



ABANDONMENT AND RESTORATION PLAN

IZOK PROJECT

NOVEMBER 2013

MINERALS AND METALS GROUP

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**ABANDONMENT AND
RESTORATION PLAN
EXPLORATION OPERATIONS
IZOK, HOOD AND GONDOR
PROJECTS
NUNAVUT, CANADA**

NOVEMBER 15, 2013

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1.0 PREAMBLE

The Abandonment and Restoration Plan is effective from March 2014 to March 2015 and applies to the Izok/Hood Projects – Ham Lake Camp operated by MMG Resources in the Kitikmeot District of Nunavut, north latitude 65° 40' and west longitude 112° 50'. The camp is situated on a mineral lease that has been “windowed out” of IOL ground. The project is under agreement with Nunavut Tunngavik Incorporated (NTI). Additional active permits are presently held with the following regulatory bodies in association with the project:

Kitikmeot Inuit Association (KIA)	KTL306C019
Aboriginal Affairs and Northern Development Canada (AANDC)	N2012C0005
Nunavut Water Board (NWB)	2BE – IZK1217

The following formal distribution has been made of this plan:

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2.0 INTRODUCTION

This abandonment and restoration plan has been prepared as a document for the Ham Lake Camp, and for drilling programs to be carried out within the surrounding area including the Point Lake-Itchen Lake volcanic belt and the Takiyuak greenstone belt. The Ham Lake Camp is located 265 km south of Kugluktuk and 360 km north of Yellowknife and is only accessible by air. It is serviced year round by a 2800' gravel air strip and seasonally by a 4500' ice air strip for Hercules operations in the early Spring. The camp will support a population of up to 40 people in “weatherhaven” style tents, and is open for operations between March and October annually.

The plan has been developed keeping in mind that reclamation activities at MMG sites are ongoing during each and every field season, with progressive actions undertaken during the course of daily camp management.

The purpose of the plan is to ensure that our activities are designed to minimize detrimental impact on the environment in which we are operating, and as much as possible facilitate the return of those natural conditions that pre-existed our presence.

The plan is reviewed on an annual basis, and modifications or changes made as required.

3.0 SCHEDULE

The Ham Lake site is normally opened in March or early April by a skeleton crew who spend several weeks plowing an ice air strip on Iznogoudh Lake in order to facilitate the landing of Hercules aircraft and support the annual re-supply of the camp. Fuel is brought in drum form, in quantities determined by the programmed activities of any given field season. Diesel for the operation of camp generators, diamond drills, and heavy equipment and Jet fuel (Jet B) for the operation of helicopters make up the majority of the airlift. The annual construction of the air strip normally takes a week to ten days, depending on ice conditions and temperatures. The seasonal shutdown of the camp normally happens in early to mid-September and takes roughly a week to complete. This plan will be applied by the site personnel under the supervision of the field supervisor or camp manager.

The below table reflects a typical field season and the activities associated with mineral exploration that take place over the course of the seven month period.

MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
Site opens, ice airstrip constructed and heavy airlift initiated	Heavy airlift operations normally finish end of April. Ice (lake) drilling and geophysical programs start.	ice (lake) drilling finishes end of May.	Environmental programs begin. Drilling on land continues. Prospecting, mapping and geophysics.	Environmental work. Drilling on land continues. Prospecting, mapping and geophysics.	Environmental work. Drilling on land continues. Prospecting, mapping and geophysics.	Drilling activity finishes. Environmental work finishes. Shut down activities. Camp closure mid-September

4.0 SITE INFRASTRUCTURE

The Ham Lake camp is located on the South and East Shores of Ham Lake. The site was originally established by Inmet Mining Corporation (Inmet) in the early 1980s. A fuel farm and ATCO trailer camp are legacy structures that are associated with this period and are no longer in use. During the 2013 season, reclamation work began on these historic structures. The present camp includes accommodations for 50, a kitchen, an office, core logging and storage facilities, 2 shops, and fuel storage facilities and is served by a 2,800 foot long gravel air strip. A short gravel access road connects the airstrip to the camp. The layout of the camp is shown in Figure 2.

The following is a list of the major components of the camp and ancillary facilities:

Abandoned Inmet Camp

- 12 – Travco trailers (ATCO style units no longer in use)
The first of these trailer units was dismantled and removed from site in 2013.
- 7 – bulk fuel storage tanks (80,000L each)
These have been removed from their pad and are being prepared for dismantling and eventual removal from site.

