

# HIGH LAKE



## 2018 Annual Report Submittal 2BE – HIG1722

Presented  
**April 2019**

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## **PROJECT DESCRIPTION:**

### **High Lake**

MMG Resources Inc. is an exploration and mining development company focused on base metals. The High Lake deposit is located in the Kitikmeot region of Nunavut, approximately 550km due north of Yellowknife, and 175km to the East Southeast of Kugluktuk. It is roughly 45km from the Coronation Gulf area of the Arctic coast.

The High Lake deposits were first discovered in the mid-1950's, and have been worked on through the years by various companies. MMG obtained the property in 2009 following a series of corporate takeovers and began work in 2010, following up on work done by Texas Gulf, Aber, Wolfden and Zinifex.

The discovery of the "West Zone" in 2003 by Wolfden Resources, located approximately 1.5km to the west of the High Lake camp, caused renewed interest in the property.

In 2008 Zinifex/Oz Minerals took the High Lake property through the initial stages of permitting towards development after the completion of a Pre-Feasibility Study. The property has been the focus of several years of engineering studies and environmental baseline work, which has continued under MMG.

The historic HL camp, which is located on the southwest shore of High Lake, now consists of 5 temporary plywood clad structures, following the removal of 10 wood frame tents and one plywood clad structure during the 2015 reclamation. The camp is located on a government of Canada land lease which has been excluded from the IOL CO-29 land package. This site is convenient due to its proximity to the main High Lake deposit and its historic use as a camp location. The frozen lake surface will allow heavy air lift operations in winter which makes it an ideal staging area for annual re-supply to support work in the region. The camp has not been operated at capacity since 2013 when some limited work was carried out. It remained closed for the 2014 season and saw a short period of limited occupancy in 2015 to support reclamation work carried out both at this site and High Lake East. The reclamation work effectively reduced the footprint of the site to the Land Lease that remains in good standing. In late 2015, inspection visits were conducted by AANDC and KIA representatives, and the closure of the associated permits on the surrounding Crown and Kitikmeot lands (KTL308C008 and N2011C0033) was requested. The permit held with the KIA was approved for closure. The LUP held with AANDC was initially indicated to be approved but then questioned and subsequently observed. This permit related to Crown lands (N2011C0033) still awaits closure. The observations made are related to historic drill locations and legacy reclamation work. A brief visit to the site was conducted in September of 2017 in order to address these observations, and a subsequent repeated request for closure of the LUP held with AANDC will be submitted.

## **High Lake East**

Regional exploration work surrounding the property in 2009 identified a surface showing 45km to the Southeast of the historic High Lake deposit, initially called MOLYMAG and now referred to as High Lake East. This showing was drilled in 2010 and 2011 to some success, identifying mineralization in a greenstone belt hosted within a similar geological setting to High Lake. The High Lake East property has surface showings of copper, zinc, silver and molybdenum and consists of 5 mineral leases that were converted from claims in 2014..

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 1:500,000 scale as part of an extensive regional mapping program in 1962 by Bostock et al. In 1986, the area was re-mapped at 1:50,000 scale by Jackson et al. This mapping extended the known package of volcanic rocks south of the James River.

In 1995, several base metal anomalies were identified by Banshee and Snowpipe Resources, but 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, and ground follow-up of EM responses led to the discovery of base metal-rich boulders.

The no longer existing High Lake East camp location was 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.

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. Site reclamation carried out in 2015 completed the removal of all structures. What remains on the site is stacked drill core. Following the completion of reclamation, this site was also visited during the inspections associated with the closure of permits. No visits have been made to this site since September of 2015.

## **EXPLORATION SUMMARY 2007 – 2014**

During the period of MMGs involvement with the High Lake property, continued mapping, sampling and geophysical surveys have resulted in more than 20,000m of diamond drilling conducted in continued work towards creating an economic resource from those known deposits and in the hopes of adding additional ones. The feasibility work undertaken involved not only resource confirmation drilling but also metallurgical testing and geotechnical engineering holes for development planning.

