐱᓕᕆᐊᕆᔭᐅᔪᒪᔪᖅ ᐳᓚᕋᖅᑐᓕᕆᓂᖅ ᒥᙳᐃᖅᓴᕆᐊᖅᑐᖅᓯᒪᔪᓄᑦ ᓄᓇᓕᒋᔭᐅᔪᓂᒃ ᑕᑯᔭᖅᑐᖅᓯᒪᔪᓄᑦ ᓄᖅᑲᖓᕕᐅᒋᐊᖅᑐᖅᓯᒪᑲᐃᓐᓇᕈᓐᓴᖅᑐᓄᓪᓗ ᐊᑐᖅᑕᐅᓂᐊᕐᓗᓂ ᐊᖅᑭᒃᑰᑉ ᐃᓚᐃᓐᓇᑐᐃᓐᓇᖕᖓᓐᓂ.

ᐅᑭᐅᒃᑯᑦ ᐊᖅᑯᓯᐅᕈᒪᓂᖅ: ᑐᒃᓯᖅᑑᑎᒃᑯᑦ ᐱᓕᕆᐊᕆᔭᐅᔪᒪᔪᖅ ᐅᑭᐅᒃᑯᑦ ᐊᑐᖅᑕᐅᔪᓐᓇᕋᔭᖅᑐᒥᒃ ᐊᖅᑯᓯᐅᕐᓂᖅ ᒪᓂᒃᓴᖅᑕᐅᓗᓂ ᑲᑎᖅᓱᖅᑕᐅᓗᓂᓗ ᐊᐳᑦ ᓄᓇᐅᑉ ᖃᖓᓂᖅᑐᖅ ᓯᑯᓗ. ᐃᑐᑦᑎᖅᑕᐅᓇᔭᖅᑐᖅ ᐅᐱᙳᓕᖅᑎᓪᓗᒍ ᐊᑐᖅᑕᐅᔭᕇᕈᓂ.

ᐅᑭᐅᒃᑯᑦ ᐊᑐᓚᐅᔪᓐᓇᖅᑐᒥᒃ ᐊᑐᓇᐊᒃᓴᓕᐅᕈᒪᓂᖅ: ᑐᒃᓯᖅᑑᑎᒃᑯᑦ ᐱᓕᕆᐊᕆᔭᐅᔪᒪᔪᖅ ᐊᑐᓇᐊᒃᓴᓕᐅᕐᓗᓂ ᐅᑭᐅᒃᑯᑦ ᐊᑐᖅᑕᐅᖃᑦᑕᕈᓐᓇᕋᔭᖅᑐᒥᒃ ᐊᑕᐅᓰᓐᓇᕐᒧᑦ ᐊᒃᓴᓗᐊᖅᑲᖅᑐᒧᑦ ᐊᑐᓇᐊᙳᔪᓐᓇᖅᑐᒥᒃ ᐳᐊᕆᑎᖅᑲᖅᑐᒧᑦ, ᑕᐃᒪᐃᒥᐊᖅᑲᖅᓂᕋᓂ.

Appendix C3
Nunavut Impact Review Board Screening Part 2 Form

SCREENING PART 2 FORM
PROJECT SPECIFIC INFORMATION REQUIREMENTS (PSIR)

1. SUBMISSIONS

The Proponent must submit all information pertaining to the Project as a whole. The information requirements below are designed for the purpose of environmental assessment and are not limited to the scope of a single permit or license application.

IMPORTANT: Please be advised of the following:

1. NIRB does not accept references to an ftp site as a submission.

2. The Proponent must provide NIRB with 1 (one) electronic copy and 1 (one) hardcopy of the required information in English.

3. All maps should be legible, and should include grids, be of appropriate scale, indicate the scale, include latitude and longitude references, title, legend and a north arrow. To the extent possible, avoid hand-drawn demarcations; and,

4. Please complete all required information in each section below. If the required information is not applicable to the Project Description, please indicate this in the response with "n/a". If the request has been provided in a different section or report, please note the section or report where the response can be found.

2. GENERAL PROJECT INFORMATION REQUIREMENTS

Project Coordinates and Maps

1. The preferred method for submitting project coordinates information is through the use of a Geographic Information System (GIS) compatible digital file. Although an ESRI ArcView 3.x shape file (in decimal degrees) is the preferred interchange format, the NIRB has the capacity to receive over 100 GIS and CAD related formats, including MapInfo and AutoCAD, provided proper format and projection metadata is also submitted. The NIRB requires coordinates for the Project Description which reflect the entire project area as defined by:
   - the area/sites of investigation;
   - the boundaries of the foreseen land use permit/right-of-way area(s) to be applied for;
   - the location of any proposed infrastructure or activity(s); and,
   - the boundaries of the mineral claim block(s) where proposed activities will be undertaken.
2. Map of the project site within a regional context indicating the distance to the closest communities.

   Refer to Section 1.1, Figure 1-1 in the Project Description.

3. Map of any camp site including locations of camp facilities.

Refer to Section 2.5.7, Figure 2.4 in the Project Description.

4. Map of the project site indicating existing and/or proposed infrastructure, proximity to water bodies and proximity to wildlife and wildlife habitat.

   Refer to Section 1.1, Figures 1.1, 2.2 and 4.1in the Project Description.

Project General Information

5. Discuss the need and purpose of the proposed project.

   The purpose of the Project is to build, operate and reclaim a gold mine.

   The mine will create employment and business opportunities in the Kivalliq Region of Nunavut. Sustained benefits will flow for the life of the mine to the owners of the company, employees, the Inuit, and the federal and Nunavut governments.

6. Discuss alternatives to the project and alternatives to project components, including the no-go alternative. Provide justification for the chosen option(s).

   Refer to Section 2.10 of the Project Description.

7. Provide a schedule for all project activities.

   Refer to Section 1.4, Table 1.1 of the Project Description.

8. List the acts, regulations and guidelines that apply to project activities.

   Refer to Appendix B in the Project Description.

   List the approvals, permits and licenses required to conduct the project.

   Refer to Section 1.9 and Table 1-3 of the Project Description.

9. **DFO Operational Statement (OS) Conformity**
   Indicate whether any of the following Department of Fisheries and Oceans (DFO) Operational Statement (OS) activities apply to the Project Description:
   - Bridge Maintenance – **it is the Project's intent to undertake all bridge maintenance in compliance with DFO-OS.**
   - Clear Span Bridge - **it is the Project's intent to undertake all bridge design and construction in compliance with DFO-OS.**
   - Culvert Maintenance - **it is the Project's intent to undertake all culvert installation and maintenance in compliance with DFO-OS.**
   - Ice Bridge – **it is the Project's intent to undertake all ice bridge construction and reclamation in compliance with DFO-OS**
   - Routine Maintenance Dredging – **it is the Project's intent that no routine dredging will be required for any aspect of the Project's construction or ongoing operations.**

- Installation of Moorings – **it is the Project's intent that no moorings will be required for any aspect of the Project's construction or ongoing operations.**

Please see DFO's OS for specific definitions of these activities available from either NIRB's ftp site at http://ftp.nunavut.ca/nirb/NIRB_ADMINISTRATION/ or DFO's web-site at http://www.dfo-mpo.gc.ca/canwaters-eauxcan/index_e.asp

10. If any of the DFO's OS apply to the Project Description, does the Proponent agree to meet the conditions and incorporate the measures to protect fish and fish habitat as outlined in the applicable OS? If yes, provide a signed statement of confirmation.

It is the Project's intent to construct and operate all facilities in compliance with relevant DFO-OS. Refer to the Project Description, Appendix E for the signed letter of confirmation sent to the Department of Fisheries and Oceans.

Transportation

11. Describe how the project site will be accessed and how supplies will be brought to site. Provide a map showing access route(s).

Refer to Section 2.4 and Figure 2.2 of the Project Description.

12. If a previous airstrip is being used, provide a description of the type of airstrip (ice-strip/all-weather), including its location. Describe dust management procedures and provide a map showing location of airstrip.

Not applicable. There will not be an airstrip at the site, the Rankin Inlet airport will be used.

13. If an airstrip is being constructed, provide the following information: **Not applicable**
    a. Discuss design considerations for permafrost
    b. Discuss construction techniques
    c. Describe the construction materials, type and sources, and the acid rock drainage (ARD) and metal leaching (ML) characteristics (if rock material is required for airstrip bed).
    d. Describe dust management procedures.
    e. Provide a map showing location of proposed airstrip.

14. Describe expected flight altitudes, frequency of flights and anticipated flight routes.

Not applicable.

Camp Site

15. Describe all existing and proposed camp structures and infrastructure.

Refer to section 2.5 of the Project Description.

16. Describe the type of camp:
    a. Mobile **Not applicable.**
    b. Temporary **Refer to section 2.5.2 of the Project Description.**

c. Seasonal **Not applicable.**
d. Permanent **Refer to section 2.5 of the Project Description.**
e. Other

Some hotel accommodation in Rankin Inlet may be block-booked during construction.

17. Describe the maximum number of personnel expected on site, including the timing for those personnel.
    Preliminary estimates of personnel are as follows:
    Construction phase – 2011 to 2015: up to 700-800 personnel
    Operations – 2015 to 2026: approximately 500 workers on site
    Reclamation and closure – 2025 to 2029: approximately 100 workers on site

Equipment

18. Provide a list of equipment required for the project and discuss the uses for the equipment.

    Refer to Sections 2.6 and 2.7, Tables 2.3 and 2.4 in the Project Description.

19. If possible, provide digital photos of equipment.

6-yd Scooptram (typical)

Quarry-type excavating equipment (typical)

Drill jumbo (typical)

Scissor-lift in use (typical)

Underground mining equipment (typical)
Includes 16-t truck, 2 scooptrams, scissor-lift.

Water

20. Describe the location of water source(s), the water intake methods, and all methods employed to prevent fish entrapment. Provide a map showing the water intake locations.

    Refer to Section 2.10.4 and Figures 2.3 and 2.4 of the Project Description.

21. Describe the estimated rate of water consumption (m^3/day).

    Refer to Section 2.13.1 of the Project Description. The estimated rate of water consumption will be based on the use of 200 litres per person per day and make-up water required for the mill. The total will be specified in the draft Environmental Impact Statement.

22. Describe how waste water will be managed. If relevant, provide detail regarding location of sumps, including capacity of sumps and monitoring.

    Refer to Section 2.13.2 of the Project Description.

23. If applicable, discuss how surface water and underground water will be managed and monitored.

    Refer to Section 2.13.2 of the Project Description.

Waste Water (Grey water, Sewage, Other)

24. Describe the quantities, treatment, storage, transportation, and disposal methods for the following (where relevant):

- Sewage – **Refer to Sections 2.5.8 and 2.13.2 of the Project Description. The existing exploration camp, with a modular sewage treatment plant, will continue to be used to house construction staff. The temporary construction camp will also use a modular sewage treatment unit.**
- Camp grey water – **Refer to Section 2.5.8 of the Project Description.**
- Combustible solid waste – **Refer to Section 2.14 of the Project Description.**
- Non-combustible solid waste – **Refer to 2.14 of the Project Description.**
- Bulky items/scrap metal – **Refer to 2.14 of the Project Description.**
- Waste oil/hazardous waste – **Refer to Section 2.14 of the Project Description.**
- Contaminated soils/snow – **Refer to Section 2.14 of the Project Description.**
- Empty barrels/ fuel drums – **Refer to Section 2.14 of the Project Description.**
- Any other waste produced – **A comprehensive waste management plan will be included in the draft Environmental Impact Statement.**

25. If the Project Description includes a landfill or landfarm, indicate the locations on a map, provide the conceptual design parameters, and discuss waste management and contact-water management procedures.

    A comprehensive Spill Response Plan and Waste Management Plan will be included with the draft Environmental Impact Statement. These Plans will address the landfill and options being considered for managing spilled materials.

Fuel

26. Describe the types of fuel, quantities (number of containers, type of containers and capacity of containers), method of storage and containment. Indicate the location on a map where fuel is to be stored, and method of transportation of fuel to project site.

    Refer to Sections 2.3.2 and 2.5.5, Figure 2.1 of the Project Description. Fuel will be transported from the tank farm in Rankin Inlet to the Meliadine site in a tanker truck.

    Propane may be used for camp cooking and, if used, will be stored in a bulk tank.

27. Describe any secondary containment measures to be employed, including the type of material or system used. If no secondary containment is to be employed, please provide justification.

    Fuel storage tanks will be within engineered berms and will have an impermeable liner providing a minimum secondary containment of 110% of tank capacity.

28. Describe the method of fuel transfer and the method of refuelling.

    Refer to Sections 2.3.2, 2.5.2 and 2.5.5 of the Project Description.

Chemicals and Hazardous Materials*

**included but not limited to oils, greases, drill mud, antifreeze, calcium or sodium chloride salt, lead acid batteries and cleaners*

All reagents and materials used on site will be stored and handled in compliance with manufacturers' and WHMIS specifications. Further details will be provided with the draft Environmental Impact Statement.

29. Describe the types, quantities (number of containers, the type of container and capacity of containers), method of storage and containment. Indicate the location on a map where material is to be stored, and method of transportation of materials to project site.

Refer to sections 2.11.4 and 2.15, and table 2.6 in the Project Description.