Present MMG Camp Equipment/Facilities

- 1 – diesel fired forced air dual chamber incinerator (serial no. 18162)
- 1 – 10' x 44' Generator Building
- 2 – Cummins 175 kW diesel generators (serial no's. 44670421 and 4460441)
- 1 – Steel garage – 20' x 24'
- 1 – Wood frame workshop
- 2 – Wood frame, steel clad core storage warehouses
- 1 – Wood frame, aluminum clad 12' x 36' skidded core shack
- 1 – 14'X16' wood frame, plywood clad storage shed
- 10 – 14'X16' Weatherhaven style accommodation tents
- 1 – 20'X60' Weatherhaven style accommodation tent
- 3 – 14'X32' Weatherhaven style "dry" facilities
- 1 – 20'X40' Weatherhaven style kitchen facility
- 1 – 16'X32' Weatherhaven style office tent
- 2 – 14'X16' wood frame, canvass tents

Fuel Tanks

- 5 – 11,000 L. portable (skid mounted) double walled steel fuel tanks

Mobile Equipment

- 1 – Caterpillar D-6 Bulldozer (*inoperative and prepared for removal from site*)
- 1 – Komatsu 250W Loader
- 1 – Champion Motor Grader (*inoperative and prepared for removal from site*)

1 – Fuel trailer	
1 – Cat 140G Motor Grader (<i>inoperative</i>)	3 – Ford F-350 pickup trucks
1 – Cat 930 Loader (<i>now with V plow</i>)	14 – Snowmobiles (various models)
1 – Bobcat	
1 – JBC ZoomBoom (<i>inoperative and prepared for removal from site</i>)	

2013 modifications to the Ham Lake camp included:

- The removal and preparation for transport of the historic bulk fuel tanks
- The demolition of one of the historic ATCO trailer units
- The demolition, re-organization/re-location and construction of the core library
- The addition of secondary containment berms beneath the 5 double walled portable steel fuel tanks that are currently in use.
- The cleanup and relocation of the drill laydown area

Wastes of all types that are removed from site are handled in Yellowknife by KBL Environmental Ltd. who provide MMG with disposal services. Waste that cannot be handled in Yellowknife due to its nature, is transported to a facility in Edmonton.

KBL provides us with shipping manifests that serve to document chain of custody, as well as final disposal certificates for all of the waste products that they handle.

A map showing the regional setting of the project areas is provided in Figure 1. This Abandonment and Restoration Plan is designed to be extended to drilling operations that will be carried out at some distance from the Ham Lake camp. In particular, the HOOD occurrence which is located some 50km north of the Ham Lake site. Drilling operations for this area will be supported by helicopter based at Ham Lake. The historic Inmet site situated on the HOOD lease, will be used as a core storage and logging facility, as well as a location for temporary storage of fuel to be used during the drill program. This fuel cache is permitted within the existing LUP. The outlines of MMGs mineral concessions are shown in green in Figure 2. A map showing the layout of the camp and airstrip is provided in Figures 3 and 4.

5.0 FINAL ABANDONMENT AND RESTORATION PLANS

5.1. BUILDINGS AND CONTENTS

Reusable equipment including tents, tent metal frames, stoves, foam rubber mats, the kitchen stoves, refrigerators and other appliances and equipment, showers, hot water tank, and other portable components will be packaged and flown out from project site to Yellowknife. The Inmet trailers and fuel farm will be transported either by cat train or winter road to Lupin or to Yellowknife for dismantling and disposal. The wood framed buildings will be dismantled and all hardware and fasteners removed from lumber. Lumber of usable dimension will be separated from scrap. All lumber will be either transported by cat train or winter road, or air-lifted back to Yellowknife for proper disposal. All other materials resulting from the dismantling of on-site structures will be packaged and transported to Yellowknife for disposal either by air or ground. Combustible materials as defined by Environment Canada that are of a size dimension that can be accommodated by the camp incinerator will be disposed of on-site by combustion.

5.2. WATER SYSTEM

Pump, tanks and hoses will be drained, dismantled, packaged and flown out to Yellowknife. The wooden pump shacks built to protect the pumps will be dismantled, hardware and fasteners removed, and the lumber packaged for transport and proper disposal in Yellowknife.

