

Preliminary Project Description

Meliadine Gold Project, Nunavut

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MINERALS CORP.

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Non-Technical Project Summary

Comaplex Minerals Corp., based in Calgary, Alberta, proposes to build, operate and decommission an underground and open pit gold mine near Meliadine Lake, roughly 25 km north of Rankin Inlet. The mine is expected to process 3,000 tonnes of ore per day for a currently foreseeable mine life of about ten years. By Canadian standards, this is a medium-sized mine. It will use proven, conventional technology and will take three years to build before gold production can begin.

Mining will be predominantly from underground with contributions from open pits. Roughly two thirds of the planned ore production will be from underground. This causes less surface disturbance than an all-open-pit mine. There is excellent potential for ore extensions, leading to an extended mine life - these could be both underground at depth and in near-surface deposits that are currently being explored.

The total disturbed area will be approximately 410 hectares. The mine will interfere with small areas of largely seasonal fish habitat. It will not interfere with caribou breeding grounds or migration routes. The site area does not host any endangered plant, fish, animal or bird species. When the ore has been exhausted, the plant will be dismantled and removed, pits will fill with water by natural means, underground access will be closed off, waste rock management areas will be contoured, and mill tailings will be covered with waste rock.

An all-season road will be built from Rankin Inlet to the site. After closure of the mine, the road will not be reclaimed to allow continued use by local residents. It is expected that responsibility for the road will be assumed by the Government of Nunavut at that time. This road may form part of the road that may ultimately be built from Churchill, through Arviat and Rankin Inlet, to Chesterfield Inlet and Baker Lake.

Comaplex has been active in the Kivalliq region since 1969 and has been working in the Meliadine Lake area since 1989. The company has an excellent record both as a local employer and for controlling the environmental impact of its exploration work. Community briefings have been regular and frequent since 1995. The community of Rankin Inlet supports this Project.

The mine will provide substantial employment and business opportunities for northern residents and will contribute substantially to the tax base of Rankin Inlet and Nunavut.

SECTION 1

INTRODUCTION

The information and concepts presented in this Preliminary Project Description are based on the February 2009 Preliminary Assessment ("Scoping Study") on the potential of the Meliadine property to host an economic gold mine, which used 2009 mineral resource estimates of approximately 3.6 million ounces of gold. Baseline socioeconomic and environmental data collected since 1997 and public consultations conducted since 1995 were also used in preparing this Preliminary Project Description.

Although updated mineral resources estimates released in January 2010 are approximately 5 million ounces of gold, this Project Description remains based on the Scoping Study and the 2009 mineral resource estimates. The mineral resource estimates will be adjusted accordingly in the EIS.

Following on the Scoping Study in early 2009, Comaplex is about to initiate a Feasibility Study for completion in late 2010. While the Feasibility Study is not expected to substantially change the scope of the Project described here, refinements are anticipated as Comaplex completes additional work and advances its knowledge of the property.

1.1 Project Location and Ownership

The Meliadine Gold Project is located approximately 25 km north of Rankin Inlet in Nunavut and is located on Inuit Owned Land administered by the Kivalliq Inuit Association (KIA). The Project's coordinates are centred on the underground portal at 63° 01' 30" North latitude and 92° 10' 20" West longitude (NAD 83, Zone 15); UTM coordinates are 6988500N and 540250E. The Natural Resources Canada map is 55 N/1.

The general Project location and configuration of land tenure is shown on Figure 1-1. The proposed gold mining project described here is composed of mineral deposits at three separate locations on the property. The Tiriganiaq, F Zone, and Discovery gold deposits all occur on the Meliadine Gold Project property, a group of mineral leases, claims, and concessions held solely by Comaplex Minerals Corp. (Comaplex).

The Meliadine Gold Project property was for many years divided into two halves - Meliadine East and Meliadine West. As of late December 2009, Comaplex acquired 100 percent ownership of both sides of the property and is now the sole owner and operator of the entire Meliadine property.

