

# **HIGH LAKE & HIGH LAKE EAST**



## **2011 Annual Report Nunavut Impact Review Board**

Presented  
**2012**

**MINERALS AND METALS GROUP**  
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## **PROJECT DESCRIPTION:**

### **High Lake East**

MMG Resources Inc. is an exploration and mining development company. The High Lake East (formerly known as MolyMag) Project is a mineral exploration project focused on base metal exploration in an area of volcanic rocks approximately 30km east of the High Lake Greenstone Belt. The Project is located in the Kitikmeot region of Nunavut, approximately 550km north-northeast of Yellowknife, NWT. The closest population center is Kugluktuk, located 175km west-northwest of the property. The property is approximately 75km south of the Coronation Gulf. The High Lake East property has surface showings of copper, zinc, silver and molybdenum and consists of 25 mineral claims that cover approximately 25,975 ha. The High Lake East property sits approximately 40km south-east of the High Lake deposits and the existing High Lake Camp. The High Lake Camp has been deemed to be too far from the High Lake East location to efficiently conduct a diamond drill program.

“Very little historic work has been completed on or near the existing High Lake East Claims. Two periods of government mapping have occurred since the 1960s. The area was mapped at 1:506880 scale as part of an extensive regional mapping program in 1962 by Bostock et al. During this period a large portion of Canada’s northern mainland was mapped. Bostock’s mapping revealed a small package of volcanic rocks north of the existing claims; however the surrounding area was largely identified as Archean granitic rocks.

In 1986, the area was mapped at 1:50000 scale by Jackson et al. This mapping extended the known package of volcanic rocks south of the James River. No other new mapping has been completed over the claim area; however GIS compatible maps have been compiled from both Bostock and Jackson’s work.

In the 1990’s the entire Slave Craton was staked during a rush fuelled by the discovery of diamonds in the Lac de Gras region. It was at this time Banchee Resources and Snowpipe Resources worked claims that covered the existing High Lake East property area. The Banchee/Snowpipe claims were part of their ‘HT’ claim group and both airborne geophysical surveys and reconnaissance till sampling was conducted. In 1995, several base metal anomalies were identified with the geophysics, and isolated kimberlite indicator mineral trains were noted. Two follow up till sampling programs were completed in 1996 through 1997 and it was determined that the diamond potential of the property was low. The base metal anomalies were not investigated in detail.

Interest in the volcanic rocks mapped by Jackson et al (1986) led Zinifex to complete a MEGATEM survey (Fugro Airborne Surveys) over the area in 2007. Ground follow-up of EM responses led to the discovery of base metal-rich boulders.”

The campsite at High Lake East is located in a flat area near an esker on the south shore of the James River and sits on Inuit Owned Land Parcel BB-68. (see Figure 1). The campsite was chosen due to its proximity to the expected drill sites, availability of water for the camp and accessibility by fixed-wing aircraft. Two short esker airstrips are immediate to the camp location and allow for ski access in the winter, and wheeled access in the summer by twin otter out of Yellowknife.

Access is by air from Yellowknife in twin otter. Two short esker airstrips allow for ski access in the winter months and wheeled access in the summer with limited payloads. The camp itself provides accommodations for up to 20 people, in wood frame prospector style tents. Fuel is cached in drums within secondary containment berms onsite. Water for domestic use is drawn on a daily basis from the James River. Burnable waste is incinerated daily onsite in a forced air furnace and subsequently sealed in drums and air lifted to Yellowknife for proper disposal.

### **EXPLORATION PROGRAM 2011:**

The 2011 season saw initial drill testing of targets identified from regional surface prospecting, mapping and geophysics completed in preceding seasons. The James River camp was occupied from the beginning of May of 2011 and drilling commenced soon after. In total 19 holes were completed totaling 6900m of core drilling. These holes targeted several occurrences of mineralization and were located to confirm interest at depth (see drilling locations Figure 2 and Table I). In addition to diamond drilling, surface mapping and further geophysical testing of the region lead to the development of several additional targets. New claims were acquired to the East of the existing mineral tenements as a result of the surface program. This new ground will be examined in the coming seasons.