**FIELD PROGRAM 2018:**

No work was undertaken at the High Lake site during 2018 and the site (now reduced to the Surface Lease footprint) has been put on long term care and maintenance.

MMG renewed the associated Type 'B' water license (**2BE-HIG1722**)

The last site visit was undertaken in September 2017 by a third party (Matrix). A one day visit to the High Lake site to address observations of refuse and breached buildings that were noted by AANDC inspectors in August of that year, and a summary report of this visit and cleanup was provided to AANDC.

Plans for a similar and slightly longer visit to be undertaken in 2018 were suspended due to early freezing conditions during the month of September across the Western Arctic. The planned site visits are scheduled to take place in April/May once ice comes off the lakes and the locations are once again floats accessible.

**FIELD PROGRAM 2019:**

No Exploration field work will be undertaken by MMG in 2019 and the site (now reduced to the Surface Lease footprint) has been put on long term care and maintenance. The decision to maintain the water license (renewed in 2017), was based on the possibility of the site being used to support environmental and engineering studies related to the proposed Greys Bay road project and at request of the Kitikmeot Inuit Association.

Requested closure of Crown Land Use Permits is pending planned 2019 field intervention and a final inspection to be signed off by INAC.

The initial 2015 request for closure was met with several observations that require resolution prior to the closure being granted. These observations include removal of structures near the water line at the High Lake Camp, and additional remediation measures around several drill collar locations where casing and/or drill steel was observed to be left protruding from the ground.

The proposed visit will also ensure that the structures are in good condition and clean up any damage from the winter weather or incursions by wildlife, as well as addressing observations made by AANDC inspectors.