Complete details for chemicals to be used on site and their storage locations will follow in the draft Environmental Impact Statement.

30. Describe any secondary containment measures to be employed, including the type of material or system used.

All mill reagents will be stored in secure facilities that provide the secondary containment of a concrete floor surrounded by a cast-in-place stub wall in the case of sheltered storage or in an outdoor bermed facility with an impermeable liner throughout.

31. Describe the method of chemical transfer.

All reagents and materials used on site will be stored and handled in compliance with manufacturers' and WHMIS specifications. Transfers will take place from suppliers' containers as close to the end-use point as possible (in a secondary containment environment if appropriate).

The Feasibility Study will provide further details, which will be included in the draft Environmental Impact Statement.

Workforce and Human Resources/Socio-Economic Impacts

Potential Social and Economic Effects in the Kivalliq Region

Refer to Sections 4 and 6 of the Project Description.

32. Discuss opportunities for training and employment of local Inuit beneficiaries.

Refer to Section 6 of the Project Description.

33. Discuss workforce mobilization and schedule, including the duration of work and rotation length, and the transportation of workers to site.

Refer to Section 6 of the Project Description.

34. Discuss, where relevant, any specific hiring policies for Inuit beneficiaries.

Refer to Section 6 of the Project Description.

Public Involvement/ Traditional Knowledge

35. Indicate which communities, groups, or organizations would be affected by this Project Description.

Refer to Section 5 and Appendix C of the Project Description.

36. Describe any consultation with interested Parties which has occurred regarding the development of the Project Description.

Refer to Appendix C in the Project Description.

37. Provide a summary of public involvement measures, a summary of concerns expressed, and strategies employed to address any concerns.

Refer to Appendix C of the Project Description.

38. Describe how traditional knowledge was obtained, and how it has been integrated into the project.

Refer to Section 4.2 of the Project Description.

39. Discuss future consultation plans.

Refer to Section 5.3 of the Project Description.

PROJECT SPECIFIC INFORMATION

The following table identifies the project types identified in Section 3 of the NIRB, Part 1 Form. Please complete all relevant sections.

It is the proponent's responsibility to review all sections in addition to the required sections to ensure a complete application form.

Project Type	Type of Project Description	Information Request
1	All-Weather Road/Access Trail	Section A-1 and Section A-2
2	Winter Road/Winter Trail	Section A-1 and Section A-3
3	Mineral Exploration	Section B-1 through Section B-4
4	Advanced Mineral Exploration	Section B-1 through Section B-8
5	Mine Development/Bulk Sampling	Section B-1 through Section B-12
6	Pits and Quarries	Section C
7	Offshore Infrastructure(port, break water, dock)	Section D
8	Seismic Survey	Section E
9	Site Cleanup/Remediation	Section F
10	Oil and Natural Gas Exploration/Activities	Section B-3 and Section G
11	Marine Based Activities	Section H
12	Municipal and Industrial Development	Section I

SECTION A: Roads/Trails

The all–weather road was previously submitted for screening as a separate Project Description. The Project Description for the All-Weather Road can be found on the attached CD. It provides specific details on the road, bridges, culverts, quarries, geochemical testing of the same and environmental mitigation measures.

Spur roads and mine site roads will be built to the same standards as that of the all-weather road.

Refer to Section 2.4, Figure 2-2 of the Project Description for a map of the proposed all-season road route.

A-1 Project Information

1. Describe any field investigations and the results of field investigations used in selecting the proposed route (e.g. geotechnical, snow pack)

   The all-weather road is part of a separate application as it is required to service the approved underground exploration and bulk sampling program. Refer to attached CD.

2. Provide a conceptual plan of the road, including example road cross-sections and water crossings.

   The all-weather road is part of a separate application as it is required to service the approved underground exploration and bulk sampling program. Refer to attached CD.

3. Discuss the type and volume of traffic using the road/trail (i.e. type of vehicles and cargo and number of trips annually).

The construction phase will entail the movement of an estimated 50,000 to 100,000 tonnes of equipment and materials to the site over a 3-year period.

Traffic volume on the road during mine operations will depend on the size of vehicles used to provide the services required; in particular, the size of the passenger bus used to ferry workers between the site and the airport/Rankin Inlet, and the size of trucks used to haul bulk fuel and supplies to the mine site. Annual operating requirements for the project that will be carried over the road include approximately:

   a. **Between 10,000-15,000 worker transfers in each direction.**
   b. **Between 100,000 and 200,000 tonnes per year of bulk material and supplies, including over** 100 **ML of fuel.**

More details will follow completion of the project feasibility study and will be presented in the draft Environmental Impact Statement.

4. Discuss public access to the road.

The road alignment crosses municipal and Inuit-Owned Lands and is expected to cover an existing ATV trail to Meliadine Lake. The public is expected to have access to the road for personal use along most of its distance. For reasons of security and safety, public use of that portion of the road that provides immediate access to mine site operations will be restricted to mine personnel.

5. Describe maintenance procedures.

Road maintenance will include standard snow removal in winter and grading in summer. Road upgrading will require adding crushed rock from time to time. This will be produced and stockpiled at quarries along the road route. Dust suppression in summer will include limiting the speed of vehicles, the application of water and may include additives like calcium chloride (salt). Calcium chloride is approved for use by municipalities in Nunavut and southern Canada. It unfortunately also attracts wildlife onto the road.

Further details will be provided in the draft Environmental Impact Statement.

A-2 All-Weather Road/Access Trail

6. Discuss road design considerations for permafrost.

The alignment of the proposed road along the crest of eskers and rock outcrops should reduce the prevalence of ground ice in the upper permafrost horizon of the road base. Also, the placement of dry rock and granular material to 1.5+ m depth will bring the zone of permanently frozen ground nearer to the surface and serve to stabilize the base of the road and road bed. A crown in the road surface will shed water to the sides of the road and reduce the amount of natural precipitation entering the roadbed. This will reduce the effects of moisture-related road bed heaving.

7. Describe the construction materials (type and sources for materials), and the acid rock drainage (ARD) and metal leaching (ML) characteristics of the construction materials.

   All construction material for the road building will be taken from quarries near or adjacent to the road alignment as shown in Figure 2-2 of the Project Description. Rock and till samples from all potential quarry and borrow sites were assayed and analysed for ARD and metal leaching. Initial test results from these samples are chemically inert. The results are described in the Project Description for the All-Weather Road Project Description, which can be found on the attached CD.

   Further testing of road building materials for spur roads and mine sites roads is continuing and will be presented in the draft Environmental Impact Statement.

8. Discuss construction techniques, including timing for construction activities.

   The road will be constructed to conventional Arctic standards using accepted practices. Road construction will precede construction at the mine site. Road building materials will be extracted from quarries by blasting in the case of rock, or loaded from a pit in the case of sand and gravel. Materials will be loaded into trucks at the quarry and hauled to the "end" of the road where it will be dumped and pushed into place by a dozer. Crushed rock will be used to "dress" the road surface. Stockpiles of crushed rock will be prepared at selected quarries for future road maintenance needs.

9. Indicate on a map the locations of designated refuelling areas, water crossings, culverts, and quarries/borrow sources.

   The all-weather road is part of a separate application as it is required to service the approved underground exploration and bulk sampling program. Refer to attached CD.

10. Identify the proposed traffic speed and measures employed to ensure public safety.

    Company vehicles will be expected to keep to a speed limit that may be vehicle-specific. Thus, a services truck may have a lower speed limit than a pick-up. Typical speed limits at other mine sites are in the range of 10 - 30 km/h on site service roads and higher on access roads. Road safety and speed limits will be reviewed with the community.

11. Describe dust management procedures.

    Spring and summer will likely require road dust suppression. The application of water is an effective, but short-term solution. In early spring water cannot be applied due to freezing and resulting safety concerns. Additives can extend the effective period for water-based dust suppression procedures but may attract wildlife to the road. Additives to water approved for road dust suppression in Nunavut include calcium chloride (salt). Regular road maintenance and observing the posted speed limits will also reduce dust.

A-3 Winter Road/Trail

The all-season road described above will hopefully be completed following a screening that is presently underway, and as a result winter haul routes used in the past will not be required.

Should a winter road be required it would use the same routes and the same equipment as has been approved for use during the exploration phase of the Project.

12. Describe the surface preparation, including the use of snow berms or compaction, and any flooding. If flooding is to be used, provide the location of the water source on a map.
    Not applicable.

13. Describe the operating time period.
    Not applicable.

14. Identify the proposed traffic speed and measures employed to ensure public safety.
    Not applicable.

15. Discuss whether the selected route traverses any fish-bearing water bodies.
    Not applicable.

SECTION B: Mineral Exploration /Advanced Exploration /Development

B-1 Project Information

1. Describe the type of mineral resource under exploration.

   Refer to Sections 2.1 and 3.2.1 of the Project Description.

B-2 Exploration Activity

2. Indicate the type of exploration activity:

   Exploration by geophysics, geochemistry and diamond drilling has been semi-continuous on the property since the late 1980s and continues seasonally to the present. An exploration decline and drifts were driven underground in 2007 to 2008 and will be continued in 2011 to 2013.

- Bulk Sampling (underground or other)

  An underground exploration and bulk sampling program was conducted on the Tiriganiaq gold deposit on the Meliadine property in 2007 to 2008 and will be extended in 2011 to 2013. (Please see NIRB Screening Decision Report File No. 07EN044.) The 2007 – 2008 program extracted a bulk sample to evaluate:
  - **Correlation between bulk grades and diamond drill grades,**
  - **Continuity of mineralized structures between diamond drill holes,**
  - **Geotechnical conditions for mining, and**
  - **Metallurgical properties of the ore.**

The 2011 – 2013 program will repeat in part what was done earlier.

- Stripping (mining shallow bedded mineral deposits in which the overlying material is stripped off, the mineral removed and the overburden replaced)
  Stripping of overburden at Meliadine was confined to the area of the exploration portal and was completed in August of 2007.

- Trenching
  Trenching was not used during the exploration phase at Meliadine due to depth of overburden.

- Pitting
  Pitting was not used during the exploration phase at Meliadine.

- Delineation drilling
  Diamond drilling was used extensively during the exploration phase, see exploration drilling below. Drilling from the surface continued during 2010 and is expected to continue in future years.

- Preliminary Delineation drilling
  Diamond drilling was used extensively during the exploration phase, see exploration drilling below.

- Exploration drilling
  Diamond drilling was used extensively during the exploration of the Meliadine property. Prior to, during and after construction of the mine, diamond drilling will continue.

- Geophysical work (indicate ground and/or air)
  Both ground-based and airborne geophysical surveys were used extensively during the early phases of the current ongoing exploration program at Meliadine. This method of exploration using mainly magnetics continues to be one of the most effective tools for targeting drill holes in the greater Meliadine exploration area.

- Other
  Boulder train mapping and gold grain counts from soil samples were used extensively during the early exploration phases at Meliadine. This form of exploration will continue in the greater Meliadine exploration area.

3. Describe the exploration activities associated with this project:

- Satellite remote sensing
  Remote sensing from satellites has not been used to date.

- Aircraft remote sensing
  Aircraft have been used for extensive airborne geophysical surveys during the early exploration.

- Soil sampling
  Soil sampling has been used extensively in the early stages of exploration and may resume in the greater Meliadine exploration area.

- Sediment sampling
  Sediment and stream sampling has been used extensively in the early stages of exploration and may resume in the greater Meliadine exploration area.

- On land drilling (indicate drill type)
  Diamond drilling has been used extensively during the exploration of the property and will continue to be a main form of exploration.

- On ice drilling (indicate drill type)
  Late winter diamond drilling from ice covered lakes has been used extensively during the exploration and is still required in the greater Meliadine exploration area. Mainly NQ is used in drilling.

- Water based drilling (indicate drill type)
  Water based drilling has not been used during the exploration at Meliadine and is not anticipated.

- Overburden removal
  Overburden has not been removed for exploration purposes except for portal development to facilitate conventional underground exploration as examined by NIRB in File No. 07EN044.

- Explosives transportation and storage
  Explosives have been used only during the underground exploration phase as examined by NIRB in File No. 07EN044.

- Work within navigable waters
  Work within navigable waters has not been undertaken during the exploration phase and is not anticipated under any circumstances.

- On site sample processing
  A**ll core samples from diamond drilling have been logged, split and sampled on site. The samples were submitted for assay in southern assay laboratories. The remaining drill core is stored on site. This will continue.**

  During the 2007 – 2008 underground exploration phase, the mineralized material was crushed and passed through a sample tower to reduce each bulk samples (e.g. 120 tonnes from a blast) to much smaller representative samples (e.g. a 50-kilogram pail). These representative samples were sent to laboratories in southern Canada for bulk and metallurgical analysis. A one tonne 'tote' bag of crushed material from each individual sample was kept and left at site. All other crushed material not sent for assaying or testing was stockpiled on the site in one of four ore piles segregated by rock type. This ore would be processed in the proposed future mill. A similar procedure will be followed for the continuation of the underground program that is scheduled to start May 2011 and continue into 2013.

- Off-site sample processing

All diamond drill core samples during the exploration phase, as well as bulk sample metallurgical analyses were and continue to be completed in southern laboratories. Extensive geochemical analyses of overburden and host rock were also completed in southern laboratories.

