

**IZOK**



**2012 Annual Report**

Presented

**January 2013**

**MINERALS AND METALS GROUP**

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## **TABLE OF CONTENTS**

Project Description.....	4
Izok Exploration Activity 2012.....	7
Hood Exploration Activity 2012.....	11
Planned Activity 2013.....	15
Environmental.....	15
Water Usage.....	18
Wildlife.....	18
Community.....	18
Air Operations.....	19
Reclamation Work.....	20
Waste Removal.....	20
Spill Contingency and Abandonment and Restoration Plans.....	21
Inspections.....	21
Permitting .....	21

## **FIGURES**

Figure 1 : Project Location.....	5
Figure 2 : Permitted Areas of Work.....	6
Figure 3 : Izok Drill Collar Locations.....	9
Figure 4 : Izok Cuttings Sump Locations.....	10
Figure 5 : Hood Property Map.....	11
Figure 6 : Hood Drill Collar Locations.....	12
Figure 7 : Hood Cuttings Sump Locations.....	13
Figure 8 : Hood Water Source Locations.....	14
Figure 9 : Izok Water Sampling Locations for Winter Drilling.....	17

**TABLES**

Table I : 2012 Izok Drilling Summary .....7  
Table II : 2012 Hood Drilling Summary .....12  
Table III : 2012 Hood Water Source Locations.....13  
Table IV : 2012 Izok Water Testing Locations.....16  
Table V : 2012 Seasonal Employees from Local Communities.....19  
Table VI : 2012 Air Operations .....20

**APPENDICES** .....22

Appendix I : Inspection Reports.....18  
Appendix II : Permitting .....20  
Appendix III : Water Usage Domestic.....24  
Appendix IV : Water Usage Industrial.....28  
Appendix V : Laboratory Results Water Testing.....31  
Appendix VI : Water Sampling Photos.....84  
Appendix VII : Wildlife Sightings Log.....85  
Appendix VIII : KBL Waste Disposal Certificates.....88  
Appendix IX : Waste Management Plan.....103  
Appendix X : Spill Contingency Plan.....110  
Appendix XI : Abandonment and Restoration Plan.....110  
Appendix XII: Photos .....111

**PROJECT DESCRIPTION:  
IZOK / HOOD**

The Minerals and Metals Group (MMG) is a mining development company that has the mineral rights for the Izok and portions of the Hood River properties.

The Izok property is a VMS style poly-metallic deposit hosted in felsic rocks, the primary interest being its copper and zinc content. The property consists of three mineral leases and three claims. It is located approximately 300 km north of Yellowknife and is situated on both Crown and Inuit Owned Land (see figure 1).

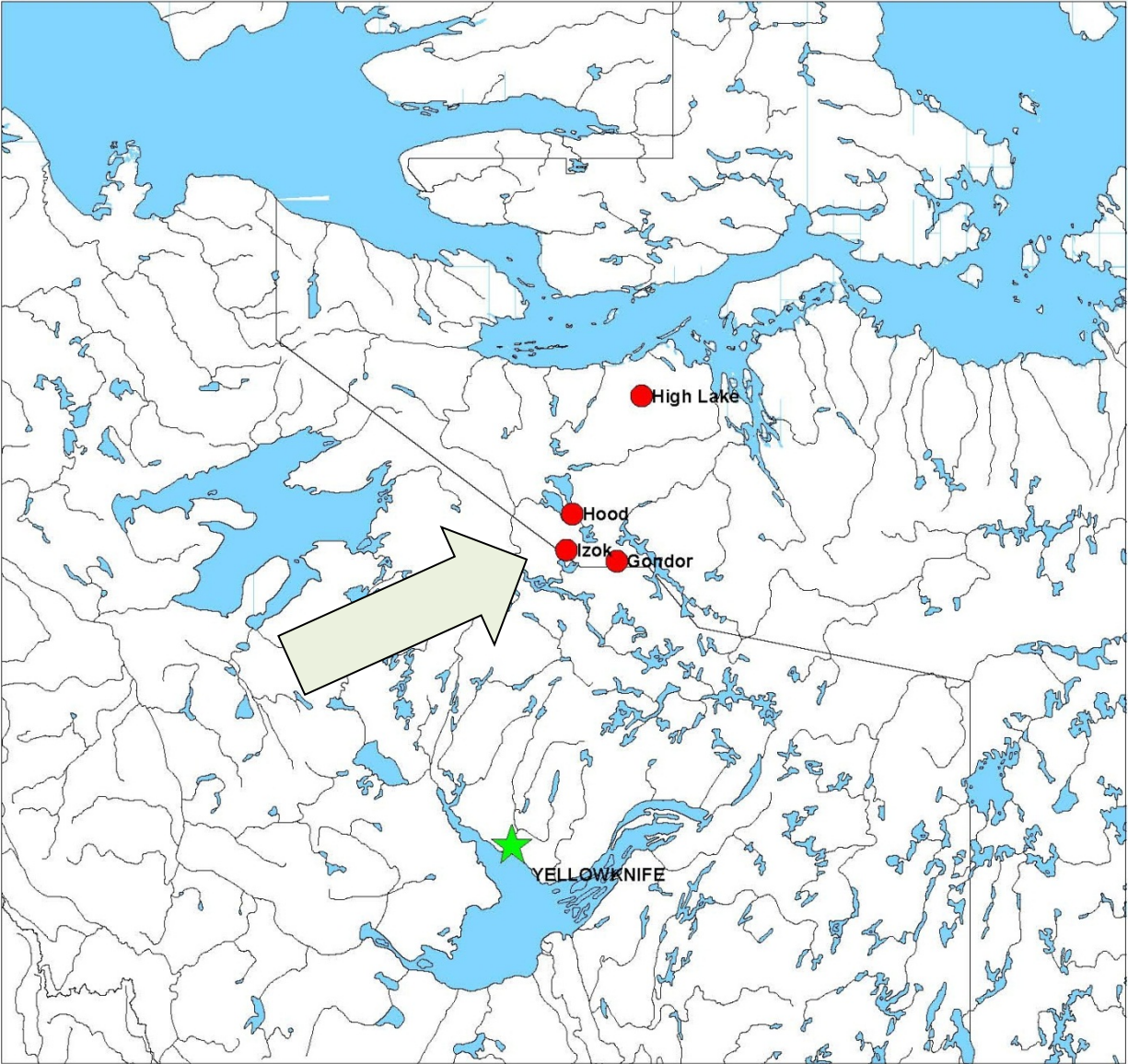
The Izok Lake property has been well documented and explored by various groups over its 40 year history. Although activity in the region is documented since the 1960's, the first significant discovery was made in the mid-1970's by Texas Gulf. Since then, Izok Lake has played host to a number of interested groups, including Minnova and Inmet prior to the involvement of Wolfden and the subsequent series of takeovers that led the property to MMG.




MMG continues to test for extensions of the Izok resource, and follow up geophysical targets with exploration drilling. Although under a series of different companies (Wolfden/Zinifex/Oz) exploration has been continually managed under more or less the same technical team since the acquisition of Wolfden by Zinifex in 2007. During this period there has been several drill campaigns aimed at expanding the resource. The intervening years saw continued surface mapping and geophysical testing of surrounding rock units in the hopes of identifying extensions. Included in this regional work were the adjacent historic showings of Gondor and Hood River, previously explored by Kennecott and Inmet in the 1970s and 80s. Both locations host VMS style mineralization in greenstone geology, and represent potential additional resources that due to their proximity to Izok, are of interest.

Izok's remote location and the logistical challenges involved have discouraged possible developers over the years and it remains one of the last undeveloped large high grade base metal deposits. The most recent published resource was completed under Zinifex and is estimated at 14.4 million tons of material grading 12.94%Zn, 2.52%Cu, and silver credits of 71 g/ton.

MMG intends to continue exploring in the area in the hopes of expanding the current resource at Izok.

The project is supported by a 50 man camp located on Ham Lake, approximately 5km North of Izok Lake where the mineral resource is located.



