

# **MELIADINE GOLD PROJECT**

**APPLICATION TO CONDUCT**

**EXPLORATORY DIAMOND DRILLING AND GEOTECHNICAL DRILLING ON FEDERAL  
CLAIM PB1 (F69574)**

SUBMITTED TO:

NUNAVUT IMPACT REVIEW BOARD – FILE 10EN006

INAC FILE – N2010C0002

NWB File – 2BB-MEL0914 (Amendment Request)

BY:

COMAPLEX MINERALS CORP.

CALGARY, AB

**February 2010**

## **PROJECT COORDINATES AND MAPS**

### **Name and location of proposed project.**

The Meliadine West Gold Project is located on Inuit Owned Land approximately 35 km north west of Rankin Inlet in the Kivalliq Region of Nunavut. The camp serving the exploration program is located at 63° 01' 30" N - 92° 10' 20" W and has operated at this location since May 1997.

**Federal Claim PB1 (F69574)** is located over the mouth of the Meliadine River about 6 km NNW of the hamlet of Rankin Inlet. The center of the claim is at 62° 52' N Lat and - 92° 08' W Long. The area being investigated for the possibility of a bridge crossing the Meliadine River is on Claim PB1 at 62° 52' 32.3" N Lat and -92° 07' 9.1" W Long. The Project is owned by Comaplex Minerals Corp. of Calgary (100%).

The location of the claim and proposed work is generalized on **Figures 1 and 2**. Shapefiles in coordinate system UTM NAD83, Zone 15 are included on the accompanying CD.

### **Project Management**

The Meliadine West Gold Project is managed by the following personnel:

Project Mailing address:

Meliadine West Gold Project  
Comaplex Minerals Corp.  
901, 1015 - 4th Street SW  
Calgary, AB T2R 1J4

Project Manager: Mark Balog, Chief Operating Officer  
Comaplex Minerals Corp.  
Calgary, AB  
ph. 403 265 2846

Field Management: Doug Dumka, Exploration Manager  
Comaplex Minerals Corp.  
Calgary, AB  
ph. 403 750 2559

Environment: John Witteman\*  
Canmore, AB  
ph. 403 750 2570

\* Consultant to Comaplex Minerals Corp.

## **PROJECT GENERAL INFORMATION**

Comaplex Minerals Corp. has identified gold occurrences on its PB1 claim (and adjacent NTI Concession ANT3) where the Meliadine River enters Prairie Bay that are worthy of drill testing. Comaplex proposes to drill approximately 15 DDH totaling less than 2000 metres in less than 15 diamond drill holes as an initial test of the gold occurrences. This drilling would require standard permissions and operating procedures. There are no alternatives to diamond drilling.

In addition, Comaplex has been evaluating sites for a bridge over the Meliadine River in conjunction with the Municipality of Rankin Inlet and Department of Economic Development and Transportation. Comaplex has conducted environmental and archaeological surveys along a proposed road route and has chosen a preliminary bridge site shown on maps accompanying this application. As an initial step towards the selection of a bridge location, the bedrock conditions need to be evaluated through the drilling of shallow geotechnical drill holes, (< 10 meters into bedrock), designed to look for faults and fractures in the bedrock that could affect bridge construction. It will be necessary to drill some of these shallow holes close to the shore of the river and within the normally 31 m restricted zone of the high water mark. This permit requests permission to drill within this zone. The results would influence the Feasibility Study for the Meliadine Gold Project anticipated to be completed in early 2011. Comaplex would take all necessary precautions to ensure that drill cuttings do not enter the river. It should be noted that the geotechnical holes will be very short in length and excessive cuttings will not be generated. There are no alternatives to geotechnical drilling for the effective evaluation of a proposed bridge location.

A “No-go” decision could delay the feasibility study and ultimately the development of the Meliadine Gold Project assuming a positive result from the feasibility study.

### **Proposed Schedule**

April 2010 – Permit Approval

June – October 2010 - Drilling

### **List of approvals, permits and licenses required including the authorizing agency, expiry dates.**

#### **Current Licences and Permits January 2010 – Meliadine Gold Project**

<b>Lic. Number</b>	<b>Explanation</b>	<b>Issued By</b>	<b>NIRB File</b>	<b>Expiry</b>	<b>Note</b>
KVRW98F149	Meliadine Lake Right of Way	KIA		April 30 2010	
KVRW07F02	Overland Right of Way	KIA	07AN063	October 26 2010	
N2010C0002	INAC Drill, Access Permit	INAC	10EN006	This Application	
	WCB Program Authorization	WCB		December 31, 2009	Being Renewed
	Hamlet Disposal Authorization	Hamlet	issued Aug 09	NA	
	Community & Gov't Services Authorization- Land Use Permit				
	CLEY Permit for Mitigation				
2BB-MEL0914	Water License	NWB	07EN044	31-Jul-14	