- Waste rock storage
  Approximately 75,000 tonnes of waste rock mined during the 2007 – 2008 underground exploration phase were used to build pads and roads required during underground exploration. The waste rock from the second bulk sample will undergo geochemical testing and if found to be suitable for construction, will be used to build roads and pads elsewhere on the commercial lease. Otherwise it will go to a designated waste rock storage area.

- Ore storage
  Approximately 25,500 tonnes of mineralized material were excavated during the underground exploration program, most of which is in temporary storage on a rock pad near the portal, the balance having been shipped to laboratories in southern Canada. The second bulk sample of comparable size will also be stored on the same pad. If the mine goes into production, the mineralized material will be milled and the gold extracted. If the project is decommissioned, the mineralized material will be returned underground.

- Tailings disposal
  No tailings were produced during the underground exploration programs.

- Portal and underground ramp construction
  Standard underground mining methods were used for portal and ramp development during the underground exploration phase in 2007 to 2008. The portal and ramp were sized and designed so they can be used for ore production should a commercial mine be developed. The same procedures are to be used in the 2011 – 2013 underground program.

- Landfilling
  No landfill has been developed at the exploration site. All inert non-combustible waste produced during the exploration phase has been transferred to the Rankin Inlet municipal waste disposal site. When the mine is established a landfill will be established in one of the waste rock management areas. The location will be provided in the draft Environmental Impact Statement.

- Landfarming
  No landfarm was developed at the exploration site and no landfarm will be established at the mine site. All spill material will be removed to a southern location or managed on site in another manner.

- Other
  Not applicable.

B-3 Geosciences

1. Indicate the geophysical operation type:
   a. Seismic (please complete Section E)
   No seismic surveys were conducted during the exploration phase.

b. Magnetic

Extensive geomagnetic geophysical surveys have been completed over most of the Meliadine property. Additional magnetic surveys in the greater Meliadine exploration area are likely.

c. Gravimetric

Only limited gravimetric geophysical surveys have been conducted in the area.

Electromagnetic

Extensive electromagnetic surveys have been included in geophysical surveys over the exploration area at Meliadine. The electromagnetic surveys conducted to date were done within the bounds of the mineral claim blocks shown on Figure 1.1 of the Project Description. Surveys were both airborne and ground-based.

d. Other (specify)

None.

2. Indicate the geological operation type:

a. Geological Mapping

Geological mapping has been completed over much of the claim block and in all areas where geophysical results warranted closer inspection. Most of the property is covered with glacial till that obscures all outcrop. All of the ramps, drifts, and raises in the 2007 – 2008 underground exploration and bulk sampling program were geologically mapped on a round-by-round basis. Similar procedures will be used during the 2011-2013 underground program. Geological mapping on the Meliadine property will continue.

b. Aerial Photography

Aerial photography for the exploration area was flown in 1997 with a detailed digital terrain model and maps were produced for the main Meliadine West exploration areas and the proposed road route. Additional satellite mapping will be carried out in 2011.

c. Geotechnical Survey

Geotechnical investigations have been made at prospective development sites with more contemplated as the overall project advances through the Feasibility Study. In particular, the exploration decline has been mapped for geotechnical characteristics as a means of developing appropriate mining methods. Numerous oriented-core diamond drill holes were drilled from 2007 to 2009 for the purposes of geotechnical analysis and more are to be drilled with the results to be used in the Feasibility Study.

d. Ground Penetrating Survey

A Ground-Penetrating Radar survey was conducted over the prospective portal area in 1998 to assess overburden characteristics.

e. Other (specify)

None.

3. Indicate on a map the boundary subject to air and/or ground geophysical work.

Refer to Figure 1.1 for the area of the mineral claims that host the Meliadine Gold Project. The electromagnetic surveys conducted to date have been completed to cover the potential for gold mineralization within the bounds of these mineral claim blocks.

4. Provide flight altitudes and locations where flight altitudes will be below 610m.
   No further low level surveys are planned for the project at this time.

B-4 Drilling

5. Provide the number of drill holes and depths (provide estimates and maximums where possible)
   To the end of 2010, 1429 holes were drilled for the Project area ranging in depth from 53 m to 758 m. Drill holes on Tiriganiaq numbered 683.

6. Discuss any drill additives to be used
   $CaCl_2$ (calcium chloride) is the standard additive for drilling in permafrost ground to lower the freezing point of the water to inhibit the risk of freezing the drill rods in the hole. The other functions of the water are lubricating the drill bit and to facilitate the movement of drill cuttings to surface.

7. Describe method for dealing with drill cuttings.
   Drill cuttings collect in natural sumps in the immediate area of the drill site. Where natural sumps are absent, a temporary sump is created with a temporary containment berm or Aquadam. These are heavy-duty plastic tubes that are filled with water and conform to the hummocky terrain, restricting the movement of the cuttings. In this way, the cuttings are contained without causing the incremental terrain disturbance that would be required by constructing a dirt berm. No cuttings are allowed to enter any body of water. Extensive experience has shown that with the application of fertilizer and peat moss, vegetation starts to grow through the cuttings within a few years and most drill sites older than 7-8 years are almost completely rehabilitated.

8. Describe method for dealing with drill water
   Water is collected in sumps where the drill solids settle, with excess water draining through the adjacent tundra.

9. Describe how drill equipment will be mobilized
   The necessary diamond drilling equipment has remained on site for many years. This is expected to continue. Exploration drilling from surface in the area of the mine will be much reduced once mining commences as exploration and development drilling of the deposit shifts to underground drill stations and the open pits. Geotechnical and diamond drilling on pads or laydown areas within the developed area of the mine and plant would involve drill moves by skid mounted drills pulled by a loader or similar tracked vehicle. Exploration drills working in areas of natural tundra outside of the mine and plant areas would be moved by helicopter in the summer and by a tracked vehicle pulling skid-mounted drills in winter.

10. Describe how drill holes will be abandoned –
    Drill sites have been abandoned by cutting off any casing at or below ground level. This is followed a treatment with peat and fertilizer in the area of the drill cuttings for enhanced recovery around the diamond drilling site.

11. If Project Description involves uranium exploration drilling, discuss the potential for radiation exposure and radiation protection measures. Please refer to the *Canadian Guidelines for Naturally Occurring Radioactive Materials* for more information.
Not applicable.

B-5 Stripping/ Trenching/ Pit Excavation

12. Discuss methods employed. (i.e. mechanical, manual, hydraulic, blasting, other)
The area of the pit would be stripped of overburden using conventional stripping procedures (drill, blast, muck and haul) followed by standard surface mining procedures to excavate waste rock and ore to the design depth of the pit. The mining sequence would involve drilling and blasting a predetermined volume of rock which would then be removed by loading and hauling either the ore or waste rock to designated locations. Please see proposed pit overburden and waste rock storage locations on Figures 2.3, 2.4, 2.5 and 2.6 of the Project Description.

13. Describe expected dimensions of excavation(s) including depth(s).

Refer to Figures 2.3, 2.5 and 2.6 in the Project Description for the location of the open pits. Greater detail, including depth, will follow completion of the feasibility study and be presented in the draft Environmental Impact Statement.

14. Indicate the locations on a map.

Refer to Figures 2.3, 2.5 and 2.6 of the Project Description. Greater detail will follow completion of the feasibility study and be presented in the draft Environmental Impact Statement.

15. Discuss the expected volume material to be removed.

Refer to Table 2.7 in the Project Description.

16. Discuss methods used to determine acid rock drainage (ARD) and metal leaching (ML) potential and results.

Refer to Section 3.2.7 of the Project Description.

B-6 Underground Activities

17. Describe underground access.
Refer to Sections 2.6 and 2.11.2 of the Project Description.

18. Describe underground workings and provide a conceptual plan.
Refer to Sections 2.6 and 2.11.2 of the Project Description.

19. Show location of underground workings on a map.

Refer to Sections 2.6 and 2.11.2 of the Project Description for a description. The underground will be located under the Tiriganiaq open pit and further to the northeast. Drilling at Wesmeg and F Zone has been encouraging, and an underground development at these locations cannot be discounted. Similarly, the extent of drilling at the other gold deposits is currently inadequate to rule out underground developments sometime in the future.

20. Describe ventilation system.
Refer to Section 2.6.1 of the Project Description.

21. Describe the method for dealing with ground ice, groundwater and mine water when encountered.
Refer to Section 2.6.1 of the Project Description.

22. Provide a Mine Rescue Plan.
Refer to Section 2.16 of the Project Description.

B-7 Waste Rock Storage and Tailings Disposal

23. Indicate on a map the location and conceptual design of waste rock storage piles and tailings disposal facility.

Refer to Sections 2.8 and 2.9, and Figures 2.3, 2.5 and 2.6 of the Project Description. The figures show the proposed locations of the overburden and waste rock management areas, and the tailings impoundment area. The locations will be evaluated as part of the feasibility study and presented in the draft EIS.

The proposed tailings impoundment area will likely include Lake B7 basin and possibly the land area immediately to the east. Dykes would progressively be raised to increase the holding capacity of the area in order to accommodate the accumulation of tailings over time.

24. Discuss the anticipated volumes of waste rock and tailings.

Refer to Table 2.7 in the Project Description.

25. Discuss methods used to determine acid rock drainage (ARD) and metal leaching (ML) potential and results.

Refer to Section 3.2.7 of the Project Description and the *Static Test Results for Waste Rock and Tailings, Meliadine Gold Project, Nunavut, Canada* report on the attached CD.

B-8 Stockpiles

26. Indicate on a map the location and conceptual design of all stockpiles.

Refer to the Project Description, Figures 2.3, 2.5 and 2.6.

27. Describe the types of material to be stockpiled. (i.e. ore, overburden)

Low-grade ore and overburden. If the overburden is suitable for reclamation, it will be stock piled for later use. If not, it will be incorporated into the waste rock management areas.

Describe the anticipated volumes of each type of material to be stockpiled.

Refer to Table 2-7 in the Project Description.

28. Describe any containment measures for stockpiled materials as well as treatment measures for runoff from the stockpile.

All drainage and runoff from stockpiles will be directed to sumps at the toe of each stockpile and pumped to the tailings impoundment area or other holding pond. At the F Zone, Wolf, Pump and Discovery deposits, runoff will also be collected in sumps at the toes. The water will first be tested and, if it meets licence conditions, will be discharged. If not, it will be treated and discharged when licence conditions are met.

29. Discuss methods used to determine acid rock drainage (ARD) and metal leaching (ML) potential and results.

Refer to Section 3.2.7 of the Project Description and the *Static Test Results for Waste Rock and Tailings, Meliadine Gold Project, Nunavut, Canada* report on the attached CD*.*

B-9 Mine Development Activities

30. Indicate the type(s) of mine development activity(s):
    - Underground

      Refer to Sections 2.6 and 2.11.2 of the Project Description.

    - Open Pit

      Refer to Sections 2.7 and 2.11.3 of the Project Description.

    - Strip Mining

      No strip mining is envisaged at the Meliadine Gold Project.

    - Other

      No other mining strategies are contemplated.

31. Describe mine activities.
    - Mining development plan and methods

      Refer to Sections 2.6, 2.7 and 2.11 of the Project Description.

- Site access

  Refer to Section 2.4, Figure 2.2 of the Project Description

- Site infrastructure (e.g. airstrip, accommodations, offshore infrastructures, mill facilities, fuel storage facilities, site service roads)

  Refer to Section 2.5 of the Project Description for description of site infrastructure. Figure 2.4 provides a close-up of the layout of main infrastructure.

- Milling process

  Refer to Section 2.11.4 of the Project Description for a description of the mill process. The gold extraction process is illustrated in Figure 2.7 of the Project Description.

- Water source(s) for domestic and industrial uses, required volumes, distribution and management.

  Refer to Sections 2.10.4 and 2.13 of the Project Description for a description of water management.

- Solid waste, wastewater and sewage management

  Refer to Sections 2.14 of the Project Description for a description of solid waste management.

  Refer to Sections 2.5.8 and 2.13.2 of the Project Description for information on sewage treatment.

- Water treatment systems

  Refer to Section 2.13 for information on water treatment systems.

- Hazardous waste management

  Refer to Section 2.14 of the Project Description.

  A Hazardous Waste Management Plan will be included with the draft Environmental Impact Statement.

- Ore stockpile management

  Refer to Section 2.9 of the Project Description.

- Tailings containment and management

  Refer to Section 2.8 of the Project Description.

- Waste rock management

  Refer to Sections 2.9 of the Project Description. Pit and underground mining development rock in excess of site infrastructure construction and underground backfill needs will be placed in waste rock management areas.

- Site surface water management

  Refer to Section 2.13.2 of the Project Description. Site development design and engineering will ensure that all runoff from the built-up area of the mill site will be collected and treated as needed.

- Mine water management
  Initial mining will be carried out in permafrost so no significant mine water volume is expected. Studies are in progress to determine probable quantity and quality of groundwater that may be encountered below the permafrost.

- Pitting and quarrying activities

  Refer to Section C Pits and Quarries of this questionnaire.

- Explosive use, supply and storage (including on site manufacturing if required)

  Refer to Sections 2.3.1 and 2.15.3 of the Project Description.