Legend	
	MMG Project Sites
	YellowKnife
	Rivers




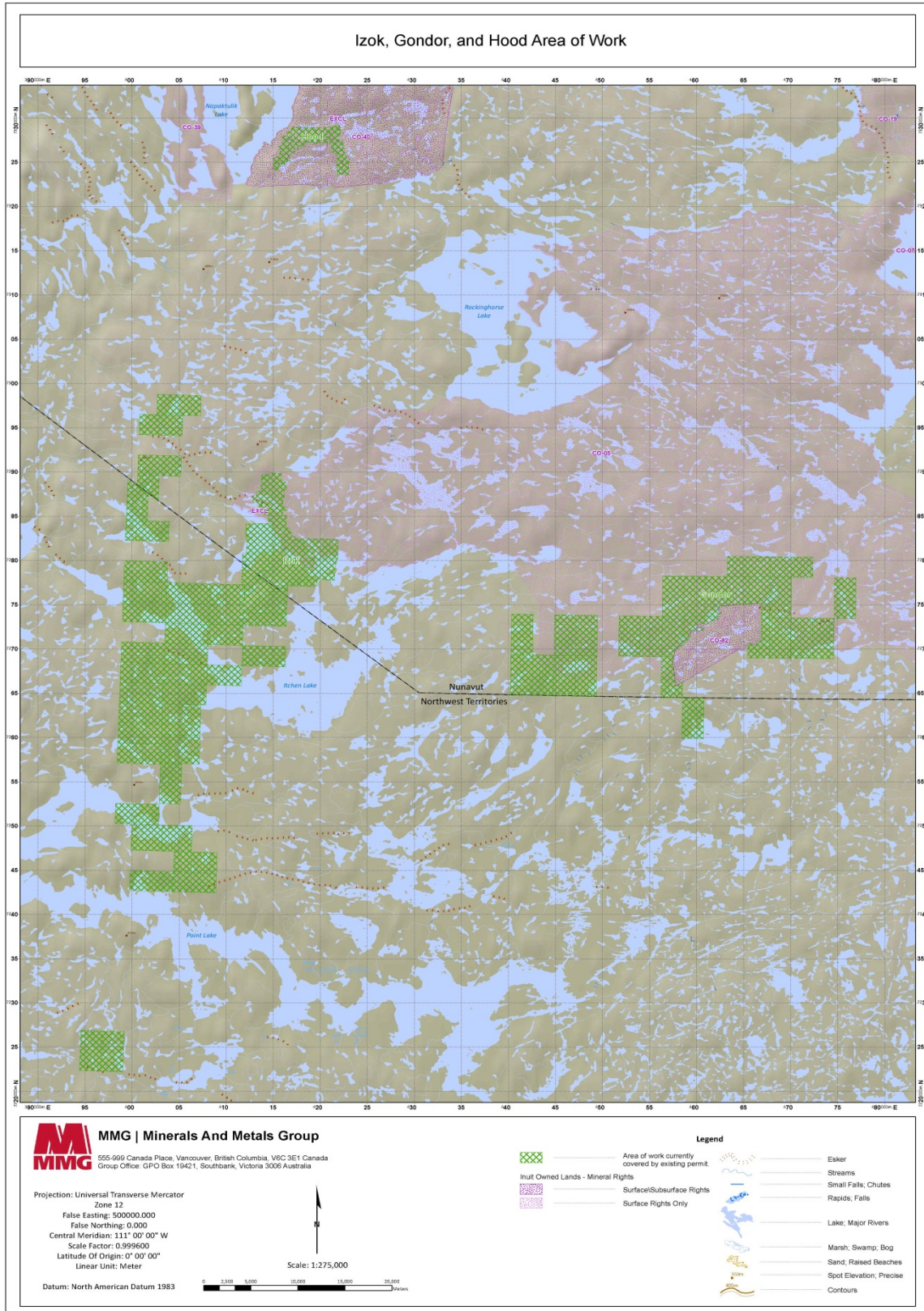
 <b>MMG</b>	
Date: 02-Aug-12	<h2>Project Location Map</h2>
Author: YeungC	
Office: Vancouver	
Drawing: 001	
Scale: 1 : 7,000,000	Projection: WGS84

Figure 2 : Permitted Areas of Work



## IZOK EXPLORATION PROGRAM 2012:

The 2012 exploration program at Izok included a diamond drilling campaign under MMG management, as well as surface and downhole geophysics. In addition to these technical aspects, environmental baseline work and engineering studies progressed in parallel. 60 diamond drill holes were completed by three drills over a 5 month period from April to August, representing a total of 8,677m. of drilling. 21 holes of the 2012 exploration drilling were carried out on ice over lake-bottom targets (see figure 2) beneath Izok Lake.

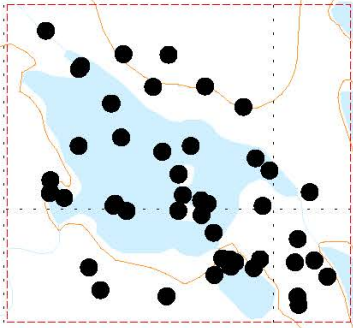
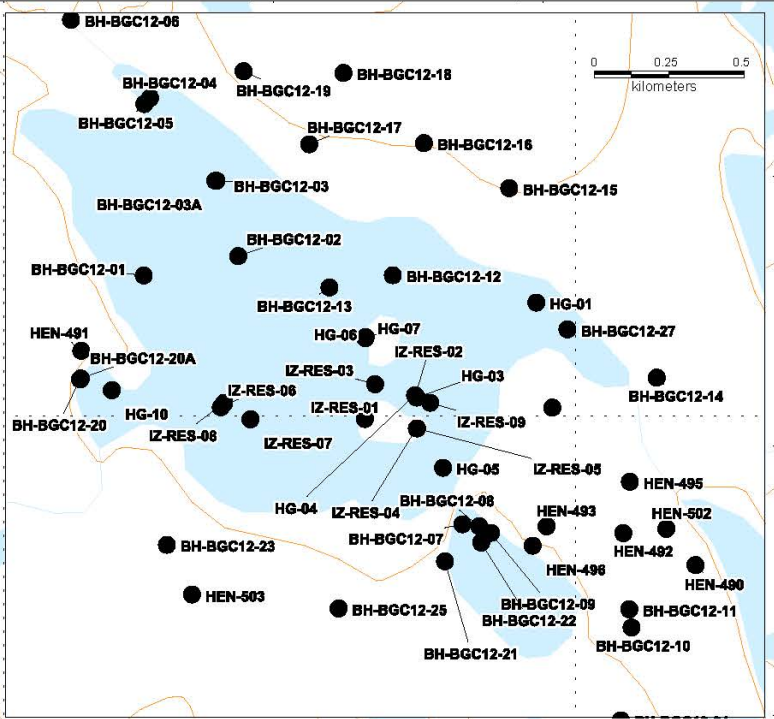
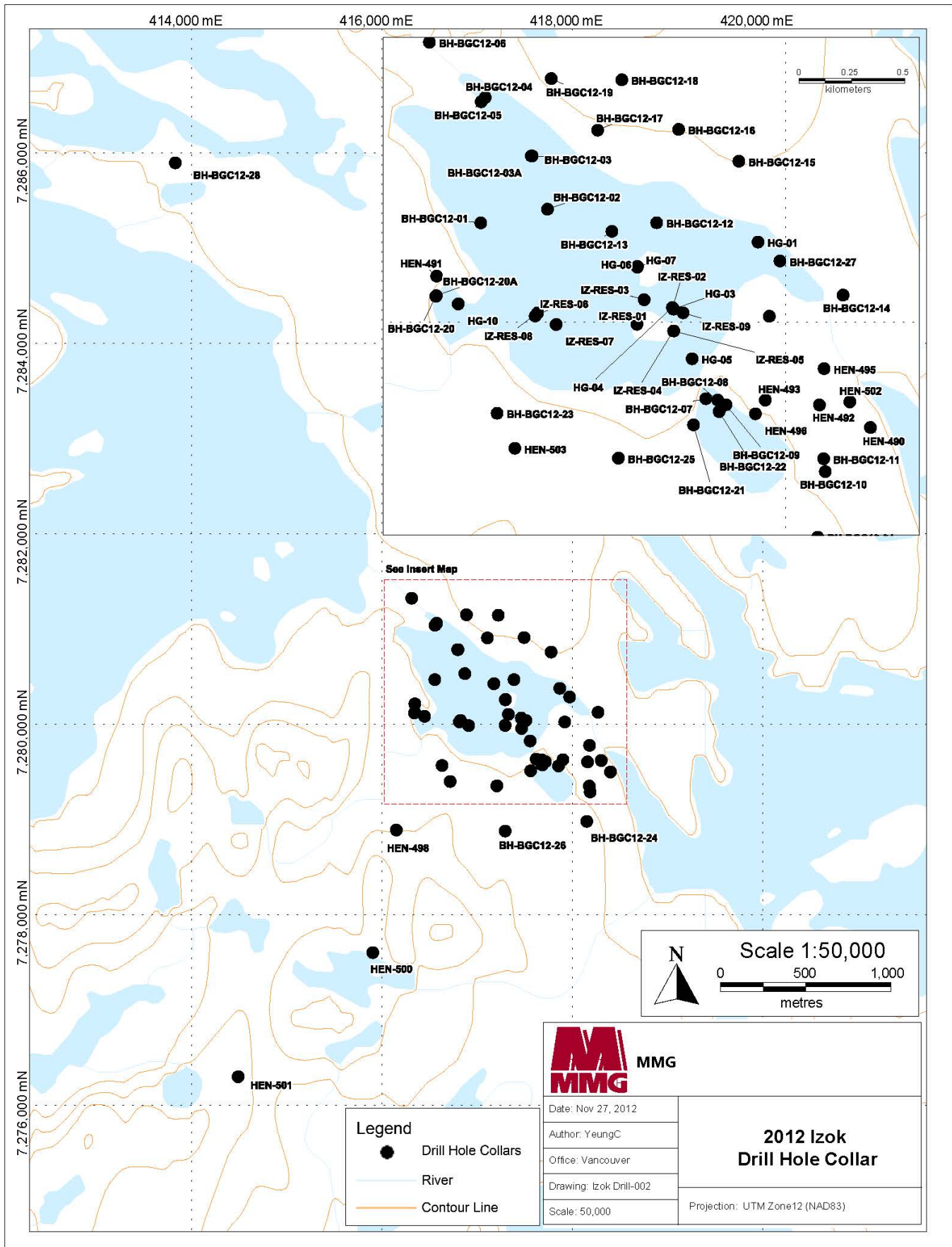
In addition to the diamond drilling program, 92 line km of UTEM and IP geophysical surveys were completed. Below is a table which summarizes the 2011 drilling on the Izok property which is followed by a surface plot of these locations.