5.3. ELECTRICAL SYSTEM

The generator shed will be inspected for residual hazardous waste (oil, grease) and will be drained of its fuel. Remaining waste fuel and oil will be collected in the containers labeled for that use and used through the summer. The shed will be dismantled and the materials packaged for transport and disposal in Yellowknife. The soil will be inspected for contamination. Any contaminated soil will be collected and sealed in empty drums for transport and proper disposal in Edmonton. This material is handled on our behalf by KBL Environmental and they supply us with chain of custody documents in addition to a final disposal certificate. Electrical wires, sockets, etc...will be taken down and either returned with camp material to Yellowknife for future use, or flown out for disposal to an approved municipal discharge or other facility.

5.4. FUEL AND CHEMICAL STORAGE FACILITIES

Fuel inventory will be managed so as to retain only a minimum quantity of fuel on site prior to permit closure activities taking place. On full abandonment of the site, any remaining fuel will be pumped from the large tank(s) in to drums and transported to Yellowknife from site for storage and future use. The large fuel tanks and smaller containers such as drums and day tanks will be either dismantled for

disposal, and removed from site or removed from site and sold. Propane cylinders equally will be removed from site and returned to Superior Propane in Yellowknife.

Chemicals stored on site will consist of any remaining drill additives, oil, grease and household cleaners. Drilling fluids will be properly contained for transport back to Yellowknife and either returned to Major Drilling or disposed of in the Edmonton facility by KBL. Household cleaners will be properly contained, packaged for transport and upon arrival in Yellowknife either disposed of by KBL or stored for future use.

5.5. WASTE FACILITY AND INCINERATOR

Once the camp is entirely dismantled, and all remaining combustible waste of a size that can be accommodated by the incinerator burned, the incinerator will be dismantled. Reusable parts will be returned to Yellowknife and the barrel will be discarded in an approved municipal discharge.

5.6. GREYWATER SUMP

The kitchen-dry greywater sump will be inspected and the grease trap emptied. This collected material will be sealed in a drum for transport to Yellowknife and proper disposal. The sump will be filled in and leveled. If determined appropriate, peat moss will be scattered over the surface.

5.7. BLACKWATER SUMP

Not applicable. The washroom facilities at the site consist of “pacto” style toilets where waste is collected in a plastic bag and contents are burned on a daily basis. These toilets will be dismantled and packaged for transport back to Yellowknife where they will be stored for future use.

5.8. HELICOPTER PAD

The helicopter pad consists of a wooden platform built of a 2x4 base with plywood cover. Soil around the helicopter pad will be inspected for contamination. The wooden pad itself will be dismantled as per other wooden structures on site, and the lumber packaged for transport to Yellowknife for proper disposal.

5.9. CAMP SITE

The camp site will undergo a final inspection. Areas showing evidence of disturbance from foot and vehicle traffic will be re-contoured, covered with a layer of peat moss and lightly fertilized to promote natural growth of indigenous plant species. Drill core, if to be left on site will be properly stored and secured. If drill core is to be removed it will be packaged and transported to Yellowknife for storage.

5.10. HEAVY EQUIPMENT AND VEHICLES

Heavy equipment and vehicles currently on-site will be either dismantled for airlift removal back to Yellowknife, or transported by cat train or ice road on trucks. Once back in Yellowknife they will either be stored for future use, or sold at auction.

5.11. DRILLING AREA RESTORATION

The drill will be dismantled into its main components by the drilling contractor according to normal procedure, packaged and secured along with its ancillary equipment and rods. The drill will be flown out to another project site or to a storage site in Yellowknife designated by the drilling contractor. All drill sites will be inspected. Any disturbed areas will be re-contoured. An inspection for soil contamination will be carried out. Drill casing, if visible will be cut off at ground level and capped in an appropriate manner. Any remaining waste will be taken to camp to be burned if possible or to be flown out to an approved municipal discharge. Greywater and sludge sumps will be filled and leveled. A layer of peat moss will be spread on top and slightly fertilized to promote natural growth. As much as possible, drill sites will be restored immediately after the drill has been moved to the next site and sumps have drained enough to be leveled.

5.12. DOCUMENTATION AND INSPECTION

Photos of camp and drill sites prior to building of drilling will be taken. Monitoring will be done during occupancy and photos taken. Once the site restored, it will again be documented with photos. Soil contaminated by hydrocarbons and unnoticed before abandonment will be treated as per the spill contingency plan. A final site inspection visit with community representatives, Land Use Inspector and in collaboration with NWB staff will be organized by the permit holder.

6.0 SEASONAL SHUTDOWN AND RESTORATION PLAN

6.1. BUILDINGS AND CONTENT

All equipment will be stored inside the wooden buildings to ensure they will withstand the winter season. Canvass and Weatherhaven style tents will be secured and braced internally to ensure they will withstand snow and wind loads. Tent doors will be wired shut, or secured with screws. Wood structures will be secured with nailed plywood over windows and doors to prevent inadvertent opening. Snowmobiles and other smaller mobile equipment will be stored under cover inside the garage of the shop building.