- Power generation, fuel requirements and storage

  Refer to Sections 2.3.2, 2.5.4 and 2.5.5 of the Project Description. An alternative to locate the power plant in Rankin Inlet and run a power line along the all-weather road is being explored.

- Continuing exploration

  Exploration by AEM and others over the past 20 years has identified gold mineralization along the over 80 kilometre long geological trend of the Meliadine property from Hudson Bay to Peter Lake. AEM exploration lands along this trend are shown on Figure 1.1. Exploration on these lands will continue.

- Other

  None

1. Describe the explosive type(s), hazard class, volumes, uses, location of storage (show on map), and method of storage.

   Refer to Sections 2.5.9 and 2.15.3, and figure 2.4 in the Project Description.

B-10 Geology and Mineralogy

34. Describe the physical nature of the ore body, including known dimensions and approximate shape.

    Refer to Section 3.2.1 of the Project Description.

35. Describe the geology/ mineralogy of the ore deposit

    Refer to Section 3.2.1 of the Project Description.

36. Describe the host rock in the general vicinity of the ore body.

    Refer to Section 3.2.1 of the Project Description.

37. Discuss the predicted rate of production.

    Refer to Section 1.3 of the Project Description.

38. Describe mine rock geochemical test programs which have been or will be performed on the ore, host rock, waste rock and tailings to determine acid generation and contaminant leaching potential. Outline methods and provide results if possible**.**

    Refer to Section 3.2.7 in the Project Description.

B-11 Mine

39. Discuss the expected life of the mine.

    Refer to Section 2.11 and table 2.5 of the Project Description. The expected mine life is expected to be 10 years based on present resources. Should more resources be found, the mine life would be extended.

40. Describe mine equipment to be used.

    Refer to Tables 2-3 and 2.4 of the Project Description.

41. Does the Project Description involve lake and/or pit dewatering? If so, describe the activity as well as the construction of water retention facilities if necessary.

    Refer to Sections 2.7.3 and 2.8 of the Project Description. Further dewatering of lakes may be required for the Pump and Wolf deposits when the size of the open pits is better known. This will be presented in the Environmental Impact Statement.

42. Discuss the possibility of operational changes occurring during the mine life with consideration for timing. (e.g. open pit to underground)

Both open pit and underground mining will occur simultaneously. The quantity of ore from each may change over the mine life.

43. If Project Description involves uranium mining, consider the potential for radiation exposure and radiation protection measures. Particular attention should be paid to *The Nuclear Safety and Control Act*.

The project does not involve uranium mining. There is no known uranium mineralization in the area.

B-12 Mill

44. If a mill will be operating on the property in conjunction with mining, indicate whether mine-water may be directed to the mill for reuse.

The open pit and underground parts of the mine will be in permafrost; the deeper parts of the underground mine may go below the permafrost. Mine water, if any, may be directly pumped to the mill or directed elsewhere in a water management infrastructure to be treated before reuse and/or being discharged. Water quality will be tested for compliance before any discharge.

45. Describe the proposed capacity of the mill.
The proposed capacity of the mill will be between 6,500 and 15,000 tpd. The initial production rate will be provided in the draft EIS.

46. Describe the physical and chemical characteristics of mill waste as best as possible.

Mill tailings will be sand and slime caliber materials with a water content to be determined. The tailings will contain residual metals and mill reagents. Further details will be provided with the draft Environmental Impact Statement.

Refer also to Sections 2.8 and 2.11.4 of the Project Description.

47. Will or does the mill handle custom lots of ore from other properties or mine sites?

No mill feed from other sources are contemplated for this Project.

SECTION C: Pits and Quarries

Describe all activities included in this project.

- Pitting

  Not Applicable

- Quarrying

Quarries will be developed for spur road construction to Discovery and possibly F Zone deposits.

- Overburden removal

  Refer to Section 2.7 and Figures 2.3, 2.5, and 2.6 of the Project Description.

- Road use and/or construction (please complete Section A)

  Refer to Section A.

- Explosives transportation and storage.

  Please refer to Sections 2.3.1 and 2.15.3 of the Project Description.

- Work within navigable waters

  No work is contemplated within navigable waters excepting the possibility of installing a jetty in Meliadine Lake.

- Blasting

  Excavating rock and granular materials from quarries, the pit, and underground in permafrost requires blasting. Preparation for blasting involves drilling blast holes and loading these with explosive. All blasting will be done with materials approved for these purposes and under the supervision of persons trained and certified for the use of explosives. Blasting on surface will be fully guarded in accordance with NWT/NU Mine Safety Regulations to prevent inadvertent access by people from outside. The portal cut was safely excavated by drilling and blasting in August-September, 2007. The safety procedures were effective.

- Stockpiling

  Refer to the Figures 2.3, 2.5 and 2.6 for low grade ore stockpiles. The conceptual design will limit the land area covered by the low grade stock piles and the side slopes will be the angle of repose upon dumping.

- Crushing

  The construction phase will require crushed rock for site development and road construction and maintenance. Typically, level pads and road bases will be built with rock passing 150 mm. Finished surfaces of the development site and road will be dressed with crushed rock passing a 25 mm screen.

  Crushing of the ore will be part of milling. Refer to 2.11.4 of the Project Description.

- Washing

Washing, as applied to coal beneficiation, is not required by any of the processes contemplated in this project.

- Other.

No other rock treatment processes are contemplated for this project.

1. Describe any field investigations and the results of field investigations used in determining new extraction sites.

   At this time, no other mining sites are to be developed in the context of this Project. Exploration continues and may lead to further gold resources for future development. These will be described and submitted for screening and review as required by the Nunavut Land Claims Agreement.

2. Identify any carving stone deposits.

   No carving stone has been identified during the course of exploration at Meliadine to date.

3. Provide a conceptual design including footprint.

   Refer to Figures 2.1 to 2.6 of the Project Description for the conceptual layout of the major mine components. Refer to Table 2-2 in the Project Description for the area of major mine components.

4. Describe the type and volume of material to be extracted.

   Materials extracted during the course of mining will include overburden, waste rock and ore. This is outlined in the Table 2.7 of the Project Description. Granular and aggregate material will also be required for building the mine infrastructure.

   More details will be presented in the draft Environmental Impact Statement.

Describe the depth of overburden.

The overburden on the area of the development site and pits varies in depth from bedrock on surface to 20 m in an area of the proposed pits.

5. Describe any existing and potential for thermokarst development and any thermokarst prevention measures.

   Thermokarst can develop wherever the natural cover of saturated frozen tundra (that is not bedrock) or tundra with massive ice near surface is disturbed and the disturbed area is not re-covered with materials of an equivalent or greater insulative effect.

   In exploring and developing the Meliadine Gold Project site, the risk of thermokarst development has been mitigated by avoiding disturbance to the natural tundra unless

absolutely necessary. Generally, all working and developed surfaces in the Project area will be covered with approximately 1.5 metres of construction materials (aggregate or crushed rock) to insulate the permafrost in the underlying overburden. This will be supplemented with additional engineered solutions where design specifications call for added thermokarst mitigation measures.

6. Describe any existing or potential for flooding and any flood control measures.

   The hydrological basins draining from the project site to Meliadine Lake are small and natural runoff volumes are relatively low. Also, the Tiriganiaq and Discovery sites are near or at the height of land for their respective drainage basins, further mitigating the risk of large runoff. The pits at F Zone will require an engineered water diversion structure that likely will exist only while mining takes place, after which the pre-existing flow will be re-established.

   Local runoff will be managed by grading all developed working surfaces to drain into a sump. Accumulated water from natural precipitation in the various pits will also be pumped to a sump for holding, testing, and appropriate treatment before disposal or transfer to the tailings impoundment area.

7. Describe any existing or potential for erosion and any erosion control measures.

   The natural drainage basins affected by proposed site and pit development are generally low slope basins. The Tiriganiaq pit, mine site and development site are near the natural height of land. The Discovery pit is well situated with respect to drainage issues. All site development features will be designed to mitigate the risk of erosion caused by altered drainage patterns. Pits and quarries developed for road construction will be contoured to reduce the risk of progressive erosion beyond the pit margins and to also prevent ponding within the pit margin. Limited risk of erosion is envisaged.

8. Describe any existing or potential for sedimentation and any sedimentation control measures.

   Sedimentation is usually associated with water movement over or through disturbed soils, or runoff from spoil piles. All water used in the camp or mill in course of the operations will be directed to the tailings impoundment area. All natural runoff from the development site and the pit, and any mine water from the mine will be collected in sumps and pumped directly to the tailings impoundment area. The tailings impoundment area is located at the natural height of land and will be designed to operate, to the extent possible, as a closed circuit. There will be no risk of site runoff and related sedimentation into the lakes, ponds and natural water courses in the project area.

   For the F Zone and Discovery areas, all natural runoff will be directed to the associated sumps, refer to Figures 2.5 and 2.6 in the Project Description for their locations. Water will be held in the sumps, tested, treated if necessary and released to the environment upon meeting water licence effluent/MMER limits.

9. Describe any existing or potential for slumping and any slump control measures.

Relief in the Project area is extremely low; there is no natural slumping and mining and construction work on the Project will not cause slumping. When overburden is excavated in the summer, it tends to have a low angle of repose (e.g. 5°). Overburden Management Areas for such material will be bermed at the toe.

10. Describe the moisture content of the ground.

    The overburden is generally saturated and frozen. Thermistors have shown that the active layer may extend to depths of 2.5 metres, but generally is in the range of 1-1.5 meters.

11. Describe any evidence of ice lenses.

    Geotechnical investigations have shown the presence of ice in the overburden, but massive ice (e.g. 1+ metres of clear ice) has not been encountered. No ice lenses have been encountered in bedrock.

12. If blasting, describe methods employed.

    Section 2.11.3 of the Project Description applies to quarrying and open pit mining.

13. Describe the explosive type(s), hazard class, volumes, uses, location of storage (show on map), and method of storage.

    Refer to Section 2.15.3 and Figure 2.3 of the Project Description.

14. Discuss methods used to determine acid rock drainage (ARD) and metal leaching (ML) potential and results.

    Refer to Section 3.2.7 of the Project Description and the geochemistry report found on the attached CD.

15. Discuss safety measures for the workforce and the public.

    Refer to Section 2.16 of the Project Description.

SECTION D: Offshore Infrastructure

No new offshore infrastructure is required for the development and operation of the Meliadine Gold Project. Commercial carriers will deliver materials to the dock and/or spud barge at Rankin Inlet for offloading, storage and transfer to the mine site. Barges from Churchill and/or the eastern provinces, and ocean-going ships presently serving Rankin Inlet will meet project needs.

D-1 Facility

1. Describe any field investigations and the results of field investigations used in selecting the site (i.e. aerial surveys, bathymetric surveys, tidal processes, shoreline erosion processes, geotechnical foundation conditions).
   Not applicable.

2. Provide a conceptual plan, profile description and drawing(s) indicating shoreline, facility footprint, tidal variations, required vessel draft, keel offset, deck height freeboard.

Not applicable.

3. Discuss how anticipated loads on the seabed foundation and on the offloading platform will be incorporated into the design.
   Not applicable.

4. Describe how vessels will manoeuvre around the facility. (e.g. pull alongside or in front).
   Not applicable.

5. Discuss the anticipated life of the facility.
   Not applicable.

D-2 Facility Construction

6. Describe the types of material used for construction (i.e. granular or rock, steel piling or sheet piling, concrete). If material is granular, consider acid rock drainage potential, metal leaching potential, percentage of fines, size.
   Not applicable.

7. Describe dredging activities.
   Not applicable.

8. Indicate source of granular or rock material used in construction.
   Not applicable.

9. List quantities of the various types of material used in construction.
   Not applicable.

10. Describe construction method(s).
    Not applicable.

11. Indicate whether a site engineer will be on-site to inspect construction.
    Not applicable.

12. If proposed construction method involves dumping of fill into water, discuss measures for mitigating the release of suspended solids.
    Not applicable.

D-3 Facility Operation

13. Describe maintenance activities associated with the facility (e.g. dredging, maintenance to account for potential settlement of facility,)
    Not applicable.

14. Discuss whether the public will have access to the facility(s) and describe public safety measures.
    Not applicable.

15. Describe cargo and container handling, transfer and storage facilities.
    Not applicable.

16. Indicate whether fuel will be transferred from barges at this site and describe the method of that fuel transfer.
    Not applicable.

17. Discuss frequency of use.
    Not applicable.

D-4 Vessel Use in Offshore Infrastructure

18. Please complete Section H.
    Not applicable.

SECTION E: Seismic Survey

No seismic survey is required for the development and operation of the Meliadine Gold Project.

E-1 Offshore Seismic Survey

1. Indicate whether the survey is 2D or 3D at each site.
   Not applicable.

2. Describe the type of equipment used, including:
   - Type and number of vessels including length, beam, draft, motors, accommodation capacity, operational speeds when towing and when not towing
   - Sound source (type and number of airguns)
   - Type and number of hydrophones
   - Number, length, and spacing of cables/ streamers

   Not applicable.

3. On a map, indicate the grid, number of lines and total distance covered at each site.
   Not applicable.

4. Indicate the discharge volume of the airguns, the depth of airgun discharge, and the frequency and duration of airgun operation at each site.
   Not applicable.