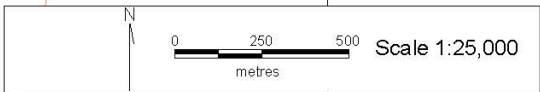
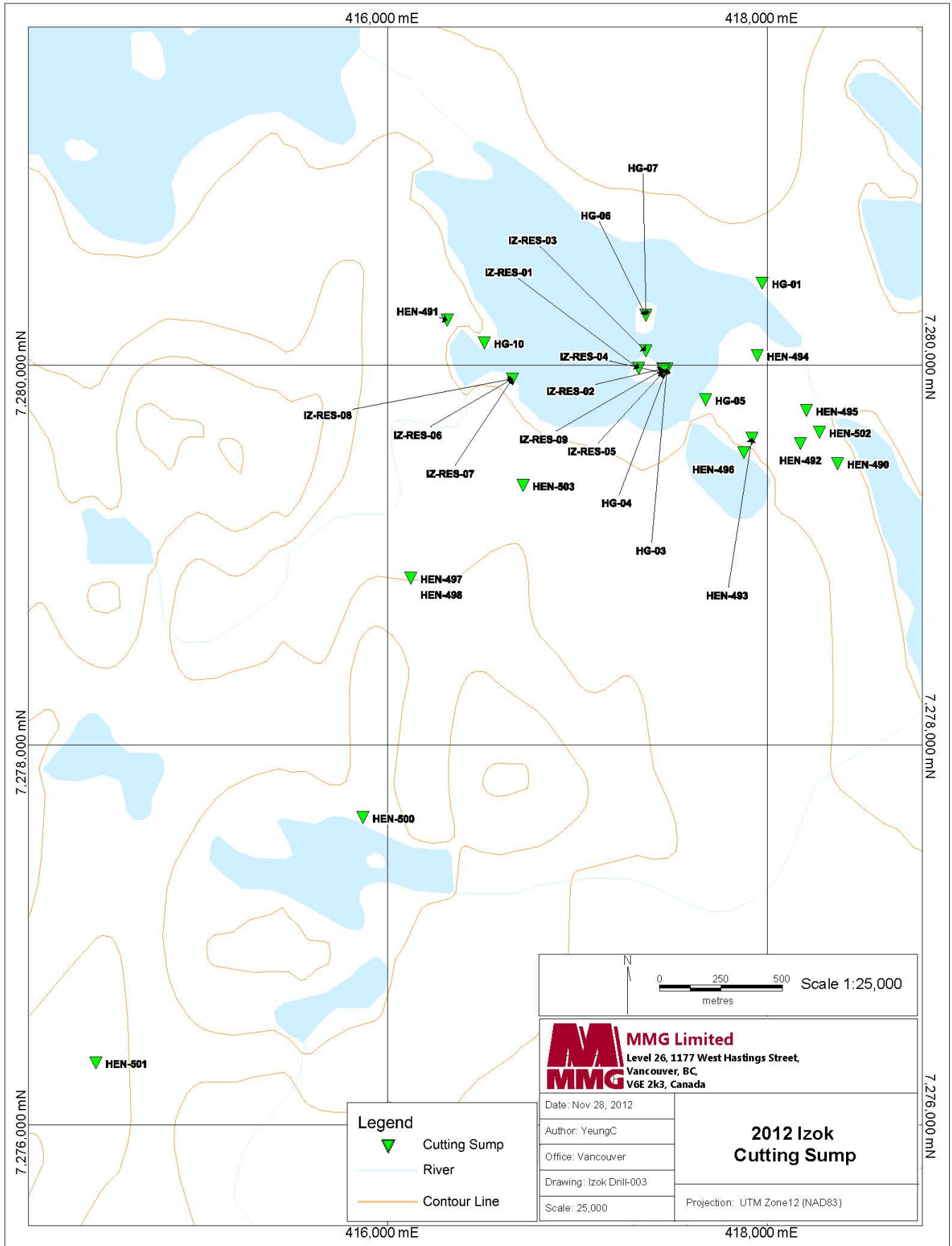
### 2012 Diamond Drilling Summary : Izok Project

Borehole ID	UTM Easting	UTM Northing	Sump Easting	Sump Northing	Depth (m)
BH-BGC12-01	416554.9	7280468.9	n/a	n/a	35.05
BH-BGC12-02	416871.5	7280533.6	n/a	n/a	30.48
BH-BGC12-03	416798.9	7280785.0	n/a	n/a	12.5
BH-BGC12-03A	416795.0	7280785.0	n/a	n/a	10.97
BH-BGC12-04	416575.9	7281061.6	n/a	n/a	24.68
BH-BGC12-05	416557.2	7281041.7	n/a	n/a	25.6
BH-BGC12-06	416311.6	7281324.0	n/a	n/a	15.24
BH-BGC12-07	417621.0	7279636.0	n/a	n/a	14.02
BH-BGC12-08	417677.7	7279629.5	n/a	n/a	29.25
BH-BGC12-09	417717.0	7279608.0	n/a	n/a	15.54
BH-BGC12-10	418187.4	7279291.1	n/a	n/a	14.04
BH-BGC12-11	418179.5	7279352.0	n/a	n/a	15.24
BH-BGC12-12	417388.3	7280469.7	n/a	n/a	27.72
BH-BGC12-13	417176.4	7280428.0	n/a	n/a	5.49
BH-BGC12-14	418271.3	7280126.3	n/a	n/a	32
BH-BGC12-15	417778.2	7280760.6	n/a	n/a	15.31
BH-BGC12-16	417492.7	7280911.7	n/a	n/a	15.34
BH-BGC12-17	417108.8	7280907.9	n/a	n/a	21.34
BH-BGC12-18	417222.9	7281146.5	n/a	n/a	15.24
BH-BGC12-19	416889.2	7281152.2	n/a	n/a	21.34
BH-BGC12-20	416342.2	7280121.4	n/a	n/a	6.1
BH-BGC12-20A	416344.0	7280124.0	n/a	n/a	9.85
BH-BGC12-21	417563.6	7279512.5	n/a	n/a	13.71
BH-BGC12-22	417683.9	7279575.4	n/a	n/a	18.59
BH-BGC12-23	416632.2	7279567.5	n/a	n/a	15.24
BH-BGC12-24	418151.1	7278980.8	n/a	n/a	15.24

BH-BGC12-25	417207.5	7279355.0	n/a	n/a	15.24
BH-BGC12-26	417294.1	7278880.8	n/a	n/a	21.23
BH-BGC12-27	417973.0	7280288.0	n/a	n/a	30.4
BH-BGC12-28	413830.5	7285896.9	n/a	n/a	13.7
HG-01	417868.5	7280377.9	417974	7280433	80
HG-03	417468.7	7280059.7	417472	7279980	26
HG-04	417463.3	7280067.6	417472	7279980	26
HG-05	417556.3	7279825.5	417675	7279819	95
HG-06	417297.7	7280262.5	417361	7280262.5	26
HG-07	417297.0	7280258.6	417361	7280262.5	77
HG-10	416448.7	7280085.1	416509	7280118	50
IZ-RES-01	417295.1	7279988.5	417322	7279983	189
IZ-RES-02	417465.0	7280067.0	417449	7279980	153
IZ-RES-03	417329.5	7280105.1	417361	7280075	47
IZ-RES-04	417468.8	7279957.3	417452	7279960	180
IZ-RES-05	417469.2	7279956.7	417452	7279960	180
IZ-RES-06	416813.1	7280027.9	416658	7279928	161
IZ-RES-07	416912.1	7279987.6	416658	7279928	87
IZ-RES-08	416824.7	7280042.6	416658	7279928	151
IZ-RES-09	417513.3	7280043.1	417454	7279977	131.5
HEN-490	418401.5	7279499.5	418370	7279483	702
HEN-491	416346.4	7280216.0	416314	7280237	315
HEN-492	418160.0	7279606.8	418175	7279587	726
HEN-493	417902.4	7279629.4	417920	7279615	720
HEN-494	417921.7	7280026.3	417947	7280052	339
HEN-495	418181.5	7279778.8	418206	7279762	639
HEN-496	417856.4	7279564.8	417877	7279540	591
HEN-497	416151.4	7278890.9	416122	7278879	123
HEN-498	416151.4	7278890.9	416122	7278879	207
HEN-500	415904.5	7277602.7	415870	7277617	519
HEN-501	414490.6	7276299.6	414463	7276326	483
HEN-502	418304.2	7279621.0	418275	7279647	573
HEN-503	416716.6	7279401.3	416714	7279367	525







**MMG Limited**  
 Level 26, 1177 West Hastings Street,  
 Vancouver, BC,  
 V6E 2k3, Canada

Date: Nov 28, 2012  
 Author: YeungC  
 Office: Vancouver  
 Drawing: Izok Drill-003  
 Scale: 25,000