Figure 1: Project Location

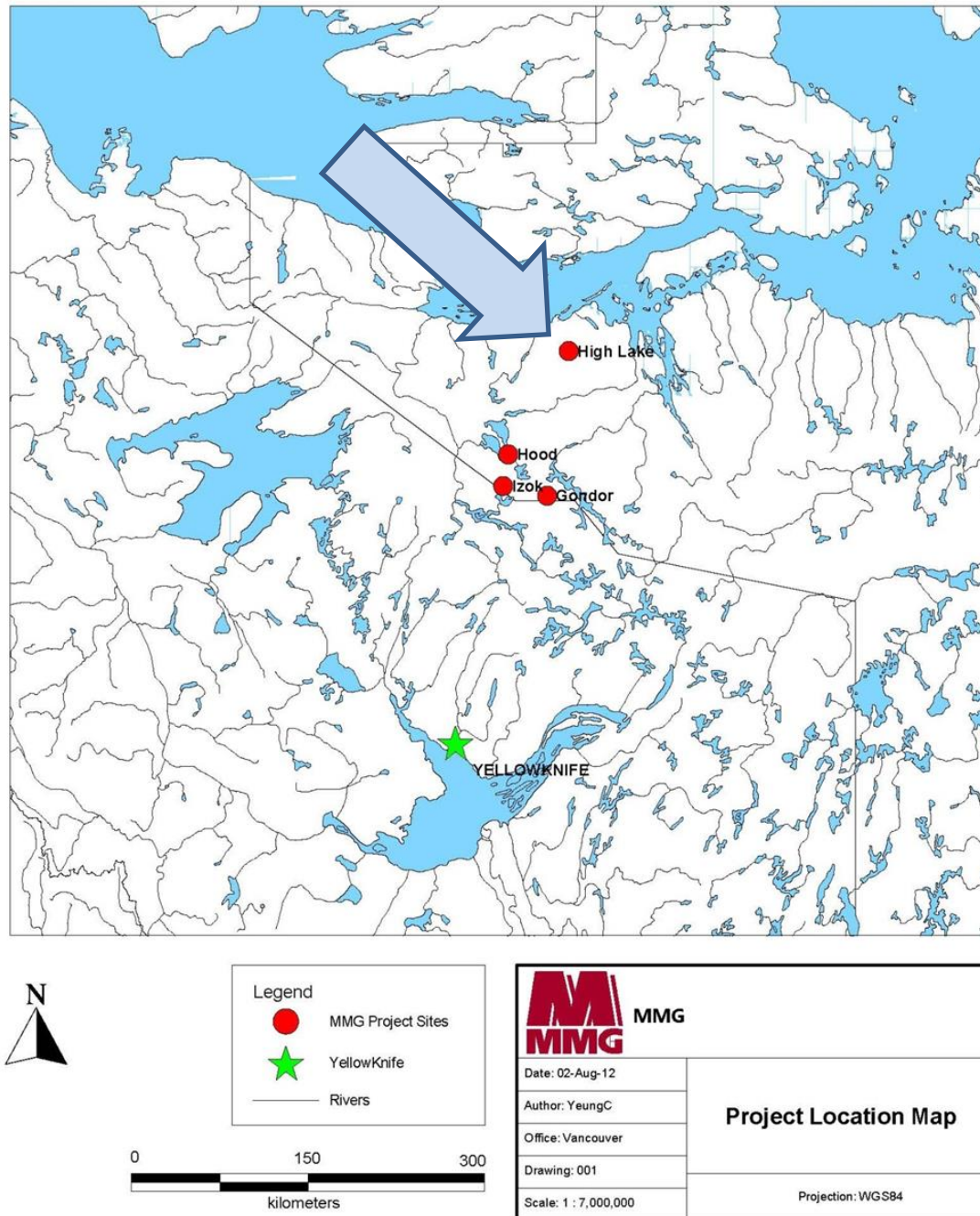




Figure 2: High Lake Detailed Property Map