**List of Acts, Regulations, and Guidelines that apply to project activities.**

Article 13 - Nunavut Land Claims Agreement

NWB - Water Licensing in Nunavut - Interim Procedures and Information Guide for Applicants

NWTWB - Guidelines for Contingency Planning

DFO - Freshwater Intake End of Pipe Fish Screen Guideline Fisheries Act - s.35

DFO – Mineral Exploration Activities Operational Statement

RWED - Environmental Protection - Spill Contingency Regulations

Canadian Drinking Water Quality Guidelines

Public Health Act Water Supply Regulations

Territorial Land Use Act and Regulations

Canada Mining Regulations

**DFO Operational Statement (OS) Conformity**

We are notifying DFO regarding this application and will follow the OS for Mineral Exploration Activities when drilling within the normal 31 m restricted zone above the high water mark of the Meliadine River. We agree to meet the conditions and incorporate the measures necessary to protect fish and fish habitat. We will forward the statement of confirmation to NIRB, NWB, INAC and the KIA when it is received.

**Transportation**

Claim PB1 is unique in its all weather road access. We are assessing the possibility of supplying a drill crew from town using drill materials stored in town delivered to a roadside location and transported to the drill site by helicopter. Refuse would be backhauled using the same methods. Drill crews may stay in town or in our Meliadine Lake camp. The alternative is to mobilize all materials from our camp using traditional helicopter support. It is likely that where feasible road access will be used but drill moves and some supply will be from our camp using helicopters. During drilling, minimum flights will be 2 in the morning (about 7:30-8:30 am, personnel, materials) and 2 in the evening (about 7:00 to 8:00 pm). On most days, other support flights will be necessary between these hours. Drill moves will typically involve the helicopter in intermittent low altitude flight (< 300 m) for 2 to 3 hours in a restricted area.

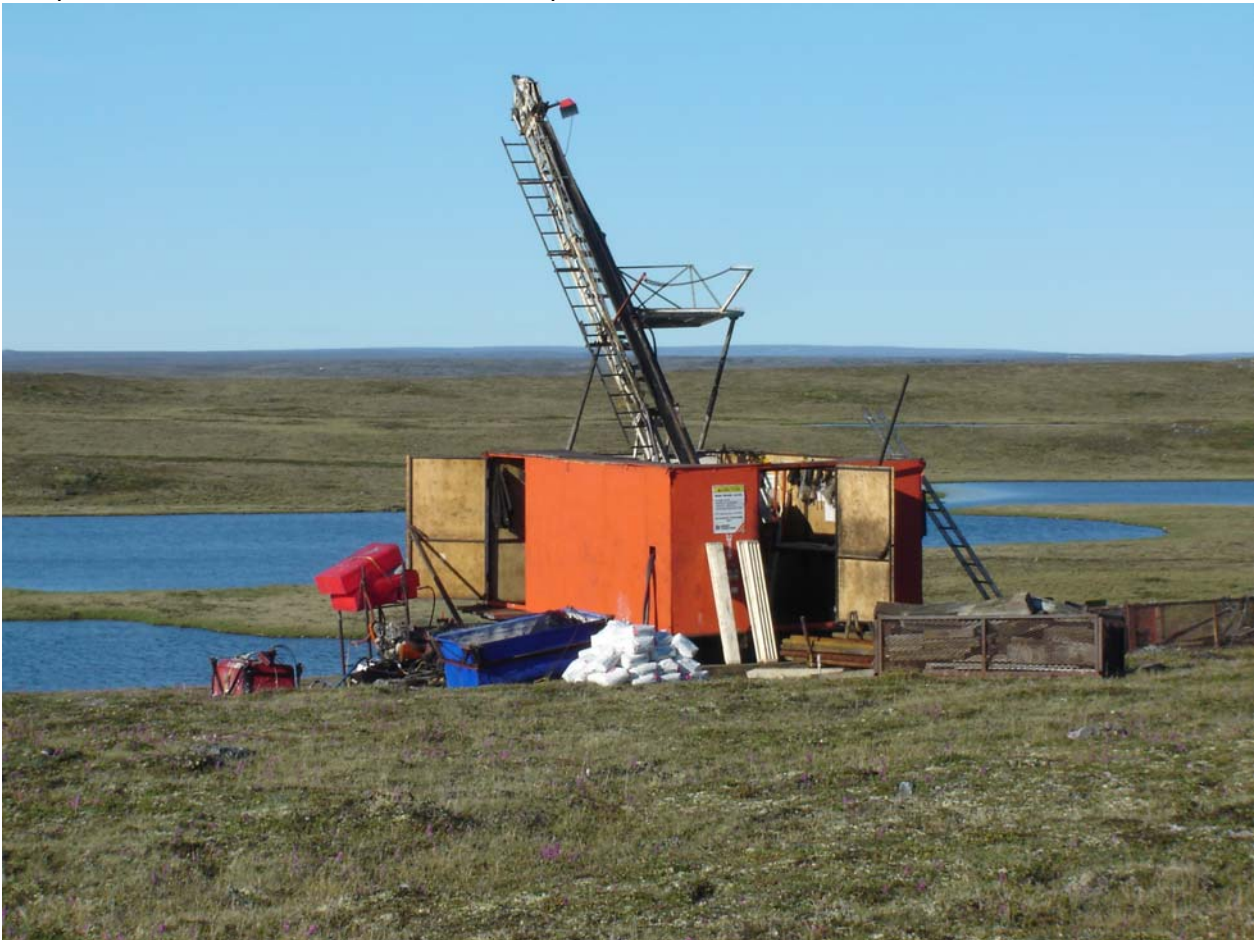
The sites are about 6 kilometers NW of the end of the Rankin Airport runway (Figure 1). Particular care and attention will be paid to maintaining communications with the airport authority about all our activities involving helicopter support.