6.2. WATER SYSTEM

Pump, tanks and hoses will be drained and dismantled. Rented equipment will be returned to owner. Hoses will be drained, rolled and stored in the warehouse storage facilities.

6.3. ELECTRICAL SYSTEM

The generator shed will be inspected for remaining hazardous waste (oil, grease) and will be drained of its fuel. Remaining waste fuel and oil will be collected in the containers labeled for that usage and used through the summer. The generator will be winterized and prepared for startup in spring. The soil surrounding the generator shed will be inspected for contamination. Any contaminated soil will be collected and transported to Yellowknife for disposal in an approved facility. Electrical wires, plugs and sockets will be stored in the kitchen.

6.4. FUEL AND CHEMICAL STORAGE FACILITIES

An inventory of remaining fuel will be made and full drums will be inspected and secured for the winter. Secondary containment berms will be inspected and any damage repaired prior to departure from site. Containment berms will be flagged for ease of locating them under snow. Empty drums will be flown out to Yellowknife where they are returned to the fuel supplier. Empty propane cylinders will be flown out to Superior Propane in Yellowknife. Chemical stored on site will consist of drill additives, oil, grease and household cleaners. All drill additives will be stored in or by the drill foreman shed and secured for the winter. Empty containers will be disposed with regular garbage. The soil of the areas will be inspected for contamination.

6.5. WASTE FACILITY AND INCINERATOR

Once the camp has been dismantled and remaining buildings secured, all remaining combustible waste stored at this site will be burned. Any remaining ash from the incinerator will be collected and sealed in drums for transport to Yellowknife and disposal. The incinerator will be partially dismantled and the

blower motor compartment sealed. The soil surrounding the incinerator will be inspected for contamination.

6.6. GREYWATER SUMP

The greywater sump cover will be secured for winter, and the grease trap emptied. Material collected will be appropriately packaged for transport back to Yellowknife.

6.7. BLACKWATER SUMP

Not applicable. The outhouses consist of “pacto” style toilets where waste is collected in a double plastic bag content burned on a daily basis.

6.8. HELICOPTER PAD

The helicopter pad consists of a wooden platform built of a 2x4 base with plywood cover. Soil around the helicopter pad will be inspected for contamination. Any contaminated soil will be collected, sealed in an empty drum, and transported to Yellowknife for proper disposal at an approved facility.

6.9. CAMP SITE

Areas showing too much wearing evidences will be covered with a layer of peat moss and lightly fertilized to promote natural growth. Soil contaminated by hydrocarbons and unnoticed before abandonment will be treated as per the spill contingency plan. Drill core to be left on site will be properly stored and secured in cross stacked piles or wooden cores racks.

6.10. HEAVY EQUIPMENT

Heavy equipment will be parked in an open area, and in an orientation that reduces the accumulation of drifting snow and resulting snow load. Their position will be flagged. Canvas and plastic tarps will be secured over the cabs and engine compartments of the equipment and vehicles. Air intakes and exhausts will be sealed off. Absorbent spill matting will be secured to the underside of engine compartments as a preventative measure. The bobcat and Komatsu Loader will be parked inside the sheet metal clad shop building.

6.11. VEHICLES

Pickup trucks will be parked in an open area, and in an orientation that reduces the accumulation of drifting snow and resulting snow load. Their position will be flagged. Canvas tarps will be secured over the cabs and engine compartments of the vehicles. Air intakes and exhausts will be sealed off. Absorbent spill matting will be secured to the underside of engine compartments as a preventative measure. Snowmobiles will be parked within the wooden shop building.