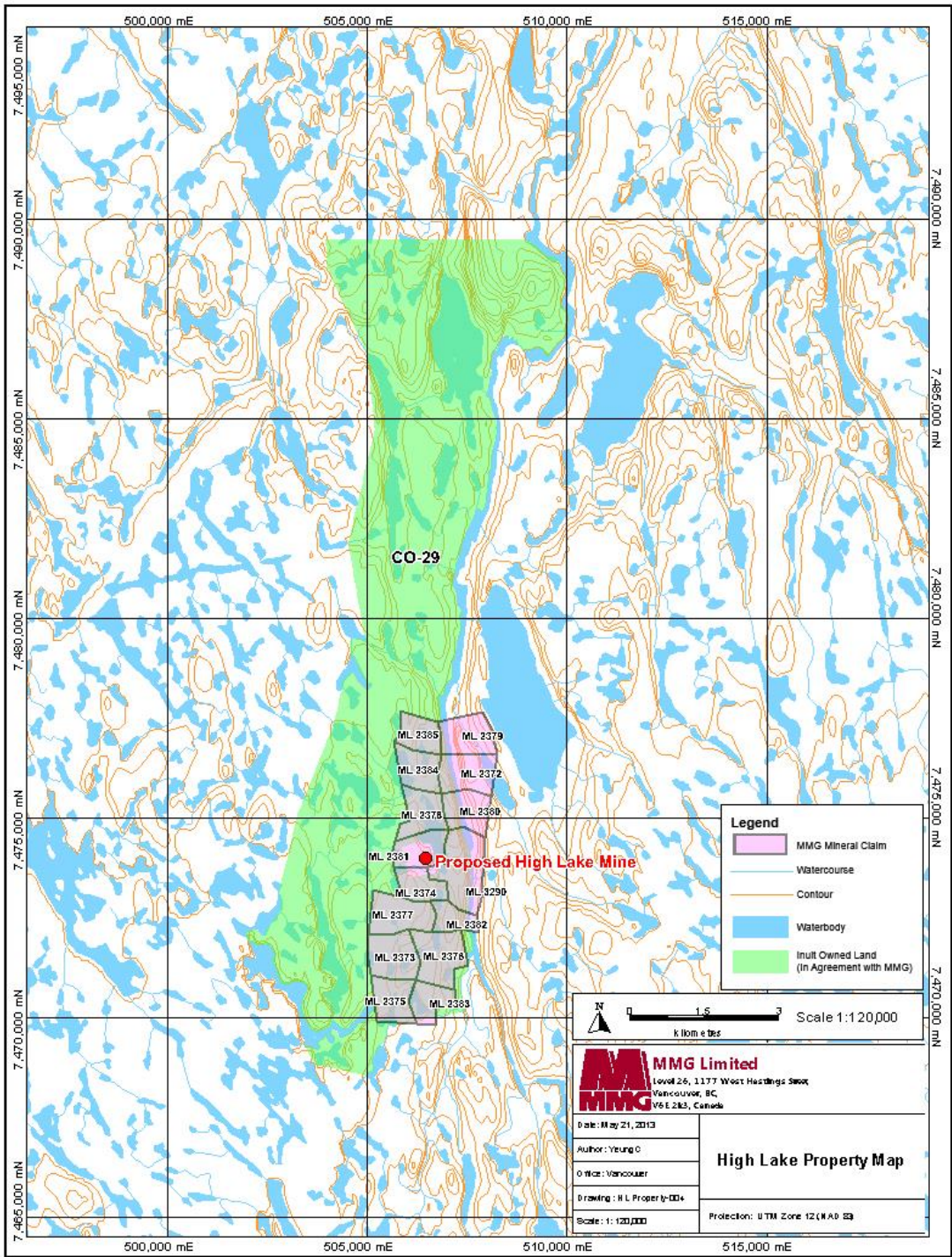
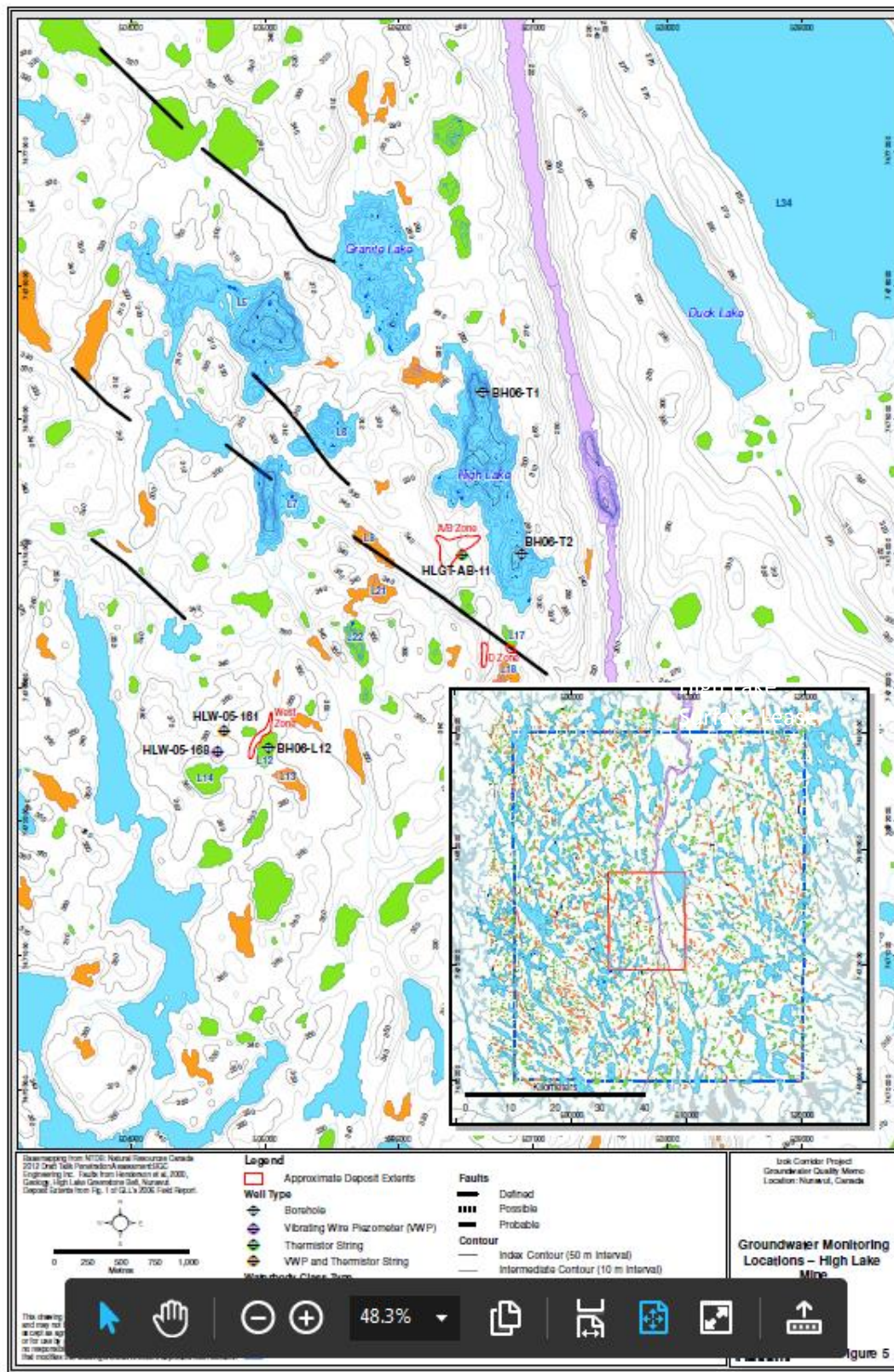




