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This is to acknowledge receipt of your *Annual Summary Report* on the project "Environmental Studies at Meliadine West Gold Project", licence number 0300599N-M granted on June 30, 1999.

NRI appreciates the information you have submitted. Your report will be placed on file at NRI and copies of your report will also be distributed to those agencies that were involved in the licensing review process for your project. Your report will also be a welcome addition to the NRI database.

The NRI database is used to assist in replying to public requests for information, and to provide information to other researchers who may wish to undertake similar projects. We hope that sharing information will help to foster growth in Northern science and increase awareness of the value of research to Nunavut residents.

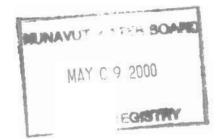
We look forward to receiving a copy of the *Final Report* on your project, whether it is a paper, thesis, or other publication. Computer disk copies in Word Perfect or Microsoft Word would be most appreciated if you would like posting or referencing of your report on the NRI web site (www.nunanet.com/~research).

In closing, we trust your research experience in Nunavut has been positive and ask that you please encourage your colleagues to contact NRI if they intend to undertake a research project in Nunavut. We look forward to assisting them in obtaining proper approvals from community agencies, Designated Inuit Organizations for the Nunavut Land Claim and government regulatory bodies.

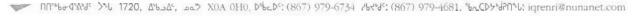
Regards,

Mary Ellen Thomas Manager, Research Liaison

M. E. Thomas











# Distribution:

Environmental Assessment Screener, NIRB
Lands Manager, QIA
Executive Director, NWB
Assistant Director of Wildlife Management, NWMB
Area Manager, DFO
Mayor/SAO, Municipality of Rankin Inlet
Chairperson, Aqiggiaq Hunters & Trappers Association
Mayor/SAO, Municipality of Chesterfield Inlet
Chairperson, Agigik Hunters & Trappers Organization

### Overview

Meliadine West Gold Project Environmental Studies

Environmental studies in the Meliadine West Gold Project exploration area began in 1996 when several small and shallow ponds and lakes in the area were tested for fish populations. Ciscos and burbot were present and comprehensive studies of fish populations and fish habitat began in 1997.

Studies into water flow and run off in the Meliadine basin also started in 1997. The traditional knowledge study on the exploration area was also initiated in 1997.

In 1998 we began wildlife surveys and studies of birds in the exploration area, conducted vegetation mapping studies and looked for archaeological sites in areas that could be disturbed by project construction.

The highlights of each of these studies are listed briefly below.



### Water flow and run off

The annual precipitation in the area is split equally between snow and rain. Most of the rain comes in the late summer and fall. Meliadine Lake has two outlets, the main flow is out through the Meliadine River; but about 20% of the flow runs into Peter lake near the western end of Meliadine Lake. Studies of water flow will continue in 2000, concentrating on run off in the area of the gold deposits. If a gold mine is to be built, it seems possible to operate it without much, if any, drainage from the tailings pond.



### Fish and fish habitat

The fish habitat and the waters of the basin do not show signs of disturbance and land use activities and so the data collect so far are an excellent baseline against which to compare the effects of a mine if one is built in the future. Much of the fish work has been done on char using the fish fence near the mouth of the Meliadine River. 2,619 char have been tagged since 1997; some fish have been captured at the fish fence every year. 535 tags have been returned by local fishermen. The search for char spawning areas continues. In 1999 evidence of char spawning near the west outlet of Meliadine Lake was found. More work on this will be done this year.

#### Wildlife

The Project area is the summer home to water birds and cranes, but few caribou. Five caribou cows were captured in winter of 1997/98 and got collars; 3 of these caribou went to the Qaminirjuag calving grounds and two went north of Chesterfield Inlet for calving. These studies are continuing.

## Vegetation

Vegetation on the tundra seems to be organised is response to soil moisture. A vegetation map of the project area has been developed.

## Archaeology

There are numerous sites in the project area that show recent and older forms Inuit land use. These sites have been reviewed by the elders committee and Moses Aliyak. The small sites in the project area were found to be relatively recent camping sites and not very significant; but the sites near Meliadine Lake are very old and important to understanding the history of Inuit Land use there.

## Traditional Knowledge

The traditional knowledge study of the project area was conducted with the guidance of the local elders committee. It found that the project area was used mainly as an area of travel within the living memory of elders in Rankin Inlet and Chesterfield Inlet. The study also produced a map of traditional land use for the project area and surrounding lands.

## Reports

Copies of all reports on these studies prepared for the Meliadine West Gold Project have been submitted to the Kivalliq Inuit Association Lands Administration.

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### WORK PLAN FOR MELIADINE WEST BASELINE AQUATIC STUDIES IN 2000

The work program for 2000 includes monitoring of water quality and invertebrate populations at key sampling locations which will likely be used for long-term monitoring during the mine operation phase. Gaps in our understanding of Arctic charr spawning movements and critical habitats will be addressed through the continuation of radio telemetry. In addition, seasonal fisheries and habitat surveys will be completed at all watercourses along the proposed road alignment between Rankin Inlet and the mine site. The collected data will be used in the preparation of an environmental impact assessment and will form a baseline for future monitoring activities. The proposed schedule for the 2000 field program is as follows:

Spring Session (8 days in mid-June)

Summer Session (15 days in mid-July)

Late Fall Session (15 days in mid- to late-Sep)