6.12. DRILLING AREA RESTORATION

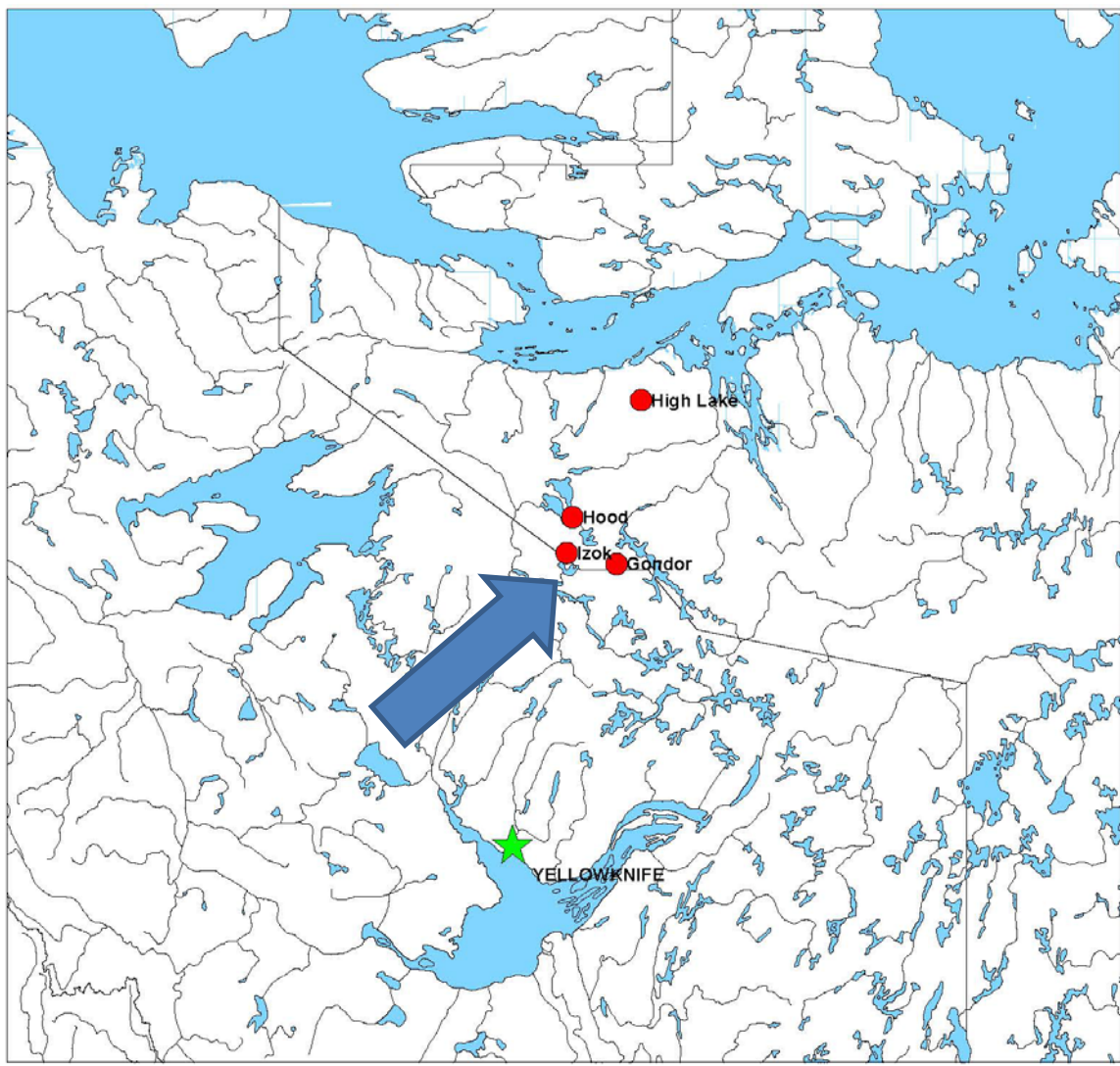
The drill will be dismantled into its main components as per the drilling contractor procedure, packaged and secured along with its ancillary equipment and rods. The drill will be left on solid ground until next season. All drill sites will be inspected for soil contamination. Any remaining waste will be taken to camp to be burned if possible to be flown out to an approved municipal discharge. Greywater and sludge sumps will be filled and leveled. A layer of peat moss will be spread on top and slightly fertilized to promote natural growth. As much as practical, drill sites will be restored immediately after the drill has been moved to the next site and sumps have drained enough to be leveled.

6.13. DOCUMENTATION AND INSPECTION

Equipment and buildings left on site will be inventoried. Photos of camp and drill sites prior to and after use will be taken for annual reporting purposes. All written records of activities required for reporting purposes will be returned to the head office in Vancouver in either digital or their original format. Annual inspections are normally carried out by Aboriginal Affairs and Northern Development Canada Land Management inspectors who also serve as the enforcement arm for the Nunavut Water Board. In addition inspectors from the Kitikmeot Inuit Association and the WSCC commonly visit.