1.2 Proponent Information

The Meliadine Gold Project is being managed by Comaplex Minerals Corp. Comaplex is a Canadian publicly traded mining company listed on the Toronto Stock Exchange, trading symbol CMF, with head offices in Calgary, Alberta. Comaplex has been exploring for minerals for over 40 years. It has been active in the Kivalliq Region of Nunavut since 1969. In the early 1990s, Comaplex was the designated geological consultant for the Inuit people in the mineral land selection process completed prior to the formation of Nunavut.

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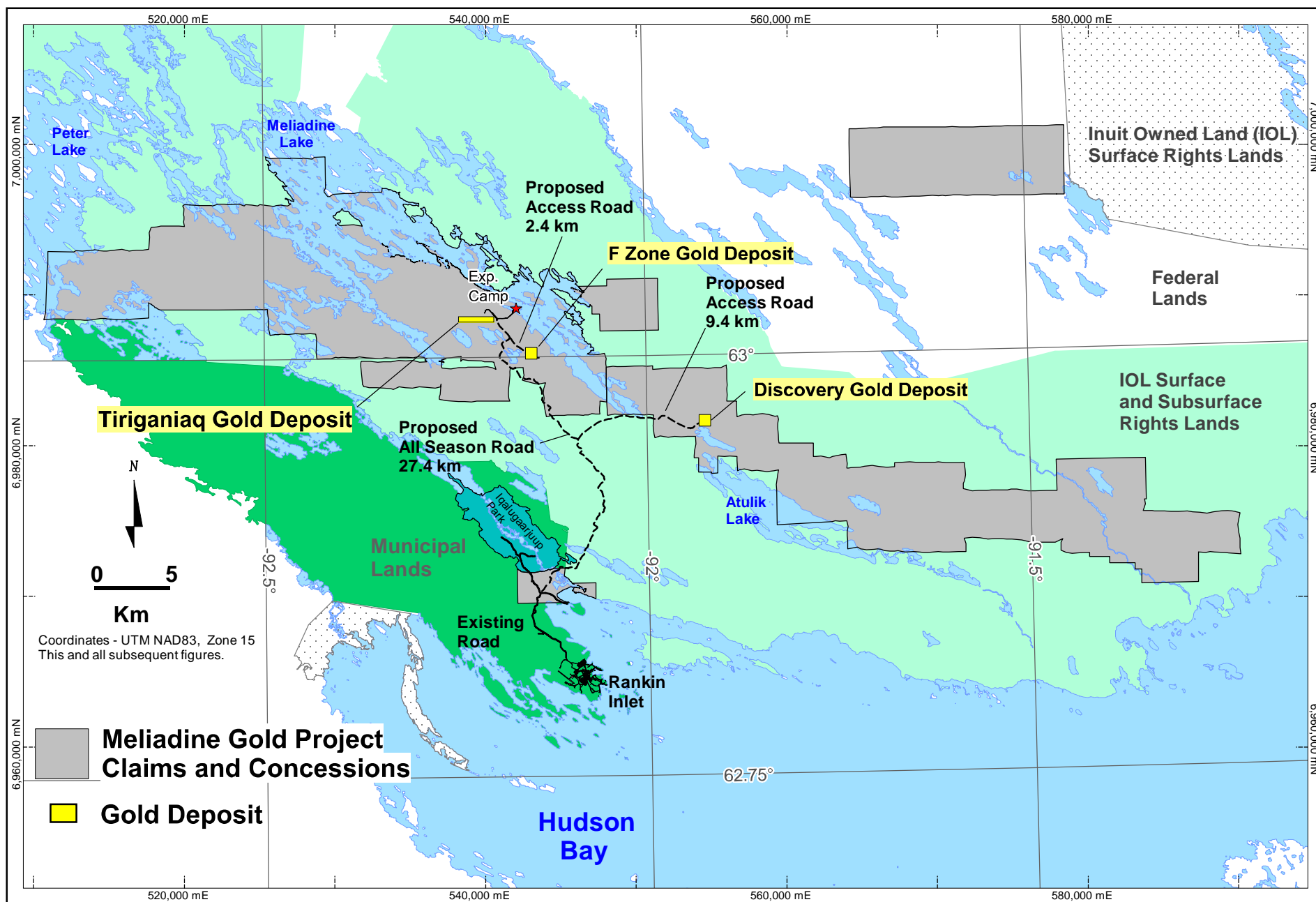