### **PLANNED EXPLORATION PROGRAM 2012:**

The proposed exploration program for the 2012 field season will include a similar amount of diamond drilling, but mostly centered around High Lake. In addition, ground geophysical surveys (magnetic, electromagnetic and induced polarization), and geological mapping are also planned. If encouraging results continue to be obtained, subsequent field seasons would include further field investigations and additional diamond drilling. The historic High Lake camp will be opened and occupied, as it will see some additional drilling this year in addition to its role as a logistical base for fuel re-supply. It may also be used throughout the season as an operational base for some of the environmental baseline work that is planned for 2012.

Figure 1: Project Location

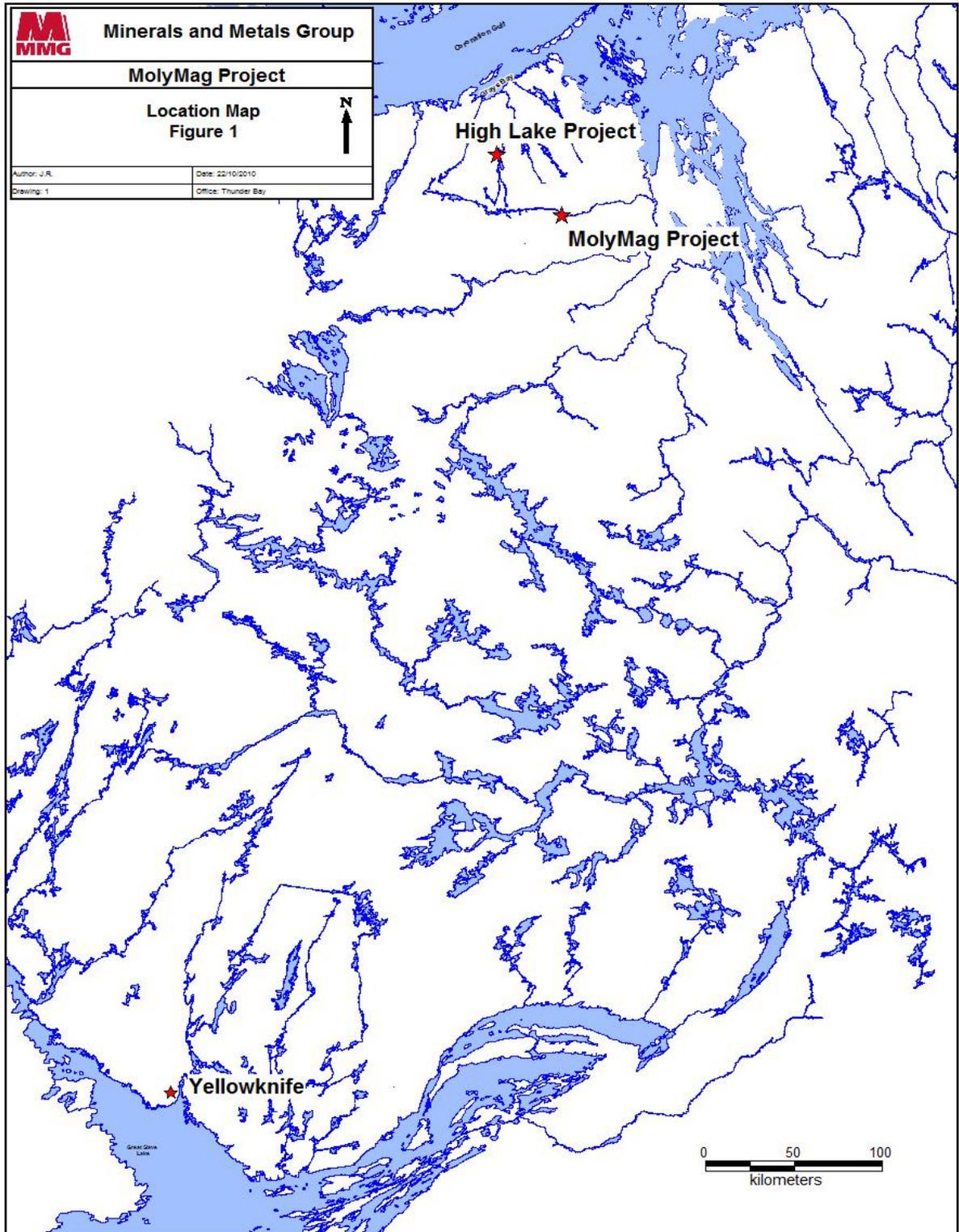
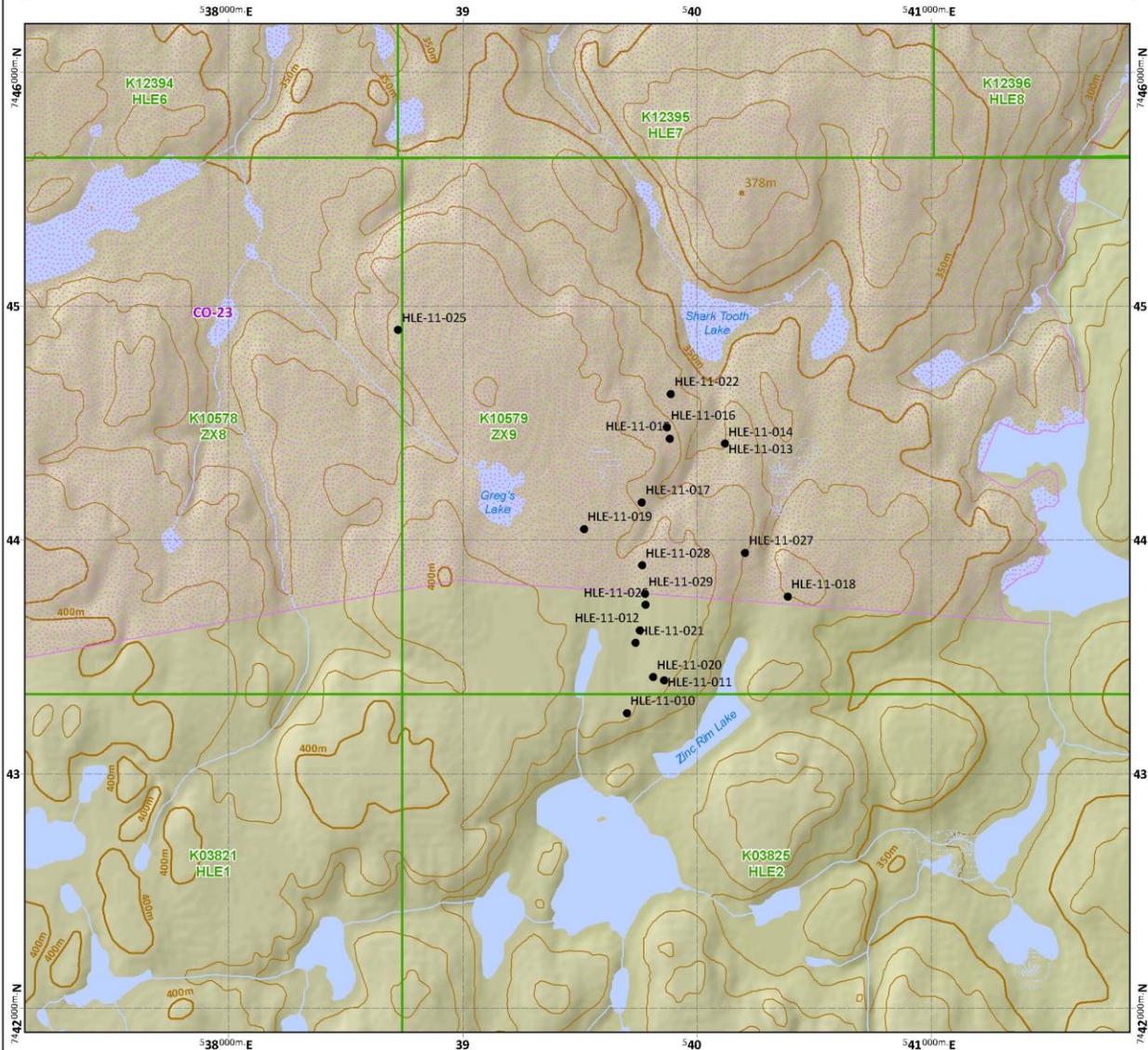