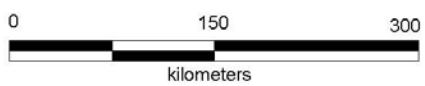
FIGURE 1 : GENERAL LOCATION MAP

Project Location Map



Legend

- MMG Project Sites
- ★ Yellowknife
- Rivers




 MMG	Project Location Map
Date: 02-Aug-12	
Author: YeungC	
Office: Vancouver	
Drawing: 001	Projection: WGS84
Scale: 1 : 7,000,000	

FIGURE 3: REGIONAL AREAS OF INTEREST

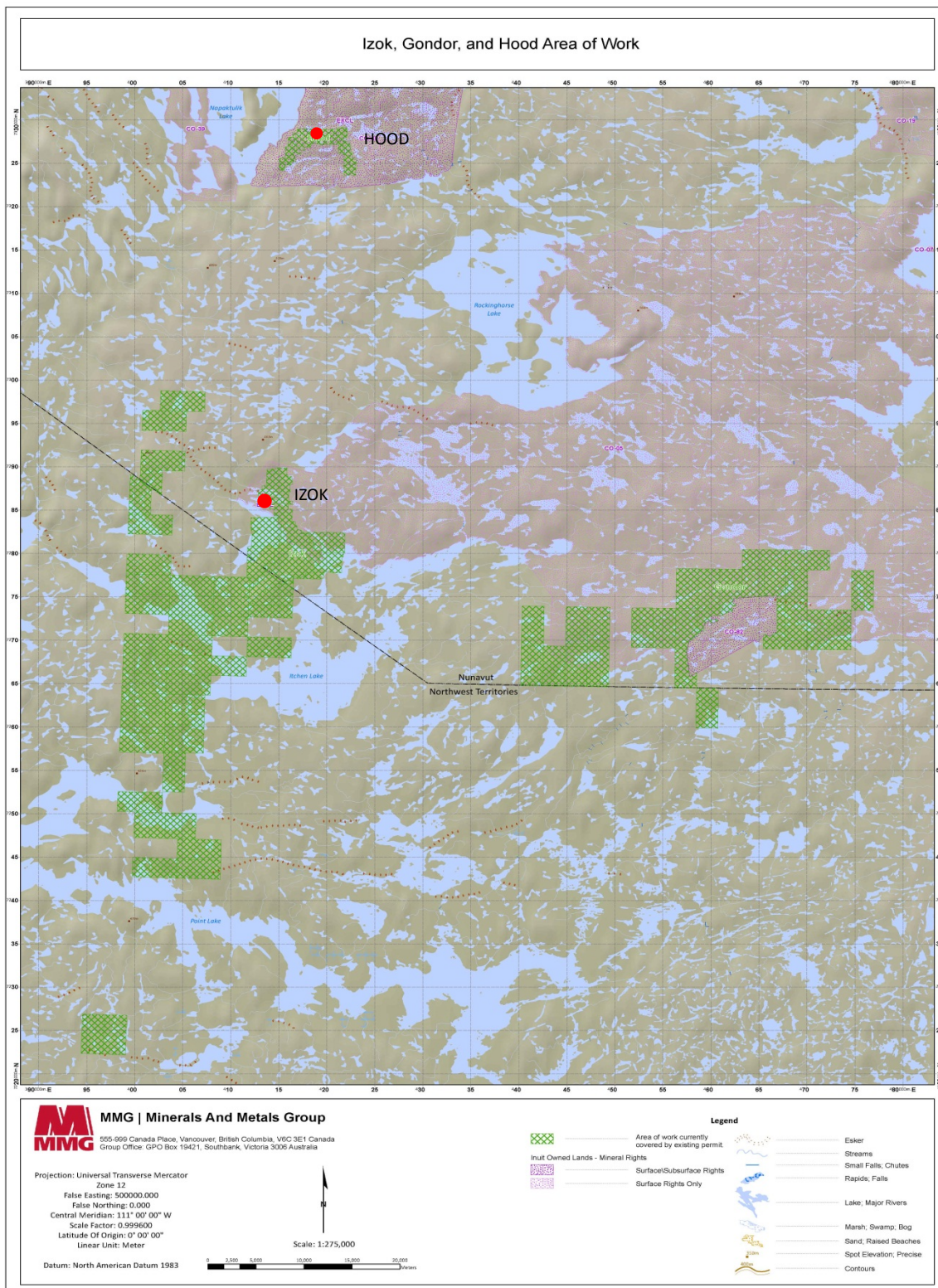


FIGURE 3: (IZOK) HAM LAKE CAMP REGIONAL



FIGURE 4: HAM LAKE CAMP (IZOK) DETAIL