5. Discuss the potential for dielectric oil to be released from the streamer array, and describe proposed mitigation measures.
   Not applicable.

6. Indicate whether additional seismic operations are required for start-up of operations, equipment testing, repeat coverage of areas.
   Not applicable.

7. Indicate whether air gun procedures will include a "ramping up" period and, if so, the proposed rate of ramping up.
   Not applicable.

8. Indicate whether the measures described in the *Statement of Canadian Practice for Mitigation of Noise in the Marine Environment* will be adhered to for this project.
   Not applicable.

E-2 Nearshore/ Onshore Seismic Survey

9. For each site, indicate whether nearshore and onshore surveys will be conducted during the ice season or once the ice has melted.
   Not applicable.

10. Describe how nearshore and onshore areas will be accessed.
    Not applicable.

11. Describe the survey methods to be used (e.g. explosive charge, vibration, air or water gun, other)
    Not applicable.

12. Describe equipment to be used
    Not applicable.

13. If applicable, indicate number, depth and spacing of shot holes
    Not applicable.

14. Describe explosive wastes including characteristics, quantities, treatment, storage, handling, transportation and disposal methods.
    Not applicable.

E-3 Vessel Use in Seismic Survey

15. Please complete Section H
    Not applicable.

SECTION F: Site Cleanup/Remediation

Refer to Section 2.17 of the Project Description for details on reclamation and closure of the mine site.

1. Describe the location, content, and condition of any existing landfills and dumps (indicate locations on a map).

   Under an agreement with the town, all inert non-combustible waste generated during the exploration phase has been transferred to the municipal landfill in Rankin Inlet.

   A landfill will be established within a waste rock storage area when construction commences.

2. Identify salvageable equipment, infrastructure and/or supplies.

   Refer to Section 2.17 of the Project Description.

3. Provide a list of all contaminants to be cleaned up, anticipated volumes and a map delineating contaminated areas. This includes buildings, equipment, scrap metal and debris, and barrels as well as soil, water (surface and groundwater) and sediment.

   Refer to Section 2.17 of the Project Description. There will be no accumulation of contaminants over the mine life.

4. Describe the degree of pollution/contamination, and list the contaminants and toxicity.

   Details will be provided with the draft Environmental Impact Statement.

5. Describe technologies used for clean-up and/or disposal of contaminated materials. Include a list of all the physical, chemical and biological cleanup/ remediation methods, operational procedures, and the dosage/frequency of reagents and bacterial medium.

Refer to Section 2.17 of the Project Description. There will be no accumulation of contaminants over the mine life. More detail will be provided with the draft Environmental Impact Statement.

6. Identify and describe all materials to be disposed of off site, including the proposed off site facilities, method of transport and containment measures.

   Refer to Section 2.17 of the Project Description.

7. Discuss the viability of landfarming, given site specific climate and geographic conditions.

   No landfarm is contemplated for the mine.

8. Describe the explosive types, hazard classes, volumes, uses, location of storage (indicate on a map), and method of storage (if applicable).

   Site cleanup and remediation is not expected to involve blasting. Refer to Section 2.15.3 for a description of the explosives to be used at the mine.

9. If blasting, describe the methods employed.

   Site cleanup and remediation is not expected to involve blasting.

10. Describe all methods of erosion control, dust suppression, and contouring and re-vegetation of lands.

    The potential for erosion is extremely slight due to (a) low relief, (b) semi-arid climate, and (c) slow movement of surface waters. Slope erosion of reclaimed surfaces will be controlled by coating with stable materials and revegetation.

    Refer to question C 7 above.

    After closure, the tailings impoundment area will present a large surface area with the potential to become a source of dust. Tailings will be capped with rough, broken rock and overburden.

11. Describe **all** activities included in this project.
    - Excavation (please complete Section B-5)
      Refer to Project Description and Section B-5 above.
    - Road use and/or construction (please complete Section A)
      Refer to Section 2.4 in the Project Description and Section A above.
    - Airstrip use and/or construction
      Not applicable
    - Camp use and/or construction
      Refer to Project Description, Section 2.5.2 and Section 2 items 16 to 18 above.
    - Stockpiling of contaminated material
      Contaminated material is not anticipate to be stockpiled, excepting while waiting for the shipping season to commence.
    - Pit and/or quarry (please complete Section C)
      See Section C above.
    - Work within navigable waters (please complete Section H)

See Section H below.

- Barrel crushing

  Refer to Section 2.14 of the Project Description.
- Building Demolition

  Refer to Section 2.17 of the Project Description.

  Other

  Not applicable.

SECTION G: <u>Oil and Natural Gas Exploration/Activities</u>

The Project does not comprise of any oil and natural gas exploration or related activities. There is no known hydrocarbon mineralization in the area.

G-1 Well Authorization

1. Identify the location(s) of the well centre(s) by latitude and longitude. Attach a map drawn to scale showing locations of existing and proposed wells.
   Not applicable.

2. Indicate if the site contains any known former well sites.
   Not applicable.

3. Include the following information for each well:
   a. Well name
   b. Surface location
   c. Proposed bottomhole location
   d. Ground elevation (in metres)
   e. Spacing area (in units)
   f. Identify the well type:
      i. Production
      ii. Injection
      iii. Disposal
      iv. Observation
      v. Storage
      vi. Experimental
      vii. Other (specify)
   g. Identify the well classification:
      i. Exploratory wildcat
      ii. Exploratory outpost
      iii. Development
   h. Drilling operation (deviation):
      i. Vertical
      ii. Directional
      iii. Horizontal
      iv. Slant
   i. Objective Zones (copy chart style below)

Objective Formation	Fluid (oil/gas/water)	Depth (mTVD)	Core (Y/N)

j. Proposed Total Depth in mTDV and mMD.
k. Formation of Total Depth
l. Sour well? (yes or no)
    i. If Yes: Maximum H_2S concentration in mol/kmol
       Emergency planning zone radius in km
m. Blowout Prevention (Well Class I – VI)
n. Deviation Surveys
    i. Will be run at intervals less than 150m? (yes or no)
o. Wireline logs
    i. Will run logs in hole for surface casing? (yes or no)
    ii. Will run a minimum of 2 porosity measuring logs? (yes or no)

Not applicable.

G-2 On-Land Exploration

4. Indicate if the site contains any known:
    a. Waste Dumps
    b. Fuel and Chemical Storage Areas
    c. Sump Areas
    d. Waste Water Discharge Locations

   Not applicable.

5. Attach maps drawn to scale showing locations of existing and proposed items identified in (2) above, as well as all proposed:
    a. Sumps
    b. Water sources
    c. Fuel and chemical storage facilities
    d. Drilling mud storage areas
    e. Transportation routes

   Not applicable.

6. If utilizing *fresh water*, estimate maximum drawdown and recharge capability of the river or lake from which water will be drawn.
   Not applicable.

7. Indicate if permafrost is expected to be encountered under:
    a. Camp Facilities
    b. Well Site
    c. Access Routes
    d. Sumps
    e. Other: ________________

   Not applicable.

8. Indicate any potential for encountering artesian aquifers or lost circulation within the surface hole (to casing depth).
   Not applicable.

9. Will drilling wastes contain detrimental substances (including, but not limited to, oil-based or invert mud and high salinity fluids)? If yes, indicate the substances and estimated volumes.

Not applicable.

10. Indicate methods for disposal of drilling wastes:
    a. Sump
    b. Down Hole (requires NEB approval)
    c. On-Site Treatment (provide plan)
    d. Off-Site (give location and method of disposal)

    Not applicable.

11. If a sump is being used, attach the following information:
    a. scale drawings and design of sumps
    b. capacity in cubic metres
    c. berm erosion protection
    d. soil permeability and type
    e. recycling/reclaiming waters
    f. surface drainage controls
    g. abandonment procedures

    Not applicable.

12. Attach the proposed or existing contingency plan which describes the course of action, mitigative measures and equipment available for use in the event of system failures and spills of hazardous materials.

Not applicable.

13. Attach an outline of planned abandonment and restoration procedures.
    Not applicable.

G-3 Off-Shore Exploration

14. Will drilling wastes contain detrimental substances (including, but not limited to, oil-based or invert mud and high salinity fluids)? If yes, indicate the substances and estimated volumes.
    Not applicable.

15. Attach the proposed or existing contingency plan which describes the course of action, mitigative measures and equipment available for use in the event of system failures and spills of hazardous materials.

Not applicable.

16. Attach an outline of planned abandonment and restoration procedures.
    Not applicable.

17. Please complete Section H
    Not applicable.

G-4 Rig

18. Type of Rig. Draw works, make and model
    Not applicable.

19. Derrick/Mast make and model
    Not applicable.

20. H.P. available to draw-works
    Not applicable.

SECTION H: Marine-Based Activities

The Project does not anticipate any marine-based activities other than receiving materials and supplies by commercial marine carriers using the dock and/or barge landing at Rankin Inlet.

H-1 Vessel Use

1. Describe the purpose of vessel operations.
   Not applicable.

2. List classes and sizes of vessels to be used.
   Not applicable.

3. Indicate crew size.
   Not applicable.

4. Indicate operating schedule.
   Not applicable.

5. Provide a description of route to be traveled (include map).
   Not applicable.

6. Indicate whether the vessel will call at any ports. If so, where and why?
   Not applicable.

7. Describe wastes produced or carried onboard including the quantities, storage, treatment, handling and disposal methods for the following:
   a. Ballast water
   b. Bilge water
   c. Deck drainage
   d. Grey and black water
   e. Solid waste
   f. Waste oil
   g. Hazardous or toxic waste

   Not applicable.

8. List all applicable regulations concerning management of wastes and discharges of materials into the marine environment
   Not applicable.

9. Provide detailed Waste Management, Emergency Response and Spill Contingency Plans
   Not applicable.

10. Does the vessel(s) possess an Arctic Pollution Prevention Certificate? If yes, indicate the date of issue and the name of the classification society.
    Not applicable.

11. Describe the source of fresh water and potable water
    Not applicable.

12. Indicate whether ice-breaking will be required, and if so, approximately where and when? Discuss any possible impacts to caribou migration, Inuit harvesting or travel routes, and outline proposed mitigation measures.
    Not applicable.

13. Indicate whether the operation will be conducted within the Outer Land Fast Ice Zone of the East Baffin Coast. For more information on the Outer Land Fast Ice Zone, please see the Nunavut Land Claims Agreement (NLCA), Articles 1 and 16.
    Not applicable.

14. Indicate whether Fisheries or Environmental Observers will be onboard during the proposed project activities. If yes, describe their function and responsibilities.
    Not applicable.

15. Describe all proposed measures for reducing impacts to marine habitat and marine wildlife (including mammals, birds, reptiles, fish, and invertebrates).
    Not applicable.

H-2 Disposal at Sea

1. Provide confirmation you have applied for a *Disposal at Sea* permit with Environment Canada.
   Not applicable.

2. Provide a justification for the disposal at sea
   Not applicable.

3. Describe the substance to be disposed of, including chemical and physical properties
   Not applicable.

4. Indicate the location where the disposal is to take place
   Not applicable.

5. Describe the frequency of disposals (disposals per day/week or month)
   Not applicable.

6. Describe the route to be followed during disposal and indicate on a map.
   Not applicable.

7. Indicate any previous disposal methods and locations
   Not applicable.

8. Provide an assessment of the potential effects of the disposal substance on living marine resources

Not applicable.

9. Provide an assessment of the potential of the disposal substance, once disposed of at sea, to cause long-term physical effects.
   Not applicable.

10. Describe all mitigation measures to be employed to minimize the environmental, health, navigational and aesthetic impacts during loading, transport and disposal.
    Not applicable.

SECTION I: Municipal and Industrial Development

Refer to Section 2.3 in the Project Description.

Discussions have been initiated with the Hamlet of Rankin Inlet, Airport Authority and the Government of Nunavut regarding collaboration on the development of off-site facilities for the mutual benefit of all parties.

1. Describe the business type, including public, private, limited, unlimited or other.

   New business opportunities will emerge in the local construction, transportation, and supply and service sectors as a result of the Project. AEM intends to explore all potential avenues for contracting out possibilities with local interests who can provide competent, competitive, and qualified services or products.

2. Describe the activity (e.g. development of quarry, development of hydroelectric facility, bulk fuel storage, power generation with nuclear fuels or hydro, tannery operations, meat processing and packing, etc.).

   Laydown area, construction, operation, maintenance
   Expediting services, operation
   Trucking, operation
   Tank farm, construction, operation, maintenance
   Road maintenance and snow removal
   Catering and housekeeping

3. Describe the production process or service provision procedures.

   Siting and construction of the Project's Rankin Inlet infrastructure remains to be discussed with the community and its leadership. The location of the offsite infrastructure will become clearer following discussions with interested parties and upon completion of the Feasibility Study. AEM is engaging all interested parties in the general requirements, so longer range planning can take place.

   Further details will be provided in the draft Environmental Impact Statement.

4. Describe the raw materials used in this activity, the storage and transportation methods. If hazardous materials are included in raw materials, products or by-products; include safety regulations methodology.

   Raw materials will be construction materials, most of which will be supplied from southern Canada.