Figure 1-1: Project Location and Land Tenure

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

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1.3 Brief Project History

The Hamlet of 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 Ltd. 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, and Comaplex from 1990 to 1994 identified gold mineralization along the 80 km 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 west half of the Meliadine property, significantly expanded the Tiriganiaq gold deposit, led to the discovery of the Wolf deposit, and expanded the F Zone and Pump gold deposits. Work by Comaplex in 1996 and 1997 concentrated on the Discovery gold deposit on the Meliadine East property.

For the ensuing years and until late 2003, exploration continued by Comaplex and its partners on the eastern half of the Meliadine property, known as 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. The majority of Comaplex's efforts from 2004 onwards were devoted to outlining new, higher-grade gold resources in the deeper parts of the Tiriganiaq deposit, as well as reconnaissance work on outlying targets. Sporadic exploration was conducted on the eastern half of the property.

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 consultant Micon International, which indicated the potential of the Project to support a mining operation. On the basis of this information, Comaplex elected to advance the Project to the feasibility level and initiate the regulatory process to permit a mining operation on the property.

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

1.4 The Proposed Project

The proposed Project would be a gold-only operation with gold being mined, milled, and poured on site. Pre-production surface and underground construction is expected to require about three years to complete. Mining would take place at a rate of 3,000 tonnes per day for a total of approximately 1 million tonnes per year. Based on current resources, this provides for an estimated operating mine life of about 10 years, and a minimum Project life of approximately 14 years.

Mining is proposed on three gold deposits on the property at this time: Tiriganiaq as the main deposit with the F Zone and Discovery deposits as satellite operations. Gold mineralization extends to the bedrock surface in all three deposits but is generally covered by glacial deposits of varying thicknesses. All three deposits are open to depth, providing excellent potential for the discovery of additional gold resources and extension of the proposed mine life. There is also potential that other mineable gold deposits will be found in the surrounding area. Permafrost is present from surface to between 350 and 450 metres vertical depth.

The Project will predominantly be an underground mining operation with two thirds of the ore excavated from the underground. Underground mining is proposed for the Tiriganiaq deposit only.

Open pit mining is proposed for Tiriganiaq, F Zone, and Discovery deposits using conventional surface mining methods.

A mill would be built on the site, treating mineralized material by crushing and grinding the rock and subjecting it to gravity separation, froth flotation and carbon-in-leach pulp cyanidation processes. Cyanide destruction, thickening of tailings, and recycling of water and reagents from the tailings is planned. The waste rock and overburden management areas, and tailings impoundment area are designed to minimize impacts to the environment and the size of the Project footprint. It is planned to recycle process water so as to minimize freshwater use.

A fully catered permanent camp would be built on the site for employee accommodation, together with infrastructure appropriate to a remote mine site. Site power would be diesel-generated with the fullest possible use of waste heat. A 27.4 km long all-season road would connect the mine site with the Hamlet of Rankin Inlet. Supplies would arrive in Rankin Inlet by ship and barge, and would be moved to site by road as required. Proposed infrastructure upgrades in Rankin Inlet would include a lay-down area, storage facilities, and a tank farm with a capacity of 20 to 25 million litres. These facilities would continue to benefit the community after closure of the mine.

Total payroll is estimated in the order of 430 people, with a total workforce on-site at any one time being 230-240 people. The work force would be employed preferentially from nearby Kivalliq communities with the balance on a fly-in-fly-out rotation from other parts of Canada. Recruitment would maximize employment opportunities for inhabitants of Rankin Inlet and nearby Kivalliq communities.