**Camp Site (n/a)**

## **Equipment**

Equipment type and number	Size – dimensions	Proposed use
LF70 Drill (or Fly 38, or RC Rig), rod	25000 lbs	Drill and equipment
Water Pumps - Diesel	150 kgs	Water pumping
300 m hose	1 inch	Water line
50 bags Salt ( $\text{CaCl}_2$ )	60 lb	Exploration Drilling Only
100 core boxes	NQ	As needed
Coil Stove	50 kgs	Water Heater – Geotechnical Drilling

See photo below – Standard LF70 drill in operation



## **Water – Water Management**

**Water Source** – local ponds will be used as water sources for drilling - see Figure 1 and Figure 2.

**Water Pumps** – Boart Longyear standard drill pumps are diesel powered and free-standing. They have a spill pan beneath them and standard procedure is to protect the pump site with absorbent matting. Standard procedure is to check for leaks or spills several times per shift. The pump and its fuel are to be positioned at least 31 m from the normal high water mark of the water source and a hose is placed in the water source. The intake is fitted with a foot valve to ensure waters pumped do not flow back into the water source and the line is metered. The intake is fitted with a screen of appropriate size to ensure that fish are not entrained. The flow rate is such that fish are not impinged on the screen. Comaplex expects a standard LF70 drill to use about 53 m<sup>3</sup> of water per day per on average.

**Coil Stoves** - A diesel powered coil stove will be used to heat water for geotechnical drill holes of limited depth.

### **Drill Site Water Management:**

For drilling both on and off – ice, Water License 2BB-MEL0914 lists the following conditions:

#### **PART F: CONDITIONS APPLYING TO DRILLING OPERATIONS**

1. The Licensee shall not conduct any land based drilling within thirty one (31) metres of the ordinary high water mark of any water body, unless otherwise approved by the Board.
2. The Licensee shall ensure that all drill waste, including water, chips, muds and salts (CaCl<sub>2</sub>) in any quantity or concentration, from land-based and on-ice drilling, shall be disposed of in a properly constructed sump or an appropriate natural depression located at a distance of at least thirty one (31) metres from the ordinary high water mark of any adjacent water body, where direct flow into a water body is not possible and no additional impacts are created.
3. Drill holes shall be immediately sealed and permanently capped to prevent induced contamination of groundwater or salinization of surface waters. The Licensee shall report all artesian flow occurrences within the Annual Report, including the location (GPS coordinates) and dates.
4. Where drilling activity has penetrated below the permafrost layer, the NWB requests that the proponent record the depth of permafrost and location of the drill hole to be included within the Annual Report.
5. Drilling additives or mud shall not be used in connection with holes drilled through lake ice unless they are re-circulated or contained such that they do not enter the water, or are demonstrated to be non-toxic.

6. For “on-ice” drilling where drill additives are not being used, return water released must be nontoxic, and not result in an increase in total suspended solids in the immediate receiving waters above the Canadian Council of Ministers for the Environment, Guidelines for the Protection of Freshwater Aquatic Life (i.e. 10mg/L for lakes with background levels under 100 mg/L, or 10% for those above 100mg/L).
7. The Licensee shall establish water quality conditions prior to and upon completion of any drilling program through lake ice.

Comaplex employs “Aqua-Dam” devices to direct drill cuttings to local sumps where necessary. The devices are fabric tubes that are filled with water and provide a seal over an irregular surface. Drill waters and entrained cuttings can be directed away from sensitive areas to intended sumps. These methods will be employed at sites more than 31 meters from the normal high water mark of local water bodies. Comaplex will adhere to the above conditions for geotechnical holes drilled within the 31 meter restricted zone subject to approval. For geotechnical drilling, coil stove (diesel powered) heated water will be employed with no salt additives.