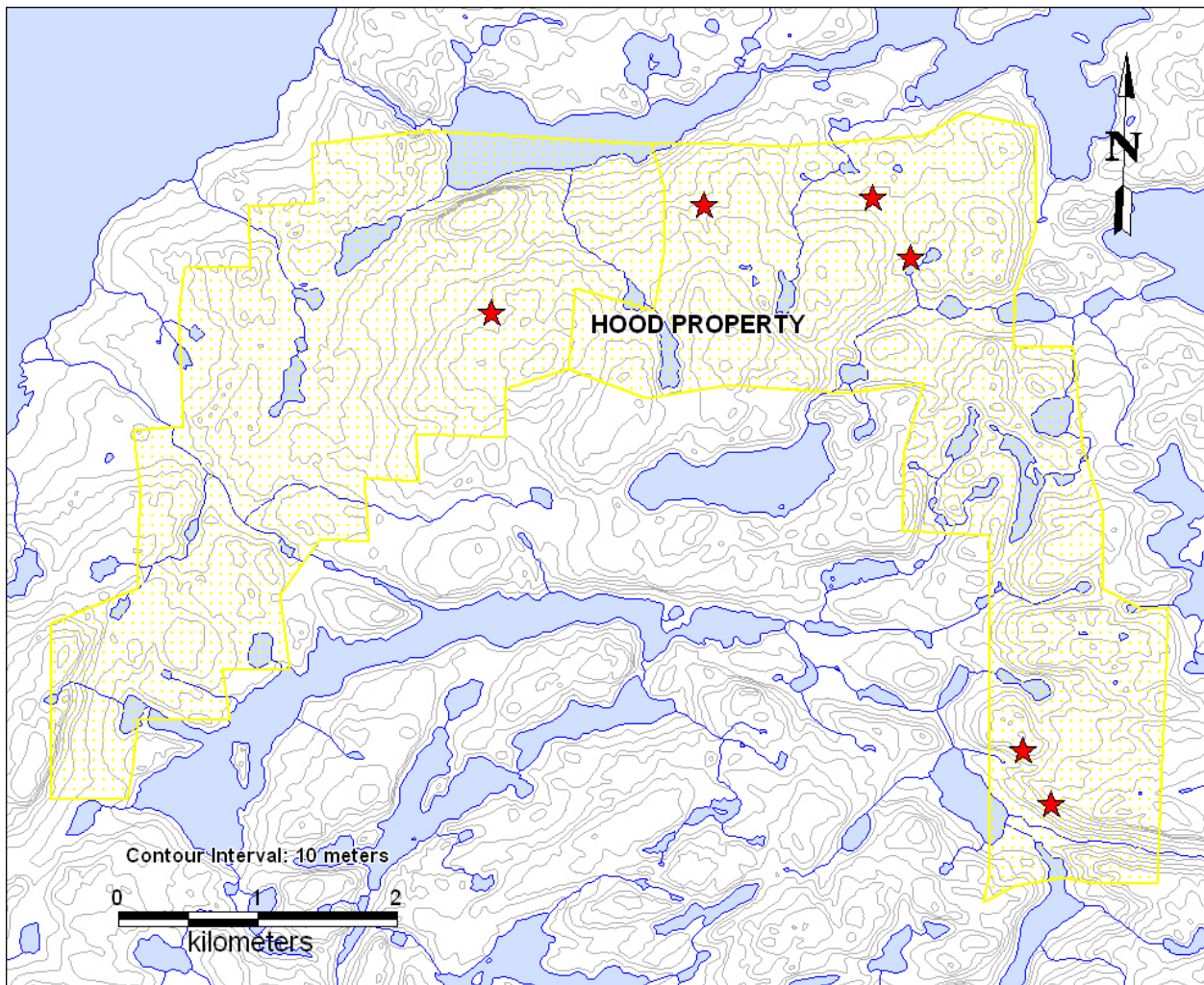
**2012 Izok Cutting Sump**  
 Projection: UTM Zone12 (NAD83)

**Legend**  
 ▼ Cutting Sump  
 River  
 Contour Line

## 2012 HOOD DRILL PROGRAM:

Exploration drilling on the Hood showings was carried out over a period of 4 months from June through to August. A total of 15 holes were completed for a total of just over 6000m of core drilling. All drilling was carried out on land by a single diamond drill, and the campaign was supported by the Izok camp, with crews travelling daily by helicopter the 40km north to Hood. In addition to drilling, 92.7 line km of electromagnetic geophysical surveys were carried out in order to identify new potential targets for future exploration. A table is provided with location coordinates for Hood drill collars and their corresponding cuttings sumps and water source locations. In addition, area maps are also provided.

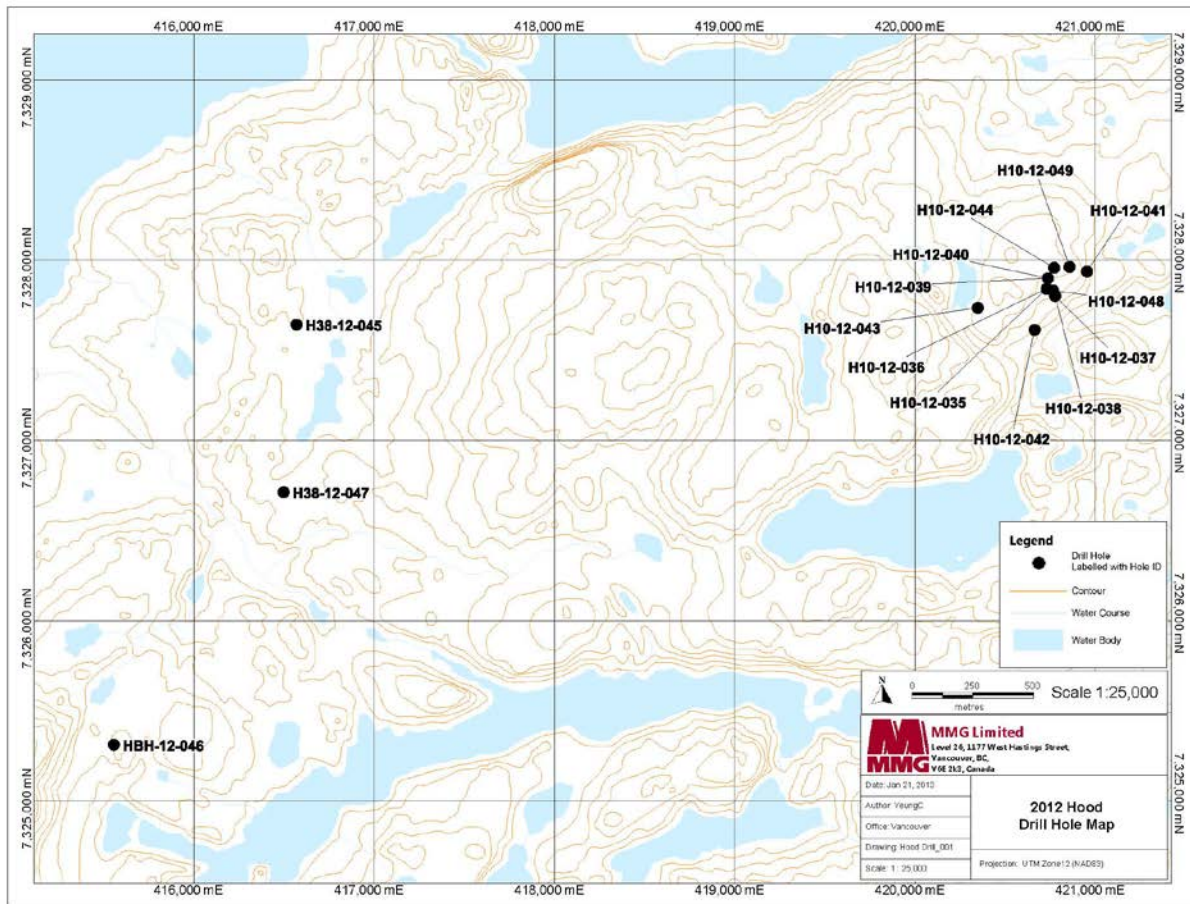
### Hood Property Map:



### Hood 2012 Drill Hole and Cuttings Sump Locations:

Drill Hole ID	UTM Easting	UTM Northing	Depth (m)	Sump Easting	Sump Northing
H10-12-035	420728.8	7327841.6	342	420783.0	7327791.0
H10-12-036	420728.8	7327841.6	432	420783.0	7327791.0
H10-12-037	420775.6	7327801.6	480	420730.0	7327853.0
H10-12-038	420776.2	7327801.6	486	420730.0	7327853.0
H10-12-039	420737.5	7327900	360	420719.0	7327929.0
H10-12-040	420737.5	7327900	507	420719.0	7327929.0
H10-12-041	420953.3	7327937.6	192	420653.0	7327641.0
H10-12-042	420661.8	7327614.4	405	420957.0	7327926.0
H10-12-043	420347.8	7327736.8	426	420378.0	7327735.0
H10-12-044	420771.0	7327958.4	520.4	420773.0	7327956.0
H10-12-048	420764.8	7327832.8	384	N/A	N/A
H10-12-049	420857.5	7327963.2	647.65	420963	7327927
H38-12-045	416569.0	7327643.2	285	416564	7327643
H38-12-047	416498.1	7326714.4	348	416498	7326712