5. Provide detailed information about the structure and/or building in which the activity will be conducted.

   Refer to Section 2.3 of the Project Description.

6. List the PPE (personal protective equipment) and tools to be used to protect personal health and safety.

   Refer to Section 2.16 of the Project Description.

7. Describe the firefighting equipment that are or will be installed.

   Firefighting equipment will be installed at the tank farm and in all buildings in compliance with applicable regulations.

8. Describe the noise sources, noise level in work area, technical measurements that will be adopted to abate the noise levels and regulatory requirements for noise abatement and noise levels.

   Noise levels associated with receiving the materials at the dock or barge landing area and in shipping materials to the site on trucks. The noise level will be similar to those associated with the annual receiving of cargo at Rankin Inlet.

   AEM is exploring the development of a road around the community so as to minimize disturbances.

9. Describe the type of gaseous emission that will be produced during this activity. Include the allowable thresholds and mitigation measures.

   Gaseous emissions would be exhaust from vehicles used in offloading and moving supplies to storage.

10. Describe odours that the activity might release and include corresponding allowable threshold. Describe mitigation measures if thresholds are exceeded.

    Not applicable.

11. Describe radiation sources that might be emitted during the activity. Include type and source and include mitigation measures. Also describe preventative measures for human exposure (i.e. PPE).

Not applicable.

12. Discuss the employee safety and environment protection training program.

Workers in the laydown area and those handling fuel will be trained in rigging, slinging, stevedoring, handling bulk fuel and WHMIS. A spill containment plan will be developed for the fuel storage facility. Spill response equipment and materials will be in place.

Refer also to Section 2.16 of the Project Description.

13. If the activity involves a bulk fuel storage facility, include drawings showing the bulk fuel storage facility location in proximity to natural water courses, high water marks, etc.

The tank farm site remains subject to approval of the Municipality of Rankin Inlet and/or Nunavut Airports. The required details will be developed in the Feasibility Study and incorporated in the draft Environmental Impact Statement, subject to confirmation of the site with the Municipality of Rankin Inlet.

14. If the activity involves the development of a new quarry or expansion of an existing quarry, complete Section C.

Please refer to Section C.

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4. DESCRIPTION OF THE EXISTING ENVIRONMENT

Describe the existing environment, including physical, biological and socioeconomic aspects. Where it is appropriate, identify local and regional study areas.

Please note that the detail provided in the description of the existing environment should be appropriate for the type of Project Description and its scope.

The following lists are intended as a guide only.

Physical Environment

Please note that a description of the physical environment is intended to cover all components of a project, including roads/trails, marine routes, etc

- Proximity to designated environmental areas, including parks; heritage sites; sensitive areas, including sensitive marine habitat areas (recreational areas; sport and commercial fishing areas; breeding, spawning and nursery areas; known migration routes of living ;marine resources; and areas of natural beauty, cultural or historical history and; other) and protected wildlife areas; and other protected areas.
- Eskers and other unique landscapes (e.g. sand hills, marshes, wetlands, floodplains).
- Evidence of ground, slope or rock instability, seismicity.
- Evidence of thermokarsts

- Evidence of ice lenses
- Surface and bedrock geology.
- Topography.
- Permafrost (e.g. stability, depth, thickness, continuity, taliks).
- Sediment and soil quality.
- Hydrology/ limnology (e.g. watershed boundaries, lakes, streams, sediment geochemistry, surface water flow, groundwater flow, flood zones).
- Tidal processes and bathymetry in the project area.
- Water quality and quantity.
- Air quality.
- Climate conditions and predicted future climate trends.
- Noise levels.
- Other physical Valued Ecosystem Components (VEC) as determined through community consultation and/or literature review.

PROJECT AREA ENVIRONMENT

Environmental baseline study reports were completed at and around the Project area during the period 1997-2010, and Aquatic and Terrestrial Baseline Reports are included on the attached CD. The results are summarized in Section 3 of the Project Description.

5. IDENTIFICATION OF IMPACTS AND PROPOSED MITIGATION MEASURES

1. Please complete the attached Table 1 – Identification of Environmental Impacts, taking into consideration the components in Appendix A. Identify impacts in Table 1 as either positive (P), negative and mitigable (M), negative and non- mitigable (N), or unknown (U).
2. Discuss the impacts identified in the above table.
3. Discuss potential socioeconomic impacts, including human health.
4. Discuss potential for transboundary effects related to the project.
5. Identify any potentially adverse effects of the Project Description on species listed under the *Species at Risk Act (SARA)* and their critical habitats or residences, what measures will be taken to avoid or lessen those effects and how the effects will be monitored.
6. Discuss proposed measures to mitigate all identified negative impacts.

   Refer to Sections 3, 4 and Appendices D4 and D5 of the Project Description.

7. CUMULATIVE EFFECTS

Discuss how the effects of this project interact with the effects of relevant past, present and reasonably foreseeable projects in a regional context.

Refer to Section 7.7.2 of the Project Description.

8. SUPPORTING DOCUMENTS

Where relevant, provide the following supporting documents:

- Abandonment and Decommissioning Plan
- Existing site photos with descriptions
- Emergency Response Plan
- Comprehensive Spill Prevention/Plan (must consider hazardous waste and fuel handling, storage, disposal, spill prevention measures, staff training and emergency contacts)
- Waste Management Plan/Program
- Monitoring and Management Plans (e.g. water quality, air pollution, noise control and wildlife protection etc.)
- If project activities are located within Caribou Protection Areas or Schedule 1 Species at Risk known locations, please provide a Wildlife Mitigation and Monitoring Plan

In addition, for Project Type 9 (Site Cleanup/Remediation), please provide the following additional supporting documents:

- Remediation Plan including cleanup criteria and how the criteria were derived.
- Human Health Risk Assessment of the contaminants at the site.

Refer to references section of the Project Description. These documents are currently in effect at the Meliadine Gold Project and will either be updated or replaced in order to meet the standard required for the draft Environmental Impact Statement that will be developed in conformity with the EIS Guidelines expected from the Nunavut Impact Review Board with the filing of this Project Description.

Additionally, the following documents can be found in an electronic format on the CD in the sleeve at the end of this document.

(1) Abandonment and Restoration, Meliadine West Gold Project Camp and Underground Exploration Area, November 2010

(2) Fuel Management And Spill Contingency Plan, Meliadine West Project, November 2010

(3) Quality Assurance / Quality Control Plan for the Meliadine Gold Project, October 2009

(4) Waste Management Plan, Meliadine West Gold Project, August 2010

(5) Waste Rock and Ore Storage Management Plan, August 2010

(6) Water Management Plan, August 2010

Appendix D4 –
NIRB Table 1 - Identification of Environmental Impacts

MELIADINE GOLD PROJECT

ENVIRONMENTAL IMPACTS & MITIGATIONS MATRIX

Project Description.

P	Positive effect
N	Negative effect: non-mitigable
M	Negative effect: mitigable
U	Unknown

Phase	Activity	Potential Effects	Type	Proposed Mitigation	Residual Effects
CONSTRUCTION	**Laydown _ -- Rankin Inlet**	Disturbance of permafrost.	M	Build pad to bring base of active layer to ground level.	None.
		Construction noise.	M	Temporary. Proper equipment maintenance. Restrict operations to normal working hours.	None.
		Removal of vegetation.	M	Area of sparse or no vegetation, area already disturbed	None.
		Employment.	P	Preferential hiring, training, apprenticeships,	Skills development.
		Community wellness.	U	Before and after socioeconomic monitoring needs to be undertaken to measure community wellness.	Increased skills base. Long-term effects of life-of-mine tax revenue.
		Community infrastructure.	P		Gain in community infrastructure.
		Human/social health.	P	Training & enforcement of safe working practices will mitigate workplace hazards.	Increased skills base & earning power.
	Rankin Inlet tank farm	Disturbance of permafrost.	M	Build pad to bring base of active layer to ground level.	None.
		Construction noise.	M	Temporary. Proper equipment maintenance. Restrict operations to normal working hours.	None.
		Removal of vegetation.	N	Area of sparse or no vegetation in area to be used for tank farm. Area already disturbed.	Tank farm on Nunavut Airports land.
		Employment.	P	Preferential hiring, training, apprenticeships,	Increased skills base.
		Community wellness.	U	Before and after socioeconomic monitoring needs to be undertaken to measure community wellness .	Increased skills base. Long-term effects of life-of-mine tax revenue.
		Community infrastructure.	P		Gain to community infrastructure.
		Human/social health.	P	Training & enforcement of safe working practices will mitigate workplace hazards.	Increased skills base & earning power.

Phase	Activity	Potential Effects	Type	Proposed Mitigation	Residual Effects
CONSTRUCTION	**Spur Roads to F Zone, Discovery, Pump, Wolf and roads around the mine site**	Disturbance of permafrost.	M	Build road base to bring base of active layer to ground level.	None.
		Disruption of drainage patterns.	M	Drainage patterns retained using with culverts. Maintain culverts.	None.
		Water contamination.	M	Construct road while ground frozen as much as possible.	None.
		Generation of greenhouse gases.	N	Ensure vehicle engines properly maintained. No idling when not in use.	Adds to Canada's emissions of greenhouse gases.
		Routing along dykes and eskers where possible.	M	Follow existing ATV trails where possible	Road along esker crests.
		Surface and bedrock geology	M	Quarries built at intervals along the route of spur roads	Positive drainage from quarry & low wall angles
		Disruption of tundra soils.	M	Road edges will revegetate naturally.	Only running surface bare of vegetation.
		Generation of dust	M	Use dust suppressants such as water. Control vehicle speeds and maintain roads.	None.
		Construction noise.	M	Temporary. Remote from community. Maintain equipment properly.	None.
		Burial of vegetation.	N	Follow existing ATV trails, crests of eskers and rock outcrops where vegetation is sparse. Mine site roads can be on dykes	Road edges will revegetate naturally. Only running surface bare of vegetation.
		Intrusion into wildlife habitat.	M	Wildlife to have right-of-way. Control vehicle speeds.	Long-term effect after mine closure depends on intensity of road use.
		Intrusion into bird habitat.	M	Low vehicle speeds to reduce bird collisions.	Long-term effect after mine closure depends on intensity of road use.
		Intrusion into fish habitat.	M	Road is routed along high ground. Culverts/bridges to allow continued fish passage.	None.
		Employment.	P	Preferential hiring, training, apprenticeships,	Increased skills base.
		Community wellness.	P	Ease of access to traditional fishing and hunting areas	Continuation of traditional pursuits
		Community infrastructure.	P		Part of road from Manitoba to Chesterfield Inlet.
		Human/social health.	P	Training & enforcement of safe working practices will mitigate workplace hazards.	Increased skills base & earning power.
		Traditional land use.	P		Improved access to land.

Phase	Activity	Potential Effects	Type	Proposed Mitigation	Residual Effects
CONSTRUCTION	**Pad construction**	Disturbance of permafrost.	M	Build pad to bring base of active layer to ground level.	None.
		Disruption of drainage patterns.	M	Redirect drainage around pads.	None.
		Water contamination.	M	Pads graded to collect runoff in sumps for settling & treatment if necessary.	None.
		Generation of greenhouse gases.	N	Ensure vehicle engines properly maintained. No idling when not in use.	Adds to Canada's emissions of greenhouse gases.
		Disruption of tundra soils.	M	Soils stripped before pad construction and stockpiled for ultimate reclamation.	None.
		Dust generation.	M	Use of dust suppressants such as water.	None.
		Construction noise.	M	Temporary. Remote from community. Equipment properly maintained.	None.
		Removal of vegetation.	N		Pads will revegetate naturally after reclamation.
		Employment.	P	Preferential hiring, training, apprenticeships,	Increased skills base.
		Traditional land use.	N	Temporary loss of pad area during life of mine.	None following reclamation.
CONSTRUCTION	**Mill/camp complex**	Disturbance of permafrost.	M	Buildings on bedrock, piles or columns, according to function.	None.
		Water contamination.	M	Control, collect and treat runoff if necessary. Waste water treatment.	None.
		Dust generation.	M	Use dust suppressants. Keep work areas clean.	None.
		Generation of greenhouse gases.	N	Ensure vehicle engines properly maintained. No idling when not in use.	Adds to Canada's emissions of greenhouse gases.
		Construction noise.	N	Temporary. Remote from community. Equipment properly maintained.	None.
		Bird habitat.	P	Buildings provide sheltered nesting sites.	Additional habitat.
		Employment.	P	Preferential hiring, training, apprenticeships,	Increased skills base.