**Waste Water** - n/a

All project related refuse will be backhauled either to our camp at Meliadine Lake or to the landfill at Rankin Inlet. Drill sites will be cleaned immediately after project completion.

**Fuel**

**Fuel and Hazardous Material Use:**

Fuels	Number of Containers	Capacity of containers (gal & litre)
• Diesel	8 bbls MAX	205 lt
• Gasoline	5 gallons MAX	Jerry can
• Propane	4 MAX	100 lb tanks

Comaplex Minerals operating procedures are contained within the **Fuel Management and Spill Contingency Plan (Sept 2009)** included on the attached CD. The plan contains details on procedures to be employed in remote drill areas.

Fuel will be transported from our Camp at Meliadine Lake by helicopter or by truck from Rankin Inlet. Only sufficient fuels to maintain the normal operation of the drill will be kept on the claim. The fuels will travel with the drill and no substantial caches will be maintained. Barrelled fuels will be stored in safe locations with the bungs rotated to the horizontal position. Fuel is transferred from barrels to the fuel tank on the drill engine by wobble pump. The barrels will be contained within plastic secondary containment vessels near the drill. The fuel tank for the drill will have a secondary containment vessel underneath it and all connections will be protected with absorbent matting.

At the drill, the fuel distribution system is protected by spill trays and absorbent matting. The water pump is located away from local water sources and is similarly protected by a spill pan and absorbent matting.

Lubricants and hazardous materials at the drill sites are maintained within a plastic, closable and flyable storage container that provides secondary containment for these products.

### **Other Hazardous**

Oils, lubricants and salts will travel with the drill. No substantial caches will be maintained. Maximum amounts of these materials are:

Salt (Calcium Chloride) – 50 x 60 lb bags

Oils – 50 – 5 litre containers

Lubricants – 20 – 5 litre containers

Batteries – 4 x 12 volt car batteries

Hazardous materials kept routinely on site with the drills will include oils, lubricants, calcium chloride (exploration drilling only) and batteries. The oils, lubricants and batteries are stored in a sealable and flyable plastic container that provides secondary containment. Calcium chloride will be used on exploration drill holes and will be stored at the drill site. Only the amount of salt necessary to complete the drill hole will be kept on hand.

Procedures for the control of hazardous materials are detailed in **Fuel Management and Spill Contingency Plan (Sept 2009)** included on the attached CD.

### **Workforce**

Comaplex Minerals Corp and its contractor Boart Longyear have a long term commitment to providing employment opportunities for local people. Comaplex has maintained a local seasonal workforce of 6 to 20 people and integrated them throughout the operation. Rotation for local employees is typically 3 weeks on and 1 week off. Boart Longyear typically has one or two drill personnel from Nunavut on its staff in any given season.

### **Public Involvement/Traditional Knowledge**

A complete listing of public meetings is appended to PART 1 of this application.

Traditional knowledge studies have been undertaken and the results have been incorporated into the report by **Nanuk Enterprises Ltd., Traditional Ecological Knowledge Study, Inuit Qaujimajatuqangit, 1999 Final Report**. The report has been included on the accompanying CD. Methods used in the acquisition and reporting of the knowledge are included in the report.



The Golder Associates Ltd report **Archaeological Impact Assessment of the Meliadine West Gold Project (Golder, 2008)** also on the CD, recommends traditional knowledge investigations along the proposed road alignment including the proposed bridge site under investigation. This work is planned for the summer of 2010.

## **PROJECT INFORMATION – MINERAL EXPLORATION**

### **B-1 Project Information**

The proposal is for the preliminary testing of surface gold occurrences and postulated strike extensions. The mineral occurrences under investigation do not outcrop and consist of auriferous boulders of local derivation. Drill testing would be designed to identify the sources of the boulders.

### **B-2,3 Exploration Activity**

Exploration activities anticipated by this permit application are:

- Surface prospecting and mapping
- Ground geophysics (magnetics surveys) – the entire area of Claim PB1 and adjacent NTI concession ANT3 are candidates for ground geophysical surveys.
- Diamond Drilling (less than 15 DDH and less than 2000 total meters as a first pass), a prospective area is indicated on Figure 1, drill hole locations under review.
- Follow-up diamond drilling assuming some success with first pass drilling
- Claim staking

#### **Other Activities**

- Geotechnical drilling at a site selected as a possible bridge over the Meliadine River as outlined previously in this application. Other agencies (KIA, NWB, DFO) are being notified regarding this proposed work and where necessary, applications to do this work are being filed.
- Environmental and heritage studies in support of the road and bridge proposal.

### **B-4 Drilling- Description of Operations and Water Management Practices**

#### **Described above**

**Drill Holes** – general areas of geotechnical and exploration drilling shown on Figures 1 and 2. Exact locations under review.