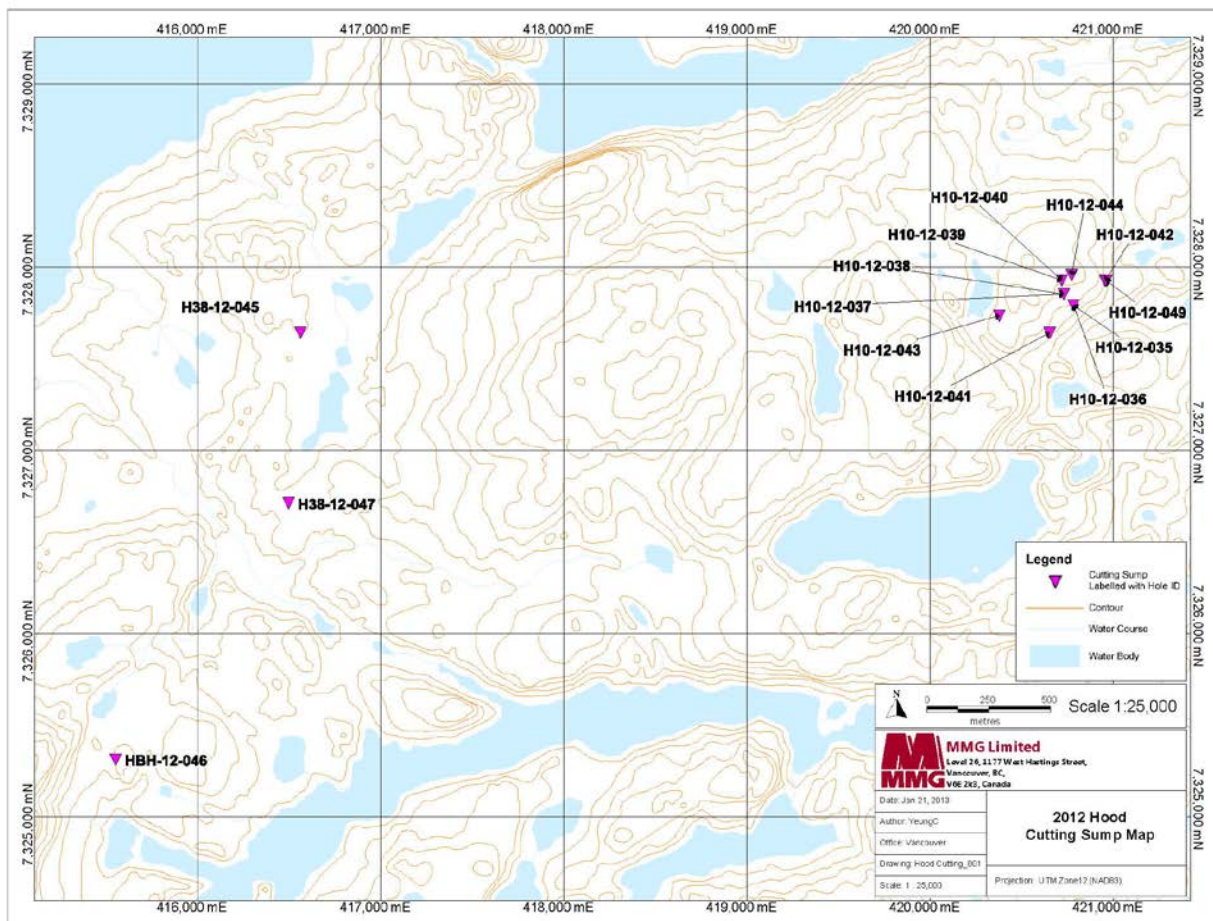
### Hood Drill Collar Location Map:



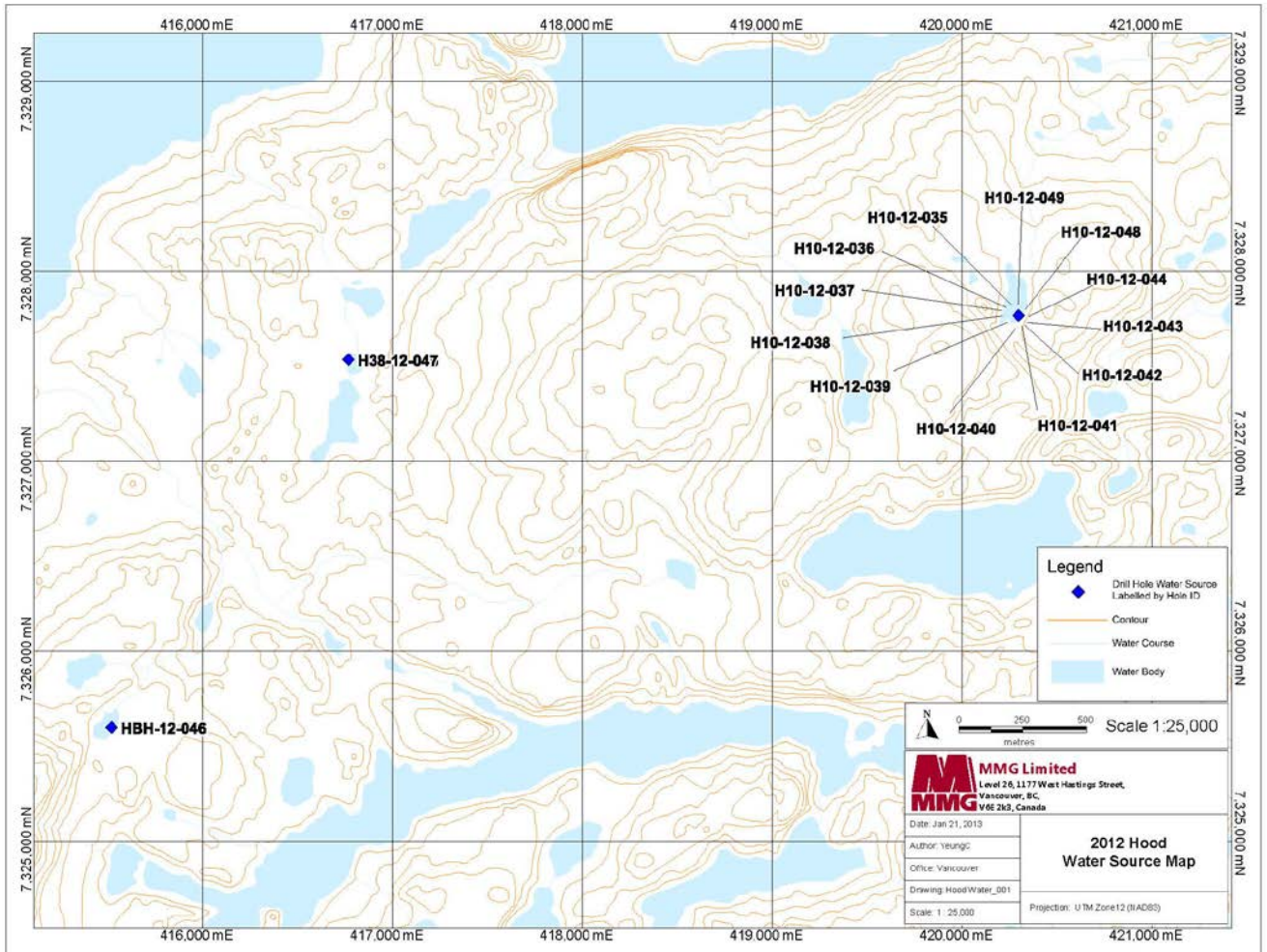
### Hood 2012 Water Source Locations for Drilling:

Drill Hole ID	Water Source	UTM Easting	UTM Northing
H10-12-035	Wick Lake	420298	7327768
H10-12-036	Wick Lake	420298	7327768
H10-12-037	Wick Lake	420298	7327768
H10-12-038	Wick Lake	420298	7327768
H10-12-039	Wick Lake	420298	7327768
H10-12-040	Wick Lake	420298	7327768
H10-12-041	Wick Lake	420298	7327768
H10-12-042	Wick Lake	420298	7327768
H10-12-043	Wick Lake	420298	7327768
H10-12-044	Wick Lake	420298	7327768
H10-12-048	Wick Lake	420298	7327768
H10-12-049	Wick Lake	420298	7327768
H38-12-045	Pongo Lake	416768	7327535
H38-12-047	Pongo Lake	416768	7327535

### Hood Drill Cuttings Sump Location Map:



# Hood Water Source Location Map:



## **PLANNED EXPLORATION PROGRAM 2013:**

The proposed exploration program for the 2013 field season will be notably reduced. A single diamond drill crew will complete an engineering hole over the Izok resource with the intention of installing an instrument to measure underground conditions, and then move north in order to continue to test the limits of the Hood mineralization. In total some 3000m of drilling are planned at Hood during the summer months. Surface prospecting, mapping and sampling will follow up regional targets identified from airborne surveys flown in late 2012 along the “Izok Corridor”. Some of these may see more detailed surface geophysics in order to more accurately interpret them. The company’s goal continues to be adding tonnage to the existing resources currently identified at Izok/Hood, and along the “Izok Corridor” heading north towards High Lake.

## **ENVIRONMENTAL:**

An extensive environmental program was completed during 2012, primarily with regard to baseline data collection in all disciplines. Wind direction and speed, temperature, and precipitation data is routinely monitored during field operations. Water usage volumes for domestic and industrial purposes are recorded for the annual water board report.

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. Analysis results are included in the annual report to the Nunavut Water Board. Drill cuttings are settled out and collected from this system and deposited in natural sumps on land to prevent contamination. Sump locations are normally chosen in rocky areas where there are cavities between frost heaved rocks or some other form of natural depression.

Baseline data gathering in support of the advances towards feasibility of the project will continue to ramp up in 2013. Mammal and bird counts, fisheries studies, vegetation work, archaeological surveys, and water and air quality work are all planned in association with development work and under supervision of Scott Trussler.

An annual review of the Spill Contingency Plan is conducted, modifications are made if necessary, and the document is included in the appendices of the annual report on an annual basis.