Figure 3: Location of Downhole Instruments





## **ENVIRONMENTAL:**

No weather station data was collected during the 2018 season.

No field work was carried out in 2018. Water usage volumes for industrial purposes, sampling records and laboratory analysis of those samples normally provided with this annual report are therefor, absent.

2018 saw no reclamation work carried out, as early freezing conditions suspended the planned September site visit. This visit will be carried out in Spring 2019. .

There is no storage of fuel and/or lubricants on site.

## **WATER USAGE:**

Water usage is divided into Industrial and Domestic applications, and is monitored. Water usage reporting is normally included in the appendices. The project is presently permitted for 100m<sup>3</sup> per day total volume for both applications.

Domestic usage at the camp during capacity occupancy is roughly 4m<sup>3</sup> per day. The camp was un-occupied during the 2018 season, and therefor there is no usage documentation associated with this report. When in operation, the High Lake camp draws its water from High Lake by means of a moveable submersible electric pump with a screened intake. Currently this pump is not installed.

Industrial usage is limited to those activities associated with drilling. There was no drilling carried out in the 2018 season and so the usage volume information normally provided is absent from this report. Sources for drilling purposes are normally dependent on the drill hole location and chosen based on an assessment of potential volume and/or flow adequacy and proximity.

## **WILDLIFE:**

Wildlife encounters and sightings during operations are normally documented by field personnel. A copy of the log is usually included in the appendices. As specified in our permit, low level flying is avoided unless absolutely necessary for operations and special care is taken during sensitive periods of animal life cycles.

As the site was un-occupied during the 2018 season, the “wildlife sightings log” that is normally provided is absent from this report.

## **COMMUNITY:**

MMG continues to employ on contract aCommunity Engagement liason in Kugluktuk, Mr. Donald Havioyak. His primary job is to maintain an MMG presence during this period of

relative absence of activity, and address concerns and questions the local population may have related to future development plans. . He has also been instrumental in the hiring of local staff over the years, aiding applicants in resume preparation and conducting initial interviews. Due to the absence of field activity, there was no additional local employment offered to surrounding Communities in the 2018 season.

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

The High Lake site was not active during the 2018 season. Therefor the information summarizing air operations of both fixed and rotary wing aircraft normally provided in this report are absent.

During regular operations, low level flight is normally 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.

#### **RECLAMATION WORK:**

There was no reclamation work carried out at the High Lake site in 2018. The planned September site visit was suspended due to early freezing conditions, and is currently scheduled to be undertaken in May/June of the current year. The site has been reduced to the Surface Land Leases in compliance with the closure requirements of the surrounding AANDC and KIA Land Use Permits. All fuel was purchased by a 3<sup>rd</sup> party and removed from site in 2015. Reclamation work previously carried out also included the complete removal of the High Lake East site.

#### **WASTE REMOVAL:**

There was no waste removed from the High Lake site in 2018 as the site was un-occupied and no field program was carried out.