**Drill Additives** - Exploration Drilling – CaCl<sub>2</sub>, drill muds if necessary  
Geotechnical Drilling - no additives

**Drill Waters and Cuttings** will be directed via a hose, or collected and transported, to a sump more than 31 meters from the high water mark of local water bodies. The sump will be chosen after a field inspection. Local cuttings management using “Aqua-dam”

**Drill Mobilization** – By helicopter from our Meliadine Lake Camp, or overland from Rankin Inlet, where our contractor, Boart Longyear, has drills in storage. Helicopter lift from road to collar locations if drills mobilized from Rankin Inlet.

**Diamond drill** holes will be abandoned in accordance with the terms and conditions of Water License 2BB-MEL0914:

Part F - #3. Drill holes shall be immediately sealed and permanently capped to prevent induced contamination of groundwater or salinization of surface waters. The Licensee shall report all artesian flow occurrences within the Annual Report, including the location (GPS coordinates) and dates.

All rod and casing will be removed from the ground or cut below ground level if the drill crew is unable to withdraw it. Note that in the case of shallow holes terminating in the permafrost zone, the drill holes are self-sealing freezing immediately upon the removal of drill rod.

## **DESCRIPTION OF THE EXISTING ENVIRONMENT**

Comaplex Minerals Corp has completed comprehensive environmental studies that are in the process of being finalized. The data will become available with the public publication of its Preliminary Project Description and Environmental Impact Statement. Selections from this data are highlighted below.

### **Protected Areas, Heritage Areas**

Figure 1 shows the proximity of the area to the Meliadine River Park (Iqalugaarjuup Nunanga Park) where important archaeological sites are protected. Heritage resources identified by Comaplex and its contractor, Golder Associates, immediately down-river from the park and within Federal Claim PB1 (F69574) are detailed in the report **Archaeological Impact Assessment of the Meliadine West Gold Project (Golder, 2008, see CD)**. The sites are scheduled for detailed mapping and mitigation in the summer of 2010 under a permit from the Department of Culture, Language, Elders and Youth (CLEY) secured by Golder Associates. The areas of investigation are generalized on Figure 2 due to mandated reporting restrictions.

### **Meliadine River – Sport Fishing**

The mouth of the Meliadine River from the south limit of the park to the outlet at Prairie Bay is an important recreational area for Rankin Inlet inhabitants. Char are known to use the river. Numerous ATV trails cross the claim and local residents are frequently

fording the river at various spots in this area to get access to terrain to the northwest.

### **Surface Resources**

Claim PB1 is the termination of a major regional esker system that traverses Meliadine River Park and that has been used in the past as a source of aggregate (see quarry – Figure 1).

### **Geology**

The Meliadine area is underlain by an Archean age package of rocks termed 'greenstones' in what is referred to as the Rankin Inlet Group. Gold bearing rocks in the form of boulders are present in the area but have not been observed in outcrop.

Archean 'greenstone' geological settings host many gold mining camps throughout Canada including Timmins, Rouyn-Noranda, and Yellowknife.

### **Climate**

The climate of the area has been summarized in **Final Report – Meliadine Project: Hydrology Baseline Studies 2008 (Golder Associates, 2008, see accompanying CD)**.

### **Terrain**

The area is dominated by the outwash plain of the mouth of the Meliadine River as it enters Prairie Bay (Figure 1). Low lying areas are covered by river silts and elevated areas are covered by glacial tills. Locally outcrops are exposed beneath the till veneer. The Meliadine River valley is a regional topographic low with the terrain rising to elevations exceeding 100 m to the north and about 30 meters to the south in the vicinity of the hamlet of Rankin Inlet. At higher elevations, outcrop is more common. Comaplex has completed terrain mapping of the claim area in support of feasibility study that is being initiated. This data will become available in 2010.

### **Water Quality**

As part of a regional effort, water sampling has been conducted regularly at the proposed crossing site. The first samples were taken in 1998. Analytical results have been reported to the Nunavut Water Board (site ML-R). In 1998, cadmium, chromium and selenium concentrations exceeded Canadian Water Quality Guidelines for the protection of aquatic life.

### **Hydrology**

The hydrology of the area has been summarized in **Final Report – Meliadine Project: Hydrology Baseline Studies 2008 (Golder Associates, 2008, see accompanying CD)**. Factsheets from this report, detailing hydrological studies at the proposed crossing site are given as in Appendix A.

### **Permafrost**

Little is known about the permafrost conditions within the claim and along the river.

The geotechnical drilling program will provide new data for this area.

### **Sediment and Soil Quality**

Golder Associates completed geomorphology and soils study for the Meliadine Gold Project including much of Claim PB1. Golder is preparing the final report at the time of writing. Generally, reworked river silts dominate the surface soils in the delta region immediately up river from the mouth on Prairie Bay. Glacial tills are present in most areas away from the influence of the river. A sand and gravel esker is present just east of the all-weather road in the northern part of the claim. The southwestern portion of the claim is dominated by outcrop.