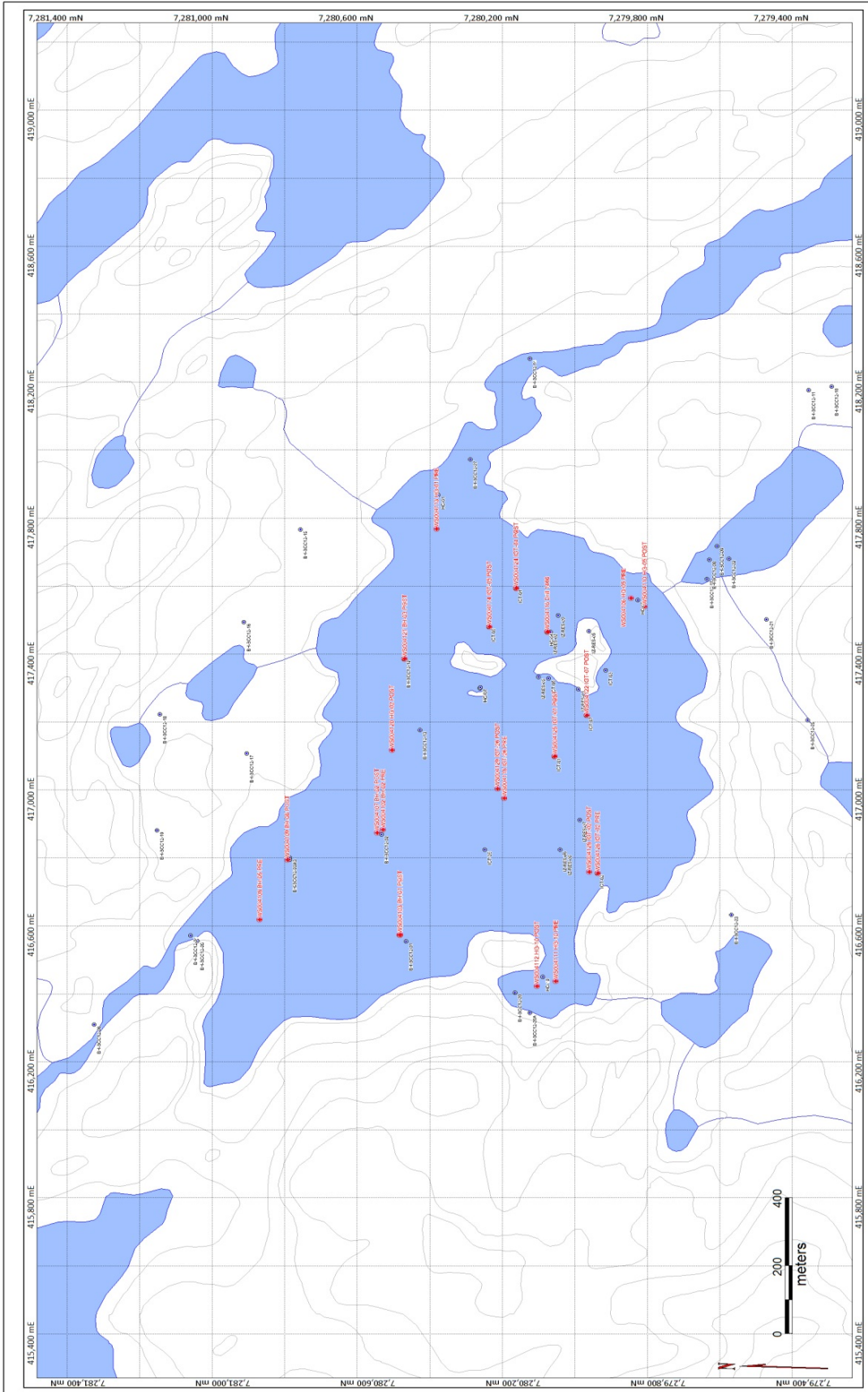
The table below shows water sampling from winter lake-ice drilling locations, the corresponding laboratory results, and photos are also included in the appendices.

**Table IV : Water Testing related to Winter Lake-ice Drilling**

Sample_ID	Sample_Type	UTM_East	UTM_North	Date
WS004101	WATER	416575	7280484	27-Mar-12
WS004102	WATER	416884	7280531	29-Mar-12
WS004103	WATER	416574	7280485	31-Mar-12
WS004106	WATER	416565	7279848	04-Apr-12
WS004107	WATER	416875	7280548	05-Apr-12
WS004108	WATER	416620	7280871	05-Apr-12
WS004109	WATER	416795	7280795	07-Apr-12
WS004110	WATER	417540	7279810	09-Apr-12
WS004111	WATER	416438	7280055	09-Apr-12
WS004112	WATER	416423	7280107	11-Apr-12
WS004113	WATER	417769	7280384	11-Apr-12
WS004114	WATER	417480	7280238	13-Apr-12
WS004115	WATER	417466	7280078	13-Apr-12
WS004116	WATER	417466	7280078	18-Apr-12
WS004117	WATER	417387	7280472	18-Apr-12
WS004118	WATER	416977	7280196	18-Apr-12
WS004119	WATER	417099	7280058	18-Apr-12
WS004120	WATER	417118	7280507	18-Apr-12
WS004121	WATER	417387	7280472	19-Apr-12
WS004122	WATER	417220	7279969	19-Apr-12
WS004123	WATER	417595	7280164	19-Apr-12
WS004124	WATER	417595	7280164	22-Apr-12
WS004125	WATER	417099	7280058	25-Apr-12
WS004126	WATER	416756	7279939	30-Apr-12
WS004128	WATER	416759	7279963	05-May-12
WS004129	WATER	417004	7280216	05-May-12

See map (Figure 4 : Water Testing Sites for Winter Drilling) on following page for relative locations of above sample sites





**M** **MMAC** **MMAC**

Blank Project: 020K

**Development Drilling & Pre and Post Water Samples**

Location: F15 Date: 15 May 2012  
 Drawn By: [Name]  
 Checked By: [Name]  
 Scale: 1:50,000

Sample ID	Sample Type	Eastings (mE)	Northings (mN)	Collection Date	Sample ID	Sample Type	Eastings (mE)	Northings (mN)	Collection Date
15S000101	Water	416,600	7,280,600	15/05/2012	15S000101	Water	417,000	7,280,600	15/05/2012
15S000102	Water	416,600	7,280,600	15/05/2012	15S000102	Water	417,000	7,280,600	15/05/2012
15S000103	Water	416,600	7,280,600	15/05/2012	15S000103	Water	417,000	7,280,600	15/05/2012
15S000104	Water	416,600	7,280,600	15/05/2012	15S000104	Water	417,000	7,280,600	15/05/2012
15S000105	Water	416,600	7,280,600	15/05/2012	15S000105	Water	417,000	7,280,600	15/05/2012
15S000106	Water	416,600	7,280,600	15/05/2012	15S000106	Water	417,000	7,280,600	15/05/2012
15S000107	Water	416,600	7,280,600	15/05/2012	15S000107	Water	417,000	7,280,600	15/05/2012
15S000108	Water	416,600	7,280,600	15/05/2012	15S000108	Water	417,000	7,280,600	15/05/2012
15S000109	Water	416,600	7,280,600	15/05/2012	15S000109	Water	417,000	7,280,600	15/05/2012
15S000110	Water	416,600	7,280,600	15/05/2012	15S000110	Water	417,000	7,280,600	15/05/2012
15S000111	Water	416,600	7,280,600	15/05/2012	15S000111	Water	417,000	7,280,600	15/05/2012
15S000112	Water	416,600	7,280,600	15/05/2012	15S000112	Water	417,000	7,280,600	15/05/2012

**Legend**

- Water Sample
- 2012 Closed Off-Road Development
- Contour
- Stream
- Tram Body

## **WATER USAGE:**

Water usage is divided into Industrial and Domestic applications, and is monitored. Water usage reporting is included in the appendices. The project is presently permitted for 100m<sup>3</sup> per day total volume for both applications. On average the Camp consumes roughly 4m<sup>3</sup> per day during capacity occupancy. During the 2012 field season the camp was occupied from March through to September. It ran at full capacity of 45 men for roughly 5 months, from April until August. The Ham Lake camp draws its water from Ham Lake by means of a submersible electric pump. The intake on the pump is screened.

Industrial usage is limited to those activities associated with drilling. The supply pumps used by Drilling Contractors are low volume, high lift capacity pumps rated to volumes of 6 Gallons per minute. Water meters installed on these pumps for the first time this season gave widely variable and apparently inaccurate readings. Usage volumes varied from 20m<sup>3</sup> to over 100m<sup>3</sup> per drill per day. Investigation into the reporting error is ongoing, however water volumes have been reported as recorded at the request of AANDC. Almost all of the water for used for 2012 drilling came from Izok Lake. Regional exploration drilling made use of the closest adequate sources.

## **WILDLIFE:**

Wildlife encounters and sightings during operations are documented by field personnel. A copy of the log is 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. A copy of the current Wildlife Management Plan for MMGs operations in the Slave is included in the Appendices.

## **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, and Janet Kadlun, who is his assistant. Their primary job is to keep local community members informed of our exploration activities, and addresses concerns and questions they may have on behalf of the company. They are also instrumental in the hiring of local staff, aiding applicants in resume preparation and conducting initial interviews on our behalf. A list of temporary employees from local communities is included below. Aside from Kitchen and Camp Maintenance positions, the Environmental programs also employed locals as field assistants and guides.

Table V : Local Employment

Employee Name	Community	Mandays
Simon Hala	Kugluktuk	11
Gibson Kaosoni	Cambridge Bay	91
Greg Ehaloak	Cambridge Bay	29
Eileen Katiak	Cambridge Bay / Edmonton	79
Yvonne Miyok	Cambridge Bay	71
Helen	Kugluktuk	12
Colin Niptinatiak	Kugluktuk	12
Kevin Klengenber	Kugluktuk	44
George Taptuna	Cambridge Bay	6
Pauline Anablak	Kugluktuk	11

#### **AIR OPERATIONS:**

In order to facilitate the seasons drill program, Izok was opened in March of 2011 and an ice airstrip constructed to receive First Air’s C-130 Hercules to mobilize equipment and fuel. The Arctic Sunwest C5 Buffalo made runs into the all-weather airstrip at Izok with bulk fuel roughly every two to three weeks during April and May. Weekly crew changes along with food re-supply and equipment was achieved with the Dash7 also operated by Air Tindi. Occasionally twin otters were employed.