#### **ABANDONMENT AND RESTORATION:**

The Abandonment and Restoration Plans were updated in February of 2013. The Plan was included in previous annual reports in digital format along with other supporting documents. The plan normally undergoes annual review in accordance with the activities anticipated every December, and if necessary modifications are made.

As the remaining fuel and lubricants have now all been removed from site, and the site is now on long term care and maintenance without occupancy, the plan remains unchanged from its previous approved version.

## **SITE INSPECTIONS BY REGULATORY BODIES:**

Site inspections of the High Lake and surrounding operational areas associated with permit closure were conducted in August of 2017 by Eva Paul of Aboriginal and Northern Development Canada (AANDC), her inspection reports are provided in the appendices. Observations made during these visits were partially addressed in site visits carried out in September of that same year, and scheduled for further work in 2018. As mentioned, the 2018 visit was suspended due to early freezing conditions and will be carried out in Spring 2019, and a subsequent inspection visit will be coordinated with Baba Pedersen.

## **PERMITTING:**

A request for closure of the Land Use Permits associated with exploration activity for the High Lake project was made in 2015 following compliance inspections conducted by the KIA and AANDC. Subsequent approval from the KIA was received for closure of those permits associated with IOL ground. The approval for closure of the N2011C0033 permit held with AANDC remains pending. The site footprint is now confined to the Surface Lease as previously mentioned.

The Water License (Nunavut Water Board) associated with the site (**2BE-HIG1722**), was renewed in 2017. The decision to renew the water license was made in order to make the site available for possible use as an operational base at the request of the Kitikmeot Inuit Association, who continues to spearhead the Greys Bay Road and Port infrastructure project. A copy of the Water License is supplied in the appendices.

# Appendix I : 2017 Site Inspections



Indigenous and  
Northern Affairs Canada

Affaires autochtones  
et du Nord Canada

☒ Original  
☐ Follow-Up Report

## CROWN LAND USE INSPECTION FORM

Permittee MMG Resources Inc.	Representative Theodore Muraro
Permit No. / Expiry N2011C0033	Representative's Title
Other Authorizations 76M/7-1-10 (31-12-2017)	Land / Other Authorizations 2BE-HIG1722
Date of Inspection 20-08-2017	Inspector Eva Paul
Activities Inspected	
<input checked="" type="checkbox"/> Camp <input type="checkbox"/> Drilling <input type="checkbox"/> Mining <input type="checkbox"/> Construction <input checked="" type="checkbox"/> Reclamation <input checked="" type="checkbox"/> Fuel Storage <input type="checkbox"/> Roads/Hauling <input type="checkbox"/> Other: <input type="checkbox"/> Other:	

Conditions:	A- Acceptable	U-Unacceptable	C-Concern	NI-Not Inspected	NA- Not applicable	
<b>Land Use Permit N2011C0033:</b>				Term No.*	Condition	Observation No.
31 (1)(a) Location and Area				2	C	1
31 (1)(b) Time				10	U	2
31 (1)(c) Equipment					A	
31 (1)(d) Methods and Techniques					A	
31 (1)(e) Type location, capacity and operation of facility				23	U	2
31 (1)(f) Control or prevent of flooding, erosion, and subsidence of Land					A	
31 (1)(g) Use, storage, handling and disposal of chemical or toxic materials					A	
31 (1)(h) Wildlife and fisheries habitat					A	
31 (1)(i) Objects and places of recreation, scenic and ecological value					A	
31 (1)(k) Petroleum fuel storage				54	C	3
31 (1)(m) Matters not inconsistent with the regulations					A	
<b>Lease # 76M/7-1-10:</b>				Term No.*	Condition	Observation No.
Term				2	C	4
Rent and Taxes					A	
Use					A	
Assignments / Subletting					NI	
Breach					A	
Termination					NA	
Reclamation					A	
Environmental				22	U	2
Fuel and Hazardous Chemicals				25	A	2
Boundaries/Survey					NA	
Improvements					A	
Access					NA	
Indemnification					NI	
Notices					NI	
Archeology					NI	
General					A	

\*refers to specific terms and conditions found in the permit/lease in question.