Table I : 2011 Drill Hole Summary High Lake East

HOLE ID #	EASTING	NORTHING	DATUM	UTM ZONE	HOLE DEPTH
HLE-11-010	539700	7443260	NAD83	12N	372
HLE-11-011	539858.2	7443399	NAD83	12N	174
HLE-11-012	539756.3	7443614	NAD83	12N	297
HLE-11-013	540118.5	7444411	NAD83	12N	223
HLE-11-014	540118.4	7444411	NAD83	12N	81
HLE-11-015	539884	7444432	NAD83	12N	266
HLE-11-016	539871	7444480	NAD83	12N	455
HLE-11-017	539764	7444160	NAD83	12N	341
HLE-11-018	540386.8	7443758	NAD83	12N	713
HLE-11-019	539516.7	7444046	NAD83	12N	290
HLE-11-020	539812.7	7443413	NAD83	12N	332
HLE-11-021	539737.8	7443560	NAD83	12N	512
HLE-11-022	539887.5	7444623	NAD83	12N	500
HLE-11-023	536131.7	7444610	NAD83	12N	161
HLE-11-024	536277	7444934	NAD83	12N	170
HLE-11-025	538723.8	7444897	NAD83	12N	215
HLE-11-026	539779.5	7443722	NAD83	12N	515
HLE-11-027	540205	7443945	NAD83	12N	279
HLE-11-028	539765	7443891	NAD83	12N	350
HLE-11-029	539777	7443769	NAD83	12N	740

# High Lake East Project

## Figure 1: 2011 Area of Drilling CO-23

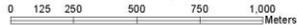


**MMG | Minerals And Metals Group**  
 555-999 Canada Place, Vancouver, British Columbia, V6C 3E1 Canada  
 Group Office: GPO Box 19421, Southbank, Victoria 3006 Australia

Projection: Universal Transverse Mercator  
 Zone 12  
 False Easting: 500000.000000  
 False Northing: 0.000000  
 Central Meridian: -111.000000  
 Scale Factor: 0.999600  
 Latitude Of Origin: 0.000000  
 Linear Unit: Meter

Datum: North American Datum 1983

Scale: 1:24,000



- HL-10-001 ● Diamond Drill Collar
- ☒ Sump
- ☒ Water Draw
- ☒ Esker
- ☒ Streams

### Legend

- ☒ Small Falls, Chutes
- ☒ Rapids, Falls
- ☒ Lake, Major Rivers
- ☒ Marsh, Swamp, Bog
- ☒ Sand, Raised Beaches
- ☒ Spot Elevation, Precise
- ☒ Contours
- ☒ Inuit Owned Lands - Mineral Rights
- ☒ Surface/Subsurface Rights

## **ENVIRONMENTAL:**

Apart from weather station data and water usage/testing, there was no other environmental work conducted during the 2011 exploration program. Wind speed and temperature data is routinely monitored during field operations, and water usage volumes for domestic and drilling purposes are recorded for the annual water board report.

In addition, lake water is tested before and after drilling during winter campaigns when the drill is positioned on lake ice. Primarily this is to ensure that suspended sediments are not escaping the re-circulation system, and that no drilling additives are entering the water bodies. Drill cuttings are settled and removed from the system and deposited on land in natural depressions or sumps.

2012 will see the renewal of baseline data collection in relation to the ongoing feasibility of the project. Mammal and bird counts, fisheries, vegetation, archaeological, water and air quality studies will all be resumed. Environmental work will be carried out under the supervision of Charlotte Mougeot.

## **WILDLIFE:**

Wildlife encounters and sightings are documented; a table showing 2011 encounters is included (see Table II below). Low level flying is avoided unless absolutely necessary for operations and special care is taken during sensitive periods of animal life cycles. An updated wildlife management plan is forthcoming.