Throughout field operations, a helicopter was based onsite that made local flights daily in order to allow for drill shift changes, drill support/moves, and surface work. 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 seasonal migration paths or calving grounds, activity is diverted or suspended.

A table showing 2012 air operations conducted out of the Izok site is included below:

Table VI : 2012 Air Operations

<b>MONTH</b>	<b>FIXED WING FLIGHTS</b>	<b>HELICOPTER HOURS</b>
March	22	18
April	41	79.2
May	28	244
June	25	337.5
July	19	393.9
August	26	292.1
September	2	

**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. Cleanup around the Izok camp location is continuous and ongoing, with the removal of waste, unused material and equipment. A cleanup at the historic ‘Hood Camp’ (originally built by Falconbridge) location north of Izok was undertaken in July and August of 2011. A total of 4 wooden frame tents and 2 plywood clad buildings were dismantled and removed from the site. Some antiquated fuel drums were flown back to Izok for use in the incinerator, and another 160 empty drums were removed from the site, and flown to Yellowknife. Several sealed drums of non-burnable waste were removed for transport back to Yellowknife and proper disposal with KBL.

**WASTE REMOVAL:**

All burnable waste is incinerated on site by a diesel powered forced air furnace. Waste that is not approved for burning, or that is identified as recyclable is removed from the waste stream. 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 transferred over to KBL Environmental for appropriate disposal. Transport and final disposal

records from KBL have been included in the appendices. Waste that involves petroleum or other chemical products is transported by KBL to Edmonton for disposal in a certified facility. Human waste is collected daily from ‘pacto’ style toilets and incinerated on site. The updated Waste Management Plan for the Slave Project sites is included in the appendices.

### **SPILL CONTINGENCY AND ABANDONMENT AND RESTORATION:**

The Spill Contingency and Abandonment and Restoration Plans presented to AANDC and the NIRB with the existing Land Use Permit (LUP#N2012C0005) for Izok/Hood/Gondor, undergo annual review and modification. The Plans have been included in submittals to regulatory agencies. As the methodology and scope of Exploration activity remains largely unchanged, so too do the plans. The updated Spill Contingency and Abandonment and Restoration Plans have been included in the appendices.

### **SITE INSPECTIONS:**

Visual site inspections of the Izok project were conducted by Eva Paul and Melissa Joy of Aboriginal Affairs and Northern Development (also acting on behalf of the Nunavut Water Board). A copy of the AANDC inspection report is included in the Appendices with dates and findings. Also included is a copy of their follow-up report. Several observations were recorded and suggestions and comments have been taken into consideration.


Luigi Torretti of the Kitikmeot Inuit Association conducted an inspection in August, for which to date we have not yet received a copy of the report. In addition, Tim Morton and Patrick Kramers of Environment Canada (DFO) also conducted an inspection. Follow up email communications to this visit seem to have answered the resulting questions but an inspection report has yet to be received.

### **PERMITTING:**

The Land Use Permit and Water Licence associated with the Izok Property underwent renewal in 2012. A single LUP (N2012C0005) now serves to cover both the Izok and the Hood/Gondor projects.

The renewal of the Water License # 2BE – IZO 0712 has been approved. The previous permit expired December 31<sup>st</sup>, 2012. It’s worth noting that the areas of interest and the scope of work being carried out remain unchanged. Copies of current operating permits are included in the Appendices.

# APPENDICES



**Indian and Northern Affairs Canada**  
Affaires indiennes et du Nord Canada

### INDUSTRIAL WATER USE INSPECTION REPORT

DATE: July 3, 2012 COMPANY REP: Greg Duso  
 LICENSEE: 2RE-1700712 LICENCE #: MNG

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**WATER SUPPLY**

Source: Nam Lake Quantity Used: Digitally tracked Meter Rdg.: \_\_\_\_\_

Indicate: <b>A - Acceptable</b>		<b>U - Unacceptable</b>		<b>N/A - Not Applicable</b>	
Intake Facilities	<u>A</u>	Storage Structures	<u>A</u>	Treatment Systems	<u>A</u>
Flow Meas. Device	<u>A</u>	Conveyance Lines	<u>A</u>	Pumping Stations	<u>A</u>
				Recycling Modifications	<u>N/A</u>

Comments: Water supply tested in the spring; safe to drink although MNG continues to supply bottled H<sub>2</sub>O. Drills equipped with flow meters this spring. Daily volumes in excess of 100 m<sup>3</sup>. (Cont...) see p. 2.

**WASTE DISPOSAL**

Tailings:	Tailings Pond <input type="checkbox"/>	Natural Lake <input type="checkbox"/>	Underground <input type="checkbox"/>	<u>slump</u> <input checked="" type="checkbox"/>
Sewage:	Sewage Treat. System <input type="checkbox"/>	Tailings Pond <input type="checkbox"/>	Natural Water Body <input type="checkbox"/>	
	Continuous Discharge <input type="checkbox"/>	Inter. Dischg. <input type="checkbox"/>		
Solid Waste:	Open Dump <input type="checkbox"/>	Landfill <input type="checkbox"/>	Incinerate <input checked="" type="checkbox"/>	Underground <input type="checkbox"/>
			Burn & Bury <input type="checkbox"/>	

Indicate: <b>A - Acceptable</b>		<b>U - Unacceptable</b>		<b>N/A - Not Applicable</b>	
Discharge Quality	<u>A</u>	Conveyance Lines	<u>N/A</u>	Disch. Meas. Dev.	<u>N/A</u>
Decant Structures	<u>A</u>	Pond Treatment	<u>N/A</u>	Dams, Dykes	<u>N/A</u>
Dyke Inspections	<u>N/A</u>	Runoff Diversion	<u>N/A</u>	Erosion	<u>A</u>
				Freeboard	<u>N/A</u>
				Seepages	<u>N/A</u>
				Spills	<u>U</u>

Effluent Discharge Rate: N/A Samples Collected: Potable - by water intake.

Comments: incinerator management - plastics and metals should not be burned. Waste management (sorting) should occur prior to incineration. Open burning is not permitted under the licence. (see p. 7.)

**GENERAL CONDITIONS**

Indicate: <b>A - Acceptable</b>		<b>U - Unacceptable</b>		<b>N/A - Not Applicable</b>	
Ore & Waste Rock Stockpiles	<u>N/A</u>	Records & Reporting	<u>A</u>	Surv. Net. Prog.	<u>N/A</u>
Geotechnical Inspection	<u>N/A</u>	Posting, Signage	<u>A</u>	Contingency Plan	<u>A</u>
Restoration Activities	<u>A</u>	New Construction	<u>N/A</u>	Fuel Storage	<u>U</u>
Mine Water Discharge	<u>A</u>	Chemical Storage	<u>A</u>	Annual Report	<u>A</u>

Comments: Fuel Management - Liners are needed under fuel transfer areas (bowzers, storage tanks, bulk drums etc.) within 30 days from today. Fuel drums at drill sites should be positioned (see p. 2)

Violations of Act or Licence: Failure to install liner as per last inspection. Water usage in excess of licensed quantity. Open burning.

General Comments: No major issues noted, mostly the implementation of better practices. Amendments to licence will be required and renewal prior to Dec 2012.

Page 2 attached  Yes  No

PROJECT MANAGER.  
Licensee Representative's Title

G. Duso  
Licensee Representative's Signature

Eva Paul  
Inspector's Name

[Signature]  
Inspector's Signature

Indian and Northern  
Affairs CanadaAffaires Indiennes  
et du Nord Canada

Date: July 3, 2012

## ENVIRONMENTAL INSPECTION REPORT

Page 2

Permit/License# 202-1200712

(Water supply) Shallow water body chosen at drill 1466. Greg directed drillers to choose a larger water source.

(Waste disposal) Hazardous waste shipping manifests were presented and in good order. Incinerator management plan should be reviewed. Ensure it is working properly - burned remains still smelled of food.

(fuel) so there is no risk of rolling downhill. (drill 1493). Barrels at Hood Camp help refuelling location should be in containment. Leaking drum was found at Hood and was righted. Daily inspections of all fuel caches should be implemented. Liner is also needed in maintenance shop (30 days).


→ Liners in fuel transfer areas, <sup>bulk fuel storage areas,</sup> and maintenance shop within 30 days and a follow up report with photos to be submitted to Inspector.


→ Open burning will not occur without proper authorizations

→ Sorting of waste prior to incineration is recommended, and an incinerator management plan should be prepared and submitted with annual report.


→ Licence needs to be amended to accurately capture activities at Hood + Gendor. Water quantity must be amended.

A follow-up report will follow after the field season and upon review of inspection photos and notes.

  
Representative's Signature

  
Inspector's Signature

RMO Initials

 PROJECT MANAGER  
Representative's Title

District Mgr. Initials

Copy 1 - Inspector's File

Copy 2 - Field Rep.

Copy 3 - Permittee Head O.