Phase	Activity	Potential Effects	Type	Proposed Mitigation	Residual Effects
CONSTRUCTION	**Underground development**	Destabilization of ground.	M	Effective geotechnical design & sequencing of workings & support systems; backfilling workings after mining.	None.
		Disturbance of permafrost.	N	Only around portal.	None.
		Altered groundwater hydrology.	M	Only if workings penetrate below permafrost.	Groundwater hydrology will be re-established when mining ends.
		Water contamination.	M	Water used for drilling kept underground. No salt used in most instances.	None.
		Generation of greenhouse gases.	N	Ensure vehicle engines properly maintained. No idling when not in use. Proper blast design.	Adds to Canada's emissions of greenhouse gases.
		Removal of rock.	N	Effective geotechnical design of workings & support systems; backfilling workings after mining.	Permanent excavations, mostly backfilled after excavation.
		Air contamination, dust, fumes.	M	Dust suppression. Engines properly maintained, no idling when engines not in use. Proper blast design.	None.
		Equipment & blasting noise.	M	Mostly confined underground. Ventilation fan noise on surface.	None.
		Employment.	P	Preferential hiring, training, apprenticeships,	Increased skills base.
		Human/social health.	P	Training & enforcement of safe working practices will mitigate workplace hazards.	Increased skills base & earning power.
		Traditional land use.	N	Temporary loss of mine surface works area during life of mine.	None.
CONSTRUCTION	**Pit development**	Destabilization of ground.	M	Effective geotechnical design of workings and mining sequencing.	None.
		Disturbance of permafrost.	N	All open pit mining is to occur within permafrost.	None.
		Disruption of drainage patterns.	M	Drainage rerouted around pits.	Permanent alteration of drainage paths.
		Water contamination.	M	Pit drainage collected in sumps and treated if necessary.	None.
		Generation of greenhouse gases.	M	Ensuring vehicle engines properly maintained. No idling when not in use.	Adds to Canada's emissions of greenhouse gases.
		Disruption of eskers.	N	Tiriganiaq pit overlain by esker.	Loss of esker above Tiriganiaq pit.
		Removal of rock.	N		Permanent excavations.
		Sediment & soil quality.	N		Permanent excavations.
		Generation of dust and fumes.	M	Use of dust suppressants such as water. Proper blast design.	None.
		Removal of vegetation.	N		Permanent loss of vegetation.

Phase	Activity	Potential Effects	Type	Proposed Mitigation	Residual Effects
CONSTRUCTION	**Pit Development**	Wildlife habitat.	N		Permanent loss of pit area as terrestrial habitat.
		Bird habitat.	N		Permanent loss of pit area as terrestrial habitat.
		Fish habitat.	N	Habitat compensation for the loss of fish habitat in bay of Lake A8 and small ponds	Temporary loss of small ponds. Gain of pit areas as major habitat following reclamation.
		Archaeological & cultural historic sites	M	Three sites will be remediated before development of Tiriganiaq open pit.	None.
		Employment.	P	Preferential hiring, training, apprenticeships,	Increased skills base.
		Traditional land use.	N	Temporary loss during life of mine	None.
	Tailings impoundment area	Destabilization of ground.	M	Geotechnical design of construction and operation will ensure ground stability.	None.
		Disturbance of permafrost.	M	Temporary, life of mine.	Removal of the lake and no talik afterwards
		Disruption of drainage patterns.	N	Redirection of drainage.	Permanent alteration of drainage paths.
		Impairment of water quality.	M	Construction and dewatering in winter. No water discharge not meeting MMER/licence limits.	None.
		Generation of greenhouse gases.	N	Ensure vehicle engines properly maintained. No idling when not in use.	Adds to Canada's emissions of greenhouse gases.
		Generation of dust.	M	Use of water to suppress dust.	None.
		Construction noise.	N	Temporary. Remote from community. Maintain mufflers properly.	None.
		Removal of vegetation.	N	Temporary loss during life of mine.	Increased land area for re-vegetation.
		Wildlife habitat.	N	Temporary loss during life of mine.	Increase in terrestrial habitat
		Bird habitat.	N	Aquatic habitat replaced by terrestrial habitat	Change only.
		Fish habitat.	N	Permanent loss of lake. Fish habitat compensation plan.	No net loss.
		Employment.	P	Preferential hiring, training, apprenticeships,	Increased skills base.
		Traditional land use.	N	Loss of traditional aquatic pursuits	Ultimate gain in terrestrial pursuits

Phase	Activity	Potential Effects	Type	Proposed Mitigation	Residual Effects
CONSTRUCTION	**Overburden management**	Destabilization of ground.	M	Effective geotechnical design of stockpile base and construction.	None.
		Permafrost disturbance.	M	Permafrost will move up into stockpile.	Stockpile remaining after mining can be used in reclamation.
		Disruption of drainage paths & small ponds.	M	Redirection of drainage.	Permanent alteration of drainage paths.
		Impairment of water quality.	M	Runoff water will be collected in sumps and, if necessary, treated to meet MMER guidelines before release to environment. Seasonal only.	None.
		Sedimentation.	M	Runoff water will be collected in sumps and sediment allowed to settle.	None.
		Dust generation.	N	Temporary. Use of dust suppressants impractical.	None.
		Machinery noise.	M	Ensure vehicle engines properly maintained. No idling when not in use.	None.
		Removal of vegetation.	N	Temporary until vegetation established.	None.
		Disruption of wildlife habitat.	N	Temporary until vegetation established.	None.
		Disruption of bird habitat.	N	Temporary until vegetation established.	None.
		Destruction and disruption of fish habitat.	N	Habitat replacement or rehabilitation on mine closure.	No net loss of fish habitat.
		Employment.	P	Preferential hiring, training, apprenticeships,	Increased skills base.
		Traditional land use.	N	Temporary loss during life of mine.	None.
OPERATIONS (Effects in addition to effects of development.)	**Open pit mining**	Destabilization of ground.	M	Geotechnical design of construction and operation will ensure ground stability.	None.
		Disruption of permafrost.	N	Temporary, life of mine.	None.
		Impairment of water quality in pits.	M	Water will be collected in sumps and treated to meet MMER/Licence limits before release to environment.	None.
		Generation of greenhouse gases.	M	Ensure vehicle engines properly maintained. No idling when not in use. Proper blast design.	Adds to Canada's emissions of greenhouse gases.
		Removal of rock.	N		Permanent excavations are allowed to fill with water to create aquatic habitat upon closure.

Phase	Activity	Potential Effects	Type	Proposed Mitigation	Residual Effects
OPERATIONS	**Open Pit Mining**	Generation of dust and fumes.	M	Use water as dust suppressant. Proper blast design.	None.
		Equipment & blasting noise.	N	Muffling of equipment, avoidance of night time blasting. Proper blast design.	None.
		Employment.	P	Preferential hiring, training, apprenticeships,	Increased skills base.
		Human/social health.	P	Training & enforcement of safe working practices will mitigate workplace hazards.	Increased skills base & earning power.
		Traditional land use.	N	Permanent loss of terrestrial habitat, replaced with aquatic habitat.	Traditional use of land changed from terrestrial to aquatic.
OPERATIONS (Effects in addition to effects of development.)	**Underground mining**	Destabilization of ground.	M	Geotechnical design of construction and operation will ensure ground stability. Backfilling of workings.	None.
		Disturbance of permafrost.	N	Upper surface of permafrost affected only around portal and shafts. Deeper workings may pass through lower extent of permafrost.	None.
		Impairment of water quality.	U	Quality unknown, however water will be collected in sumps and treated to meet Licence/MMER guidelines before release to environment.	None.
		Generation of greenhouse gases.	N	Ensure vehicle engines properly maintained. No idling when not in use. Proper blast design.	Adds to Canada's emissions of greenhouse gases.
		Removal of rock.	N		Permanent excavations, mostly backfilled after excavation.
		Generation of dust and fumes.	M	Dust suppression, engines properly maintained, no idling when engines not in use. Proper blast design.	None.
		Equipment & blasting noise.	M	Confined underground. Ventilation fan noise on surface.	None.
		Employment.	P	Preferential hiring, training, apprenticeships,	Increased skills base.
		Human/social health.	P	Training & enforcement of safe working practices will mitigate workplace hazards.	Increased skills base & earning power.
	Mill operation	Impairment of water quality.	M	Water recycled in mill and/or reclaimed from tailings. Any final effluents treated to meet Licence/MMER guidelines before release to environment.	None.
		Mechanical noise.	N	Confined in mill building.	None.
		Employment.	P	Preferential hiring, training, apprenticeships	Increased skills base.
		Human/social health.	P	Training & enforcement of safe working practices will mitigate workplace hazards.	Increased skills base & earning power.

Phase	Activity	Potential Effects	Type	Proposed Mitigation	Residual Effects
OPERATIONS (Effects in addition to effects of development.)	**Ore stockpile management**	Destabilization of ground.	M	Effective geotechnical design of stockpile base and construction.	None.
		Disturbance of permafrost.	M	Temporary, life of mine.	None.
		Disruption of drainage paths & small ponds.	M	Redirection of drainage during mine life; restoration on closure.	None.
		Impairment of water quality	M	Runoff water will be collected in sumps and treated to meet MMER/Licence limits before release to environment.	None.
		Soil contamination.	M	On closure, cover stockpile area with inert material. Permafrost will freeze up into capping material.	None.
		Generation of greenhouse gases.	N	Ensure vehicle engines properly maintained. No idling when not in use.	Adds to Canada's emissions of greenhouse gases.
		Dust generation.	N	Temporary, life of mine. Use of dust suppressants impractical.	None.
		Machinery noise.	M	Ensure vehicle engines properly maintained. No idling when not in use.	None.
		Burial of vegetation.	N	Temporary, life of mine.	Stockpile area reclaimed after closure.
		Disruption of wildlife habitat.	M	Temporary, life of mine.	None.
		Disruption of bird habitat.	M	Temporary, life of mine.	None.
		Disruption of fish habitat.	M	Habitat replacement or improvement elsewhere	No net loss of habitat.
		Employment.	P	Preferential hiring, training, apprenticeships,	Increased skills base.
		Traditional land use.	M	Temporary, life of mine.	None.
	Waste rock management	Destabilization of ground.	M	Effective geotechnical design of stockpile base and construction.	None.
		Disruption of permafrost.	M	Permafrost will freeze up into stockpile.	Stockpile becomes part of permafrost.
		Disruption of drainage patterns.	M	Redirection of drainage. Impact on ponds avoided to extent possible.	Permanent alteration of drainage paths.
		Impairment of water quality.	M	Runoff water will be collected in sumps and treated to meet MMER/Licence limits before release to environment.	None.
		Dust generation.	N	Temporary, life of mine. Use of dust suppressants impractical.	None.

Phase	Activity	Potential Effects	Type	Proposed Mitigation	Residual Effects
OPERATIONS (Effects in addition to effects of development.)	. **Waste rock management**	Machinery noise	N	Ensure vehicle engines properly maintained. No idling when not in use	None
		Burial of vegetation.	N	Temporary, life of mine.	None.
		Intrusion into wildlife habitat.	M	Temporary, life of mine.	None.
		Intrusion into bird habitat.	M	Temporary, life of mine.	None.
		Loss of fish habitat.	M	Habitat replacement or improvement elsewhere	No net loss of habitat.
		Employment.	P	Preferential hiring, training, apprenticeships,	Increased skills base.
		Traditional land use.	N	Temporary, life of mine.	None.
OPERATIONS (Effects in addition to effects of development.)	**Tailings impoundment area**	Destabilization of ground.	M	Effective geotechnical design and operations planning.	None.
		Filling of lake basin B7and other small lakes with tailings.	N	Permanent loss of lakes.	B-7 and small lake basins filled with tailings.
		Impairment of water quality.	M	Maximum retention of water in mill. Polishing pond before release of water to environment. Seasonal only.	None.
		Dust generation.	M	Progressive reclamation and final capping with inert material.	None.
		Employment.	P	Preferential hiring, training, apprenticeships,	Increased skills base.
		Human/social health.	P	Training & enforcement of safe working practices will mitigate workplace hazards.	Increased skills base & earning power.
		Traditional land use.	N	Loss of area to traditional land use during life of mine.	Substitution of terrestrial for aquatic use.
	Camp operation	Impairment of water quality.	M	Sewage treatment.	None.
		Litter, garbage.	M	Control litter by education, proper dispose of garbage.	None.
		Employment.	P	Preferential hiring, training, apprenticeships,	Increased skills base.
		Human/social health.	M	Training & enforcement of safe working practices will mitigate workplace hazards.	Increased skills base & earning power.
	Road operation	Dust impinging on water bodies and vegetation close to the road	M	Dust suppression, road maintenance and controlled road speeds.	Will continue as long as road is used.
	Road Operation	Generation of greenhouse gases.	N	Ensuring vehicle engines properly maintained. No idling when not in use.	Adds to Canada's emissions of greenhouse gases.

Phase	Activity	Potential Effects	Type	Proposed Mitigation	Residual Effects
OPERATIONS (Effects in addition to effects of development.)	**Road operation**	Vehicle noise.	M	Minimize operations at night.	None.
		Wildlife disturbance/mortality.	M	Wildlife to have right of way. Controlled vehicle speeds. Continuous use will discourage denning in road itself.	None.
		Bird disturbance/mortality.	M	Birds to have right of way. Controlled vehicle speeds. Continuous use will discourage nesting in road itself.	None.
		Employment.	P	Preferential hiring, training, apprenticeships,	Increased skills base.
		Community wellness.	P		Increased skills base. Long-term effects of life-of-mine tax revenue.
		Human/social health.	P	Training & enforcement of safe working practices will mitigate workplace hazards.	Increased skills base & earning power.
		Traditional land use.	P		Improved access to land.
		Vegetation	M	Dust suppression	None.
		Generation of greenhouse gases.	N	Ensure incinerator properly maintained.	Adds to Canada's emissions of greenhouse gases.
OPERATIONS (Effects in addition to effects of development.)	**Waste incineration**	Inert waste reduction	P	Less material to go into landfill	None.
		Air quality	M	Incinerator will be dual chamber and will be operated according to manufacturer's specifications.	None.
		Community wellness.	P	Demonstrating the means of controlling waste materials.	Increased skills base that is transferable to waste management in communities.
		Generation of greenhouse gases.	N	Ensuring incinerator properly maintained.	Adds to Canada's emissions of greenhouse gases.
	Power generation	Air quality	M	Diesel generators will be maintained to minimize emissions and work efficiently	None.
		Generation of greenhouse gases.	N	Ensuring generators properly maintained.	Adds to Canada's emissions of greenhouse gases.
	Equipment emissions	Air quality	M	Ensuring vehicle engines properly maintained. No idling when not in use.	None.