Table IIa : Wildlife sightings High Lake

DATE	ANIMAL	NUMBER	LOCATION
23/03/11	Arctic Hare	1	Near helicopter pad behind camp
27/03/11	Arctic Hare	1	Slope behind shop
10/04/11	Fox	1	Near core shack behind camp

Table Iib : Wildlife sightings High Lake East

DATE	ANIMAL	NUMBER	LOCATION
02/06/11	wolves	3	Esker south of camp
11/07/11	Female Wolf and pup	2	Near camp
17/07/11	Female Wolf and pup	2	Esker South of camp
23/07/11	Wolf and pup	2	600m south of camp (den?)
08/08/11	Wolf	1	Near camp
12/08/11	Grizzly Bear	1	North of HLE-11-026
18/08/11	Sow Grizzly w cub	2	East of airstrip near camp
21/08/11	Musk Ox	1	Across river from camp
27/08/11	Grizzly Bear	1	On airstrip near camp
13/09/11	Musk Ox	9	Other side of James River
14/09/11	Wolf	1	100' from camp

#### **COMMUNITY:**

MMG maintains an office in Kugluktuk, the closest inuit community to our project sites. We have on permanent staff there Mr. Donald Havioyak, who acts as our community liaison. He keeps local community members informed of our exploration activities, and addresses concerns and questions they may have on behalf of the company. He is also instrumental in the hiring of local staff, aiding applicants in resume preparation and conducting initial interviews on our behalf.

In the 2011 season, MMG employed the following locals at the High Lake East site:

Carl Katiak

Luke Ayaligak

#### **FLIGHT LOGS / AIR OPERATIONS:**

In order to facilitate the summer drill program, the historic High Lake camp was opened by a skeleton crew in March of 2011 and an ice airstrip constructed to receive C-130 Hercules transports carrying drums of fuel. This fuel was then shuttled using a twin otter to the High Lake East location. The High Lake East camp was opened the first week of May. Once drilling operations commenced, twin otters visited the site on a weekly basis carrying food and supplies, and allowing for movement of personnel.

Throughout drilling operations, a helicopter was based onsite that made local flights daily in order to allow for drill support and shift changes. On most days multiple flights would be logged of varying duration.

During operations, low level flight is avoided in order to minimize noise impacts on local wildlife. When operational areas coincide with migration paths or calving grounds, activity is suspended during the corresponding seasons. See Table III for 2011 aircraft activity.

Table III: 2011 Aircraft Activity High Lake (March-April) / High Lake East (May-September)

<b><i>MONTH</i></b>	<b><i>FIXED WING FLIGHTS</i></b>	<b><i>HELICOPTER HOURS</i></b>
MARCH	51 (includes re-supply and fuel shuttles to HL East)	8
APRIL	47 (includes fuel shuttles to HL East)	15.3
MAY	11	90.8
JUNE	8	170.5
JULY	7	106.7
AUGUST	18	116.3
SEPTEMBER	11	49.3

**RECLAMATION WORK:**

Reclamation work occurs at each diamond drilling site on an ongoing basis during the exploration program. All efforts are made to return drill pads as close as possible to their natural state with as little disturbance as possible at the conclusion of each drill hole.

The removal of 4 plywood “drill” and “pump” shacks was carried out at the High Lake Camp during the reporting period, along with the dismantling and storage of 4 tent frames. In addition, some 850 accumulated empty drums and 75,000lbs. of accumulated scrap metal, drill steel and old drill equipment were also removed from site. All of this material was airlifted back to Yellowknife during 2011 Hercules operations off of the frozen lake surface for proper disposal and/or return to drilling contractors (Major Drilling). Photos are provided in the appendices.

## **WASTE REMOVAL:**

All burnable waste is incinerated on site by a diesel powered forced air furnace. Incineration remains including metal scraps and ash are collected and sealed in empty 45 gallon fuel drums for transport back to Yellowknife. Waste is handled by expeditors in Yellowknife and handed over to KBL for appropriate disposal. Waste that involves petroleum or other chemical products is transported to Edmonton for disposal in a certified facility.