### **Tidal Processes**

Tidal influences are restricted to Prairie Bay and outside the southeastern boundaries of the claim area.

### **Biological Environment**

#### **Vegetation**

A vegetation study has been completed for the entire project including Claim PB1. This data will become available in 2010. Because of the common occurrence of river silts and esker sands, vegetation communities common to these soils are more common on this claim than in the project area as a whole.

#### **Wildlife/Birds**

The claim area is small and close to town, so large mammals may visit the claim area but do not stay long. Geese, ducks and ptarmigan were observed on the claim. Traditional knowledge studies (Figure 1, Nanuk, 1999) suggest that caribou migrate across the Meliadine River Park to the north in the spring.

#### **Fish / Fish Habitat**

The Golder (2008) report **Meliadine West Gold Project: Fisheries Baseline Studies 2008** (accompanying CD) includes a habitat summary for the proposed Meliadine River crossing. This summary is reproduced in Appendix A. The results indicate that the Meliadine River in this area has relatively high quality habitat with good potential to support multiple life stages of fish. High flow conditions hampered the site investigation.

#### **Species at Risk**

The Project is located in a region of Nunavut for which no Schedule 1 and 2 species have been identified (as shown by the SARA website on April 30, 2007). Two bird species on Schedule 3, the Tundra Peregrine and Short-eared Owl occur in the region but neither have been observed to nest in the Project area (within 2 km).

## Socioeconomic Environment

Please see the table below that provides the historic economic input by the Meliadine Gold Project to the local economy.

There are no human health issues related to this Project that go beyond workplace health and safety issues.

With respect to community wellness generally, this exploration project represents a significant step toward assessing the feasibility of a long term employer for the community of Rankin Inlet. It is therefore a source of hope, which is a positive factor that can contribute to community wellness.

### Meliadine Gold Project: Expenditures


Activity	2009*	2008	2007	2006	2005	2004	2003	1995-2002 (WMC)
local people 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
<b>Total (Kivalliq)</b>	\$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
<b>Total (Project)</b>	\$9,826,850	\$30,090,272	\$18,218,864	\$6,739,004	\$5,167,550	\$3,300,027	\$3,150,493	\$58,403,666
<b>Cumulative (Kivalliq)</b>	\$23,030,293	\$21,199,564	\$15,037,418	\$11,050,480	\$9,906,724	\$9,019,508	\$8,206,853	\$7,630,455
<b>Cumulative (Project)</b>	\$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 September 2009

Rankin Inlet has a history of mining and elder support for the project is strong. Comaplex Minerals has been exploring in Nunavut since 1969 with a major annual presence since the early 1980's. Since 1995, some \$23,000,000 has been spent on the Meliadine Gold Project in Kivalliq on Nunavut employees and with local or northern companies. There is great interest locally in the project including a bridge and road development.

**THE NUNAVUT IMPACT REVIEW BOARD**  
**PROJECT SPECIFIC INFORMATION REQUIREMENT - PART 2 FORM**

**TABLE 1 - IDENTIFICATION OF ENVIRONMENTAL IMPACTS**

																												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	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																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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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**

## **MITIGATION OF IMPACTS**

### **Air**

Contractors will be encouraged to operate and maintain engines, especially power generators, in accordance with manufacturer's specifications.

### **Water**

Particular care will be made to ensure the Meliadine River is protected from drill water and entrained drill cuttings. Natural sumps will be used to contain drill waters and cuttings. No residual impacts on the natural water bodies and water courses in the project area are expected.

### **Fish**

The geotechnical program will require particular attention to fish habitat at the proposed crossing site. No direct interaction with fish and fish habitat is expected. Comaplex will employ a pump system to transport drill water and cutting from a mud tank to a local sump away from the drill area and the water body. Crews will be dispatched to thoroughly clean-up drill sites immediately following drill hole completion. No deleterious additives will be used in the operation of the drill.

### **Terrain**

The primary interaction between the proposed program and the terrain in the area will be the disturbance required at drill sites. The anticipated geotechnical holes will be of short length and will not produce excessive cuttings or degrade the permafrost significantly. Thorough site cleanups and the application of peat moss and fertilizer will be employed if necessary.

### **Soil**

All activities will be designed to avoid contributing to surface erosion.

No residual impacts on soil, other than the disturbance in the immediate area of the drill sites are expected.

All combustible waste will be incinerated with the residue deposited in the municipal dump at Rankin Inlet.

Non-combustible waste will be placed in the municipal dump at Rankin Inlet.

### **Vegetation**

No residual impacts on vegetation other than the disturbance in the immediate area of the drill sites are expected. Thorough site cleanups and the application of peat moss and seeds will be employed if necessary.