Based on the current geological understanding of the Meliadine deposits, the bulk of the present and future resources will probably be mined by underground methods. For comparison, the Meliadine Project as presently proposed will generate approximately one third (33%) the amount of ore (and therefore one third the tailings) and excavate one sixteenth (6%) the amount of overburden and waste

rock as the Meadowbank gold mine for roughly the equivalent amount of gold produced. Underground mines typically disturb less land and require less reclamation than open pit mines.

Comaplex 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 neighboring communities. Sustained benefits will flow for the life of the mine to the owners of the company, employees, the Inuit, and federal and Nunavut governments.

1.4.1 Project Schedule

As with many industrial activities in the north, Project schedules for an operation, such as that proposed at the Meliadine property, are a balance of logistical and technical considerations, and 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 the draft Environmental Impact Statement. 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 issuance of permits. Instances have occurred in the past where 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 pre-production activities combined with expected and timely regulatory approvals is 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. Table 1-2 provides the proposed mine production schedule. These major schedule components will be refined as required moving forward.

Table 1-1: Important Milestones and Project Schedule

Activity	Date
Preliminary Project Description filed	Feb. 2010
Feasibility and Optimization Study	Feb. 2010 - Dec. 2010
Continuing mineral exploration on site and on adjacent mineral claims	2010 - 2024
Environmental/Regulatory review	Feb. 2010 – Sept. 2012
Permitting / authorizations / and other agreements	Sept. 2012 – Mar. 2013
Inuit impact benefit agreement	Apr. 2010 - 2012
Underground development & mining	Sept. 2011 - 2024
Construction of all-season road between Rankin Inlet and mine site	Jan. 2011 – Jul. 2011
Construction of infrastructure in Rankin Inlet and on site	Sept. 2011 – Dec. 2014
Pre-stripping of Tiriganiaq pit and building of Tailings impoundment area	Sept. 2012 – Sept. 2013
Dewater tailings impoundment area & construct dykes	2013
Open pit mining of Tiriganiaq	2014 - 2019
F-Zone development and open pit mining	2017 – 2023
Discovery development and open pit mining	2021 – 2023
Operation of the mill complex	2014 – 2023
Reclamation and closure	2023 - 2026

Table 1-2: Estimated Production Schedule (1000 tonnes)

Ore Source	Pre-strip	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
Underground												
Tiriganiaq u/g		712	690	715	695	680	717	707	672	700	386	6674
Open Pits												
Tiriganiaq		350	310	320	343	329	100					1,752
F Zone							290	283	293	228	230	1,324
Discovery									70	100	116	286
Overburden												
Tiriganiaq	3,280	480	80	70	60							3,970
F Zone						180	350	80	80			690
Discovery									100	100		200
Waste Rock												
Tiriganiaq pit	820	300	700	540	400	300	50					3,110
Tiriganiaq u/g	425	124	81	22	71	75	36					834
F Zone						500	500	1,000	1,000	1,060	650	4,710
Discovery									500	1,300	1,000	2,800
Medium Grade/Low Grade												
Tiriganiaq			50	60	110	60						280
F Zone							40	140	100	100	30	410

The medium grade/ low grade category comprises gold-bearing material with grades below the currently estimated economic cut-off. This material has to be mined in the process of mining the ore-grade material listed in Table 1-2. It could be milled economically if high gold prices persist or as a final extraction of gold at the end of the Project life.

While Tables 1-1 and 1-2 outline future milestones and the proposed future production schedule, exploration activities will continue during the environmental assessment and regulatory processes. Diamond drilling is required to better define existing mineral resources and also to find new resources on the minerals claims. Underground exploration using the existing portal can also be expected with the exploration decline being extended to facilitate underground drilling. This work will be carried out under the existing Water Licence 2BB-MEL0914. As in previous years, geotechnical drilling to shallow depths is likely on the mineral claims and also along the all weather road to define routing of the road, granular resources and possible quarries. Additionally, archaeological work is planned to gather more information on select heritage sites and to mitigate those that could be inadvertently disturbed.