## **ABANDONMENT AND RESTORATION:**

The Abandonment and Restoration Plan remains as originally presented to INAC and the NIRB with the initial amendment to the existing Land Use Permit for High Lake in 2009. The Plan has been included in subsequent submittals to the Nunavut Water Board on an annual basis. The plan undergoes annual review in accordance with the activities anticipated every December, however as the scope of Exploration activity remains unchanged, for the most part so too does the plan.

## **SITE INSPECTIONS:**

Visual site inspections of the High Lake East project were conducted by Baba Pederson of the Department of Indian and Northern Affairs, and Stanley Anablak of the Kitikmeot Inuit Association. No physical copies of the inspection reports have been received in order to include them in the Appendices with dates and findings. However no serious observations were recorded and all suggestions and comments were taken into consideration.

**APPENDICES :**                      Appendix I : Site Inspections

No report of site inspections has been received.

## Appendix II : Permitting



Indian and Northern  
Affairs Canada

www.inac.gc.ca

Affaires indiennes  
et du Nord Canada

www.ainc.gc.ca

RECEIVED MAR 16 2011

Land Administration  
P.O. Box 100  
IQALUIT, NU X0A 0H0  
Phone: 867-975-4275  
FAX: 867-975-4286

*Your file - Votre référence*

*Our file - Notre référence*

March 7, 2011

MMG Resources Inc.  
Suite 555-999 Canada Place  
Vancouver, BC  
V6C 3E1

Dear Mr. Muraro:

**Re: Land Use Permit #N2007C0009**  
**Type of Operation: Diamond Drilling**  
**Location: Hepburn Lake Area, Kitikmeot, NU, NTS 076M07**

Further to our letter dated February 17, 2011, this will confirm that the above land use permit is hereby extended from March 26, 2011 to March 26, 2012.

All conditions annexed to land use permit N2007C0009 will apply to this extension.

Sincerely,

Tracey McCaie  
Land Administrator Specialist  
Land Administration

cc: Manager, Field Operations  
RMO - Kitikmeot  
NIRB  
NPC  
CIDM#451372

Canada



**Kitikmeot Inuit Association**  
**Kitikmeot Inuit Katuyikatigit**  
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P.O. Box 360, Kugluktuk  
 Nunavut X0B 0E0  
 Tel. (867) 982-3310  
 Fax (867) 982-3311

**INUIT OWNED LAND USE LICENSE**  
**KITIKMEOT INUIT ASSOCIATION**

**LICENSE NO. KTL310C001**

Kugluktuk  
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Bathurst Inlet  
Kingaok  
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Bay Chimo  
Omingmaktok  
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Cambridge Bay  
Ikaluktutiak  
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Ojoa Haven  
Okhoktok  
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Taloyoak  
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Kugaaruk  
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Subject to the Terms and Conditions of this License, authority is hereby granted to:

MINERALS AND METAL GROUP  
 LICENSEE

To proceed with Land Use operation described in the accepted application dated: 17/12/10

Location: IOL Parcels # BB - 68 - NTS map sheet # 76N

Type of Operation: Staking & Prospecting, Exploration (geophys-grd/air, Diamond Drilling (ice, land), Camp

Commencement Date: February 16, 2010      Expiry Date: February 15, 2012

This 18<sup>th</sup> day of February, 2010

**Kitikmeot Inuit Association**

By  
SAMBAK  
 LANDS & ENVIRONMENT

The Licensee acknowledges and agrees to comply with Terms and Conditions of this License.

By [Signature]  
 AUTHORIZED SIGNATORY

### Apendix IIIa : Photos High Lake



Scrap metal loaded onto pallets and drill sloops, along with equipment and drill rod waiting for backhaul on the Hercules – April 2011



Drill tower and equipment from laydown loaded onto sloop awaiting backhaul – April 2011



Scrap metal loaded into mud tanks on old skids from laydown awaiting backhaul – April 2011



Drill rod from loaded onto skid gear and awaiting backhaul to Yellowknife – April 2011



Old D6 cat tracks chopped up, palletized, and awaiting backhaul – April 2011

**Appendix IIIb : High Lake East**



High Lake East showing fuel storage with secondary containment.



Incinerator High Lake East



Propane storage