Phase	Activity	Potential Effects	Type	Proposed Mitigation	Residual Effects
OPERATIONS	**Equipment emissions**	Disruption of permafrost.	P	Cessation of pit mining will allow re-establishment of permafrost.	Permafrost will advance to pit outline.
DECOMMISSIONING (Effects are of the work itself. Results of the work are residual effects.)	**Pits closure**	Water quality in pits.	M	Pits will naturally fill with water	Metal leaching of the walls of the pits may persist.
		Machinery noise.	N	Temporary.	None.
		Vegetation.	P		Re-establishment of vegetation on pit edges and haul roads.
		Wildlife habitat restored.	P	Continued disturbance during reclamation work. Some pits are to be back filled at F Zone	Re-establishment of habitat when operations cease.
		Bird habitat restored.	P	Continued disturbance during reclamation work.	Re-establishment of habitat when operations cease.
		Fish habitat restored.	P	No disturbance during reclamation work.	Expanded fish habitat as pits naturally fill with water. Possible habitat compensation.
		Employment.	P	Employment during reclamation work. Training and enforcement of safe work practices will mitigate workplace hazards.	Increase skills base transferable to other mines or other industry.
		Community wellness.	N		Loss of local employment & tax revenues, unless other mines or industries established.
		Human/social health.	P	Employment during reclamation work. Training and enforcement of safe work practices will mitigate workplace hazards.	Increase skills base transferable to other mines or other industry.
		Traditional land use.	P		Traditional land use restored.
		Disturbance of permafrost.	P	No further excavation or disturbance of permafrost.	Re-establishment of permafrost, closure and reclamation of portal.
DECOMMISSIONING (Effects are of the work itself. Results of the work are residual effects.)	**Underground mine closure**	Vegetation.	P		Re-establishment of vegetation following reclamation of portal area.
		Wildlife habitat restored.	P		Re-establishment of wildlife habitat over portal area following reclamation
		Bird habitat restored.	P		Re-establishment of bird habitat over portal area following reclamation
		Employment.	P	Employment during reclamation work. Training and enforcement of safe work practices will mitigate workplace hazards.	Increase skills base transferable to other mines or other industry.

Phase	Activity	Potential Effects	Type	Proposed Mitigation	Residual Effects
DECOMMISSIONING (Effects are of the work itself. Results of the work are residual effects.)	**Underground mine closure**	Community wellness.	N	Employment during reclamation work. Training and enforcement of safe work practices will mitigate workplace hazards.	Loss of local employment & tax revenues, unless other mines established.
		Human/social health.	N/P	Employment during reclamation work. Training and enforcement of safe work practices will mitigate workplace hazards.	Loss of local employment, unless other mines established, but enhanced skills base and earning power.
		Traditional land use.	P		Traditional land use fully restored.
		Dust generation.	N	Temporary during reclamation work.	None.
	Mill & plant dismantling	Employment.	N/P	Employment during reclamation work. Training and enforcement of safe work practices will mitigate workplace hazards.	Increased skills base, but loss of local employment, unless other mines established.
		Human/social health.	N/P	Employment during reclamation work. Training and enforcement of safe work practices will mitigate workplace hazards.	Loss of local employment, unless other mines established, but enhanced skills base and earning power.
		Vegetation	P		Re-establishment of vegetation following reclamation.
		Disruption of permafrost.	P		Permafrost will freeze up into cover material
	Stockpile reclamation	Disruption of drainage patterns.	P		Re-establishment of pre-existing drainage patterns to the extent possible.
		Dust generation.	M	Use of dust suppressants impractical. Temporary during reclamation work.	None.
		Machinery noise.	N	Temporary during reclamation work.	None.
		Vegetation.	P		Re-establishment of vegetation.
		Employment.	P	Employment during reclamation work. Training and enforcement of safe work practices will mitigate workplace hazards.	Increased skills base transferable to other mines or other occupations.
		Traditional land use.	P		Traditional land use fully restored.

Phase	Activity	Potential Effects	Type	Proposed Mitigation	Residual Effects
DECOMMISSIONING (Effects are of the work itself. Results of the work are residual effects.)	**Tailings impoundment area reclamation**	Permafrost.	P		Permafrost will freeze up into tailings' cover material.
		Hydrology/limnology.	P		Re-establishment of natural drainage patterns.
		Impairment of water quality.	M	Temporary during reclamation.	None.
		Dust generation.	M	Temporary during reclamation.	None.
		Machinery noise.	N	Temporary during reclamation.	None.
		Vegetation.	P		Tailings area will re-vegetate.
		Wildlife habitat restored.	M	Continued disturbance during reclamation work.	Re-establishment of habitat when reclamation complete.
		Bird habitat restored.	M	Continued disturbance during reclamation work.	Re-establishment of habitat when reclamation complete.
		Fish habitat replaced.	P		Re-establishment of aquatic life in natural drainage around tailings management area.
		Employment.	P	Employment during reclamation work. Training and enforcement of safe work practices will mitigate workplace hazards.	Increased skills base transferable to other mines or other occupations.
		Human/social health.	P	Employment during reclamation work. Training and enforcement of safe work practices will mitigate workplace hazards.	Increased skills base transferable to other mines or other occupations.
		Traditional land use.	P		Traditional land use restored.
	Waste rock management area reclamation	Stability Permafrost	P P	Contouring the waste rock management area	None.
		Water quality	P	Contouring of the area will reduce erosion	None.
		Vegetation	P	Contouring the area will encourage establishment of vegetation	Vegetation will establish over time
		Bird habitat restored	P	Continued disturbance during reclamation work.	Birds will begin to use the area following reclamation.
		Wildlife habitat restored	P	Continued disturbance during reclamation work.	Wildlife will begin to use the area following reclamation.
		Employment	P	Employment during reclamation	Increased skills base transferable to other mines or other occupations.
		Traditional land use	P		Traditional land use restored.

Phase	Activity	Potential Effects	Type	Proposed Mitigation	Residual Effects
DECOMMISSIONING (Effects are of the work itself. Results of the work are residual effects.)	**Overburden Management area reclamation**	Stability	P	Contouring of the overburden management area	None.
		Permafrost	P		Permafrost will move into the area
		Water Quality	P	Contouring of the area will reduce erosion	None.
		Vegetation	P	Contouring the area will encourage establishment of vegetation and improve water quality	Vegetation will be established over time
		Bird habitat restored	P	Continued disturbance during reclamation work.	Birds will begin to use the area following reclamation.
		Wildlife habitat restored	P	Continued disturbance during reclamation work.	Wildlife will begin to use the area following reclamation.
		Employment	P	Employment during reclamation	Increased skills base transferable to other mines or other occupations.
		Traditional land use	P		Traditional land use restored.

Appendix D5
Environmental Impacts and Mitigation Matrix

THE NUNAVUT IMPACT REVIEW BOARD

PROJECT SPECIFIC INFORMATION REQUIREMENT - PART 2 FORM

TABLE 1 - IDENTIFICATION OF ENVIRONMENTAL IMPACTS

	PROJECT COMPONENTS/ACTIVITIES	ENVIRONMENTAL COMPONENTS	PHYSICAL	designated environmental areas (i.e. Parks, Wildlife Protected areas)	ground stability	permafrost	hydrology/ limnology	water quality	climate conditions (greenhouse gases)	eskers and other unique or fragile landscapes	surface and bedrock geology	sediment and soil quality	tidal processes and bathymetry	air quality (gaseous emissionS & dust)	noise levels	other VEC:	other VEC:	other VEC:	BIOLOGICAL	vegetation	wildlife, including habitat and migration patterns	birds, including habitat and migration patterns	aquatic species, incl. habitat and migration/spawning	wildlife protected areas	other VEC:	SOCIO-ECONOMIC	archaeological and cultural historic sites	employment	community wellness	community infrastructure	human health (including social health)	traditional land use
CONSTRUCTION	Laydown – Rankin Inlet					M									M					N								P	U	P	M	
	Rankin tank farm					M									M					M								P	U	P	M	
	Spur and mine site roads					M	M	M	N	M	M	M		M	M					N	M	M	M					P	P	P	M	P
	Pads					M	M	M	N			M		M	M					N								P				N
	Mill/camp complex					M		M	N					M	M					N		P						P				
	Underground development				M	N	M	M	N		M			M	M													P			M	N
	Pit development				M	N	M	M	N	N	N	N		M	M					N	N	N	N				M	P				N
	Tailings impoundment area				M	M	N	M	N					M	M					N	N	N	N					P				N
	Overburden management				M	M	M	M				M		N	M					N	N	N	N					P				N
OPERATION	Open pit mining				M	N		M	N		N	M		M	N													P			M	N
	Underground mining				M	N		U	N		N			M														P			M	
	Mill operation							M							N													P			M	
	Ore stockpile management				M	M	M	M	N			M		N						N	M	M	M					P				M
	Waste rock management				M	M	M	M				M		N						N	M	M	M					P				N
	Tailings area management				M		N	M																				P			M	N
	Camp operation							M				M																P			M	
	Road operation							M	N			M		M	N					M	M	M						P	P		P	P
	Waste incineration								N					M															P			
	Power generation								N					M																		
	Equipment emissions								N					M															U		U	
DECOMMISSIONING	Pits closure					P		M				M			N					P	P	P	P					P		N	M	P
	Underground mine closure					P														P	P	P						P		N	M	P
	Mill and plant dismantling													M						P								P			M	
	Stockpile reclamation					P	P					M		M	N					P								P				P
	Tailings impoundment area reclamation					P	P	M				M		M	N					P	M	M	P					P			M	P
	Waste rock management area reclamation				P	P		P												P	P							P				P
	Overburden management area reclamation				P	P		P						P						P	P							P				P

Notes: Please indicate in the matrix cells whether the interaction causes an impact and whether the impact is:

P - *Positive;* ***N -*** *Negative and non-mitigable;* ***M*** *- Negative and mitigable;* ***U -*** *unknown:* ***If no impact is expected then please leave the cell blank***

Appendix E

Confirmation Letter sent to the Department of Fisheries and Oceans to abide by the Applicable *Operating Statements* and to apply for an *Authorization for Works or Undertaking Affecting Fish Habitat.*

AGNICO-EAGLE

11 April 2011

Derrick Moggy
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<u>RE:</u> **Meliadine Gold Project: Fisheries and Oceans: Conformity with DFO - Operational Statements for Nunavut and Application for an Authorization for Works or Undertakings Affecting Fish Habitat: NIRB Part 2 Screening Form, Query 10**

Dear Mr. Moggy, Ms. Williston, Ms. Johnson and Mr. Kan,

Agnico-Eagle Mines Limited (AEM) is proposing to construct and operate an all weather road of approximately 30 km in length from Rankin Inlet to the Meliadine camp located near Meliadine Lake. This also includes a spur road to Meliadine Lake. Work on the all weather road will occasionally take place in and around fish habitat, which will cause us to follow the appropriate DFO Operational Statements for Nunavut.

The Operational Statements applicable to the all weather road include:

- Timing Windows,
- Clear Span Bridges,
- Ice Bridges and Snow Fills, and
- Temporary Stream Crossing.

AEM agrees to meet the conditions and incorporate the appropriate measures to protect fish and fish habitat as outlined in the above applicable Operational Statements.

93, Rue Arseneault, bureau 202, Val d'Or, Québec, J9P0E9 819 825 3744

In outlining the project to DFO on 22 September 2010, it was understood that an *Authorization for Works or Undertakings Affecting Fish Habitat* will be required for the road to remain in compliance with the Fisheries Act. We acknowledge an authorization is only possible following a screening or possibly an environmental review by the Nunavut Impact Review Board. Nonetheless, during the interim period and prior to NIRB's review being completed, we propose continue developing an acceptable Habitat Compensation Plan, which would allow DFO's authorization to be granted shortly following NIRB's review.

AEM and its consultants continue to develop options for a no-net-loss plan for the road and look forward to completing this plan so that it meets the objectives of the Management of Fish Habitat Policy.

Should you require further information or clarification on this letter, please do not hesitate in contacting John Witteman at 819 277 5444 or jwitteman@agnico-eagle.com.

Yours sincerely,

Eric M Lamontagne
Project Manager, Meliadine

Cc. Nunavut Impact Review Board
Nunavut Planning Commission
John Witteman, Environmental Consultant
Lasha Young, Golder Associates
Veronica Tattuinee, Kivalliq Inuit Association