## **Wildlife**

Hunting or fishing by staff while at the site will not be allowed. Feeding of wildlife is strictly forbidden.

No ongoing interaction with wildlife and wildlife habitat is required by the project and so no residual impacts are expected.

## **Cumulative Effects**

No sustained industrial or commercial activity has been conducted on the Meliadine River drainage in the past; therefore, no environmental effects of past activities are evident. Drill sites produce visible scarring to the local environment for the short to medium term. Diamond drill hole sites that are more than 10 years old are typically difficult to locate even with accurate location information.

## **Appendix A:**

Figure 1: Summary of Permit Application

Figure 2: Proposed Meliadine River Crossing

Excerpts from Supporting Documents (on CD)

FigC1\_MelR\_Crossing\_FishHabitat

FigC07\_Hydrology\_Table1

FigC07\_Hydrology\_Table2

FigA10-1\_MelR\_Crossing\_Section

FigML-R\_DischargeTable

FigML-R\_HydrologyFactsheet

## **Supporting Documents (see accompanying CD)**

**Comaplex Minerals Corp. - Fuel Management and Spill Contingency Plan (Sept 2009)**

**Nanuk Enterprises 1999 - Traditional Ecological Knowledge Study, Inuit  
Qaujimajatuqangit, Nanuk Enterprises Ltd. 1999 Final Report.**

**Golder 2008 - Archaeological Impact Assessment of the Meliadine West Gold Project**

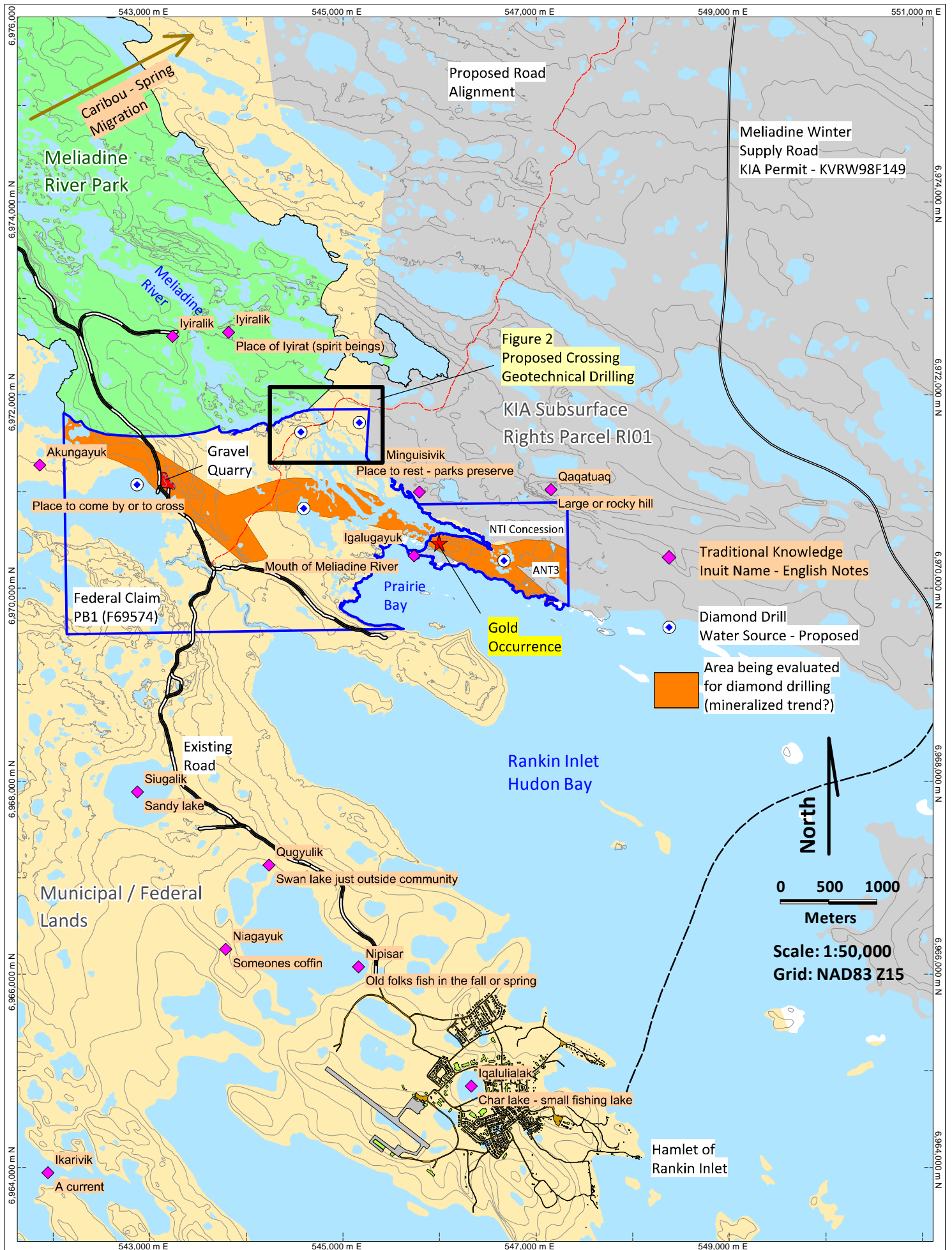
**Golder 2008 - Final Report – Meliadine Project: Hydrology Baseline Studies 2008**