<b>SECTION 1</b>	<input checked="" type="checkbox"/> Comments (s.1)	<input checked="" type="checkbox"/> Non-Compliance with Permit, Act or Regs (s.2)	<input checked="" type="checkbox"/> Action Required (s.3)																																				
<p>A final plan was submitted for MMG's N2011C0033. N2011C0033 was preceded by 2007C0009 and N2004C0037. In 2009 the LUP area was expanded for exploration south and east. All obligations held under the preceding LUPs exist in the most recent LUP.</p> <p>1. Debris was noted at several drill sites, and collars/anchors that were not removed.</p> <table border="1"> <tr> <td>1</td> <td>HLE-10-001</td> <td>N67 06 10.4 W110 04 56.9</td> <td>Nothing found</td> </tr> <tr> <td>2</td> <td>HLE-10-005</td> <td>N67 06 51.7 W110 04 51.8</td> <td>collars/casing</td> </tr> <tr> <td>3</td> <td>HLE-10-008</td> <td>N67 07 09.5 W110 06 24.0</td> <td>collars/casing</td> </tr> <tr> <td>4</td> <td>BGC12-113</td> <td>N67 28 35.6 W110 49 06.1</td> <td>garbage/debris</td> </tr> <tr> <td>5</td> <td>BGC12-111</td> <td>N67 23 08.3 W110 51 13.3</td> <td>not found</td> </tr> <tr> <td>6</td> <td>HLGT-AB-11</td> <td>N67 22 55.9 W110 50 57.6</td> <td>looks to have cables in it (thermister?)</td> </tr> <tr> <td>7</td> <td>HLZ-07-219</td> <td>N67 22 31.4 W110 51 21.0</td> <td>Casing left with white PVC over it</td> </tr> <tr> <td>8</td> <td>HLK-RES-07</td> <td>N67 22 12.0 W110 53 02.7</td> <td>boards seen</td> </tr> <tr> <td>9</td> <td>HLZ-07-206</td> <td>N67 19 56.2 W110 54 10.3</td> <td>collars/casing</td> </tr> </table>				1	HLE-10-001	N67 06 10.4 W110 04 56.9	Nothing found	2	HLE-10-005	N67 06 51.7 W110 04 51.8	collars/casing	3	HLE-10-008	N67 07 09.5 W110 06 24.0	collars/casing	4	BGC12-113	N67 28 35.6 W110 49 06.1	garbage/debris	5	BGC12-111	N67 23 08.3 W110 51 13.3	not found	6	HLGT-AB-11	N67 22 55.9 W110 50 57.6	looks to have cables in it (thermister?)	7	HLZ-07-219	N67 22 31.4 W110 51 21.0	Casing left with white PVC over it	8	HLK-RES-07	N67 22 12.0 W110 53 02.7	boards seen	9	HLZ-07-206	N67 19 56.2 W110 54 10.3	collars/casing
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10	HLZ-07-218	N67 14 08.7 W110 59 29.4	boards/debris, collars/casing
11	CNL-09-001	N67 08 34.7 W111 06 47.0	core racks, collars/casing, several in this area.

2. Reclamation of the drill sites should have been done as each hole was completed, and verification done before MMG became inactive in the region. The camp was found in disarray – wildlife and possibly weather has resulted in debris, and cleaning supplies strewn about, including a boat's fuel tank found on the dock near the water's edge. Buildings were broken into. Blue tarps used on buildings are shredded and disintegrating. These pose a threat to wildlife if ingested. Where structures were burned, there is melted plastic, nails and screws, which are to be collected.

3. A fuel tank for the boat, and cleaning supplies were stored in a wooden bin on the dock at the water's edge. The cleaning supplies were pulled from the bin by wildlife and consumed, and the fuel tank was found on the dock.

4. The lease expires 31-12-2017. MMG has informed me that a renewal application has been submitted and is awaiting INAC action.

MMG was able to briefly engage Matrix Logistics, who were working in the area shortly after the August 20 inspection, to address some of the items above. The follow up report (received November 12, 2017) shows that debris was collected and the camp was boarded up. Other items will be addressed in July 2018.

**SECTION 2** ☐ Comments ☒ **Non-Compliance with Permit, Act or Regs** ☐ Action Required

N2011C0033

2. The Permittee shall remove from Territorial Lands, all scrap metal, discarded machinery and parts, barrels and kegs, buildings and building material.

10. The Permittee shall complete all clean-up and restoration of the lands used prior to the end of each field season as well as the expiry date of this permit.

23. The Permittee shall ensure that the land use area is kept clean and tidy at all times.

54. The Permittee shall not place any petroleum fuel storage containers within thirty-one (31) metres of the normal high water mark of any stream or body of water.

76M/7-1-10

22. The Lessee shall at all times keep the land in a condition satisfactory to the Minister.

25. The Lessee shall ensure that fuel storage containers are not located within... 30.48 metres of the ordinary high water mark of any body of water...

**SECTION 3** ☐ Comments ☐ Non-Compliance with Permit, Act or Regs ☒ **Action Required**

A. All drill sites on Crown Land are to be inspected and reclaimed for closure of the LUP. Please provide a table that demonstrates which drill sites are on Crown Land vs. IOL, and which also identifies which drill holes have been purposely left with monitoring equipment. Closure of the Land Use Permit will not be possible until it has been demonstrated that all drilling on Crown Land meets the reclamation requirements. This table must be provided prior to final inspection.

B. Cleanup of the camp is to be done in the snow-free season. All locations where structures were burned should be raked for plastic and other debris (nails etc). Tarps are to be removed and/or replaced. Notification is requested well prior to the camp and drill site cleanup to facilitate charter scheduling, if MMG wishes a final inspection be done in 2018 to permit the LUP closure, as well as confirmation of the completion of the work. An updated final plan/report is also required, but can be submitted after the inspection if necessary.

C. Regular (at least annual) site maintenance is required in order to maintain the condition of the land.

D. Confirm removal of all chemicals stored less than 31m from the Ordinary High Water Mark.

Licensee or Representative	Inspector's Name
	Eva Paul
Signature	Signature
	Sent electronically
Date	Date
	16/11/2017

CC: Erik Allain, Director of Lands, INAC  
Tracey McCaie, Manager of Lands Administration, INAC

ATT: Photos of August 20 2017 Inspection

## Appendix II : Permitting



### NUNAVUT WATER BOARD WATER LICENCE

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Licence No. 2BE-HIG1722

Pursuant to the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* and the *Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada*, the Nunavut Water Board, hereinafter referred to as the Board, hereby grants to

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**MMG RESOURCES INCORPORATED**

(Licensee)

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**P.O. BOX 91460, WEST VANCOUVER, B.C. V7V 3P1**

(Mailing Address)

Herein after called the Licensee, the right to alter, divert or otherwise use water or dispose of waste for a period subject to restrictions and conditions contained within this Licence:

Licence Number/Type: **2BE-HIG1722 / TYPE "B"**

Water Management Area: **CORONATION GULF WATERSHED (NO. 29)**

Location: **HIGH LAKE PROJECT, KITIKMEOT REGION, NUNAVUT**

Classification: **MINING UNDERTAKING**

Purpose: **USE OF WATER AND DEPOSIT OF WASTE**

Quantity of Water use not to Exceed: **ONE HUNDRED (100) CUBIC METRES PER DAY**

Date of Licence Issuance: **AUGUST 04, 2017**

Expiry of Licence: **AUGUST 03, 2022**

This Licence renewal – amendment, issued and recorded at Gjoa Haven, Nunavut, includes and is subject to the annexed conditions.

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**Thomas Kabloona,**  
**Nunavut Water Board, Chair**

Licence No. 2BE-HIG1722

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**Appendix III : Waste Management Plan**

The Waste Management Plan remains unchanged from that which was provided in previous reports.

**Appendix IV : Spill Contingency Plan**

The Spill Contingency Plan remains unchanged from that (2013 version) which was provided in previous reports. A copy in digital form is available on request.

**Appendix V : Abandonment and Restoration Plan**

The Abandonment and Restoration Plan remains unchanged from that (2013 version) which was provided in previous reports. A copy in digital form is available on request.

High Lake Camp