**Golder 2008 - Meliadine West Gold Project: Fisheries Baseline Studies 2008**



## **APPENDIX A**

### **Figures**



**FIGURE 1: Summary of Permit Application**

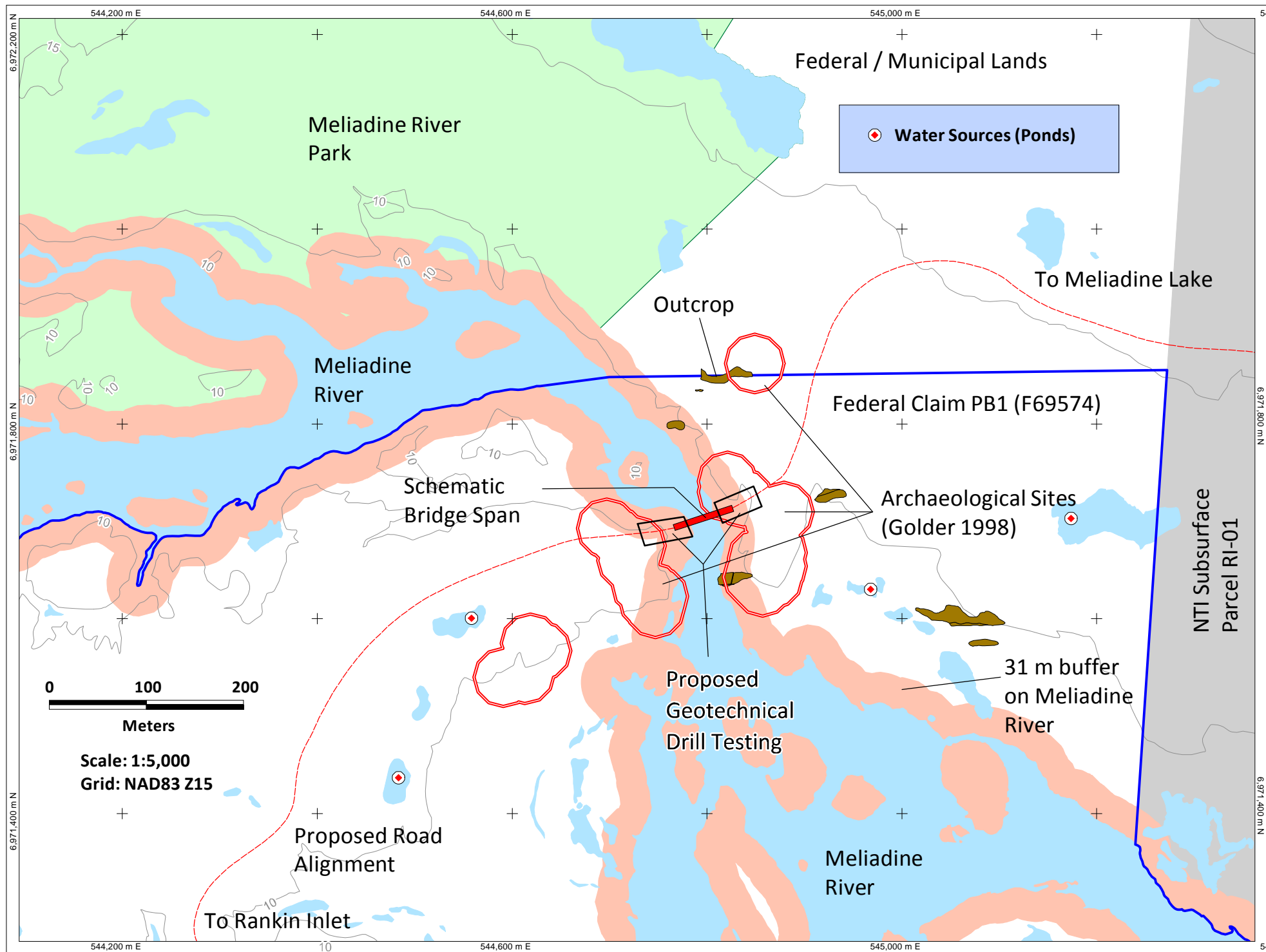


Figure 2: Proposed Meliadine River Crossing