Copy 4 - District



Appendix II : 2012 Permitting



Aboriginal Affairs and  
Northern Development Canada

Affaires autochtones et  
Développement du Nord Canada

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 1<sup>st</sup>, 2012

MMG Resources Inc.  
Suite 55-999 Canada Place  
Vancouver, BC  
V6C 3E1

Dear Theodore Muraro:

**Re: Land Use Permit #N2012C0005**  
**Type of Operation: Mining (Exploration)**  
**Location: Izok Lake Area, Kitikmeot, NU, NTS 76E & 86H**

Enclosed is your copy of Land Use permit number N2012C0005 authorizing your project as described in your application dated December 20<sup>th</sup>, 2011, received by this office January 24<sup>th</sup>, 2012.

Your application has received a wide distribution to other Federal departments, Government of the Nunavut departments, communities in the area of your operation and concerned Inuit groups. In distributing your application the Nunavut Impact Review Board (NIRB) sought comments from these various agencies based on their area of expertise that will help ensure minimum negative impact on the environment. The issuance of this permit indicates that as a result of the NIRB environmental screening process it was decided that the potentially adverse environmental effects that may be caused by your proposal are mitigable with known technology and are not significant. The terms and conditions in the permit will, in our opinion, provide the necessary protection to the environment.

Please ensure that you adhere to the operating conditions annexed to your permit. Should you have any questions regarding any conditions of this permit, please contact Tracey McCaie at (867) 975-4283 or email [landsmining@inac.gc.ca](mailto:landsmining@inac.gc.ca).

Sincerely,

Tracey McCaie  
Land Administration Specialist

cc: Manager, Field Operations  
RMO - Kitikmeot  
NIRB  
CIDMS #509606



Indian and Northern Affairs Canada / Affaires indiennes et du Nord Canada

**LAND USE PERMIT  
NORTHERN AFFAIRS PROGRAM**

**PERMIS D'UTILISATION DES TERRES  
PROGRAMME DES AFFAIRES DU NORD**

Permit Class - Permis Catégorie <b>A</b>	Permit No - NE de permis <b>N2012C0005</b>
---	---

Subject to the Territorial Land Use Regulations and the terms and conditions in this permit, authority is hereby granted to:

Sous réserve du Règlement sur l'utilisation des terres territoriales et des conditions de ce permis:

**MMG Resources Inc.**  
Permittee - Détenteur de permis

To proceed with the land use operation described in the application of:

Est autorisé à entreprendre les travaux d'exploitation des terres décrits dans la demande de permis du:

Signature <b>Theodore Muraro</b>	Date <b>March 1<sup>st</sup>, 2012</b>
Type of Land Use Operation - Genre de travaux d'exploitation des terres <b>Mining (Exploration)</b>	
Location - Emplacement <b>Izok Lake Area, Kitikmeot, NU, NTS76E &amp; 86H</b>	

This permit may be assigned, extended, discontinued, suspended or cancelled pursuant to the Territorial Land Use Regulations.

Ce permis peut faire l'objet d'une cession, d'une prolongation d'une cessation d'une suspension ou d'une annulation, en vertu du Règlement sur l'utilisation des terres territoriales.

Dated at  
Date à Iqaluit

Engineer  
Ingénieur *Theodore Muraro*

This  
Ce 1<sup>st</sup> Day of  
jour de March, 2012

Commencement Date  
Date du début des travaux March 1st, 2012      Expiry Date  
Date d'achèvement February 28th, 2014

**NOTE**

IT IS A CONDITION OF THIS PERMIT THAT THE PERMITTEE COMPLY WITH ANY OTHER APPLICABLE ACT, REGULATION, ORDINANCE BY - LAW OR ORDER DEFAULT HEREOF MAY RESULT IN SUSPENSION OR CANCELLATION OF THIS PERMIT.

**REMARQUE**

LE DÉTENTEUR DU PRÉSENT PERMIS DOIT SE CONFORMER À TOUT AUTRE RÈGLEMENT, LOI, DÉCRET RÈGLEMENT MUNICIPAL OU ARRÊTÉ APPLICABLE. LE MANQUEMENT À CETTE OBLIGATION POURRAIT DONNER LIEU À LA SUSPENSION OU À L'ANNULATION DU PERMIS.

**Canada**



**NUNAVUT WATER BOARD  
WATER LICENCE RENEWAL**

---

Licence No. 2BE-IZO1217

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

MMG INC.

(Licensee)

26<sup>th</sup> FLOOR -1177 WEST HASTINGS ST., VANCOUVER, BC V6E 2K3

(Mailing Address)

hereinafter 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 renewal:

Licence Number/Type: 2BE-IZO1217 TYPE "B"

Water Management Area: NUNAVUT 07

Location: IZOK LAKE PROJECT  
KITIKMEOT REGION, NUNAVUT

Classification: MINING AND MILLING UNDERTAKING

Purpose: DIRECT WATER USE AND DEPOSIT OF WASTE

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

Date of Licence Issuance: DECEMBER 20, 2012

Expiry of Licence: DECEMBER 31, 2017

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

Thomas Kabloona,  
**Nunavut Water Board  
Chair**

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.../2



P.O. Box 360  
Kugluktuk, NU X0B 0E0  
Telephone: (867) 982-3310  
Fax: (867) 982-3311  
www.kitia.ca

Cambridge Bay  
Ikaľuktuťiak  
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Kugluktuk  
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Bathurst Inlet  
Kingaok  
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Bay Chimo  
Umingmaktok  
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Gjoa Haven  
Okhoktok  
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Kugaaruk  
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## INUIT OWNED LAND USE LICENSE KITIKMEOT INUIT ASSOCIATION

### LICENSE NO. KTL306C019-Amended

Subject to the Terms and Conditions of this License, authority is hereby granted to:

MINERALS AND METALS GROUP  
LICENSEE

To proceed with Land Use operation described in the accepted application dated: 06/26/09

Location: Izok lake & Hood River – Inuit Owned Lands parcel # CO -05 & 40

Type of Operation: Drilling (diamond/ice, etc.) Archaeology, Research (wildlife/fish/Birds/marine), Collect of Species

Commencement Date: February 16, 2012

Expiry Date: February 15, 2013

This 21<sup>st</sup> day of February, 2012

**Kitikmeot Inuit Association**

By SANAZOU  
LANDS & ENVIRONMENT

This copy is to be retained and displayed by the Licensee.

Affiliates: Nunavut Tunngavik Inc., Kitikmeot Corporation  
Kitikmeot Economic Development Commission

Appendix III : Water Usage - Domestic

Izok 2012 Water Usage			
Date	Volume (Gallons)	Volume (Litres)	M <sup>3</sup>
07-Mar	160.8	611	0.611
08-Mar	230.3	875	0.875
09-Mar	229.7	873	0.873
10-Mar	195.5	743	0.743
11-Mar	264.2	1004	1.004
12-Mar	278.2	1057	1.057
13-Mar	483.9	1839	1.839
14-Mar	431.8	1641	1.641
15-Mar	415.0	1577	1.577
16-Mar	412.1	1566	1.566
17-Mar	412.6	1568	1.568
18-Mar	395.3	1502	1.502
19-Mar	390.3	1483	1.483
20-Mar	436.8	1660	1.66
21-Mar	480.0	1824	1.824
22-Mar	434.7	1652	1.652
23-Mar	756.8	2876	2.876
24-Mar	628.9	2390	2.39
25-Mar	563.7	2142	2.142
26-Mar	626.3	2380	2.38
27-Mar	651.1	2474	2.474
28-Mar	570.3	2167	2.167
29-Mar	736.3	2798	2.798
30-Mar	855.0	3249	3.249
31-Mar	836.6	3179	3.179
01-Apr	762.4	2897	2.897
02-Apr	395.8	1504	1.504
03-Apr	402.4	1529	1.529
04-Apr	554.7	2108	2.108
05-Apr	558.9	2124	2.124
06-Apr	690.8	2625	2.625
07-Apr	578.4	2198	2.198
08-Apr	366.6	1393	1.393
09-Apr	507.6	1929	1.929
10-Apr	630.3	2395	2.395
11-Apr	612.6	2328	2.328
12-Apr	830.3	3155	3.155
13-Apr	676.3	2570	2.57
14-Apr	672.1	2554	2.554
15-Apr	781.1	2968	2.968
16-Apr	615.5	2339	2.339
17-Apr	960.0	3648	3.648

18-Apr	988.4	3756	3.756
19-Apr	774.7	2944	2.944
20-Apr	735.3	2794	2.794
21-Apr	834.2	3170	3.17
22-Apr	837.4	3182	3.182
23-Apr	744.2	2828	2.828
24-Apr	754.7	2868	2.868
25-Apr	968.9	3682	3.682
26-Apr	916.8	3484	3.484
27-Apr	650.8	2473	2.473
28-Apr	778.4	2958	2.958
29-Apr	790.0	3002	3.002
30-Apr	627.9	2386	2.386
01-May	972.9	3697	3.697
02-May	695.5	2643	2.643
03-May	771.3	2931	2.931
04-May	561.1	2132	2.132
05-May	767.4	2916	2.916
06-May	1224.2	4652	4.652
07-May	865.5	3289	3.289
08-May	722.6	2746	2.746
09-May	601.1	2284	2.284
10-May	792.4	3011	3.011
11-May	761.1	2892	2.892
12-May	Meter broken	2500 (Avg. used)	2.50
13-May	Meter broken	2500 (Avg. used)	2.50
14-May	Meter broken	2500 (Avg. used)	2.50
15-May	Meter broken	2500 (Avg. used)	2.50
16-May	Meter broken	2500 (Avg. used)	2.50
17-May	612	2325.6	2.3256
18-May	612	2325.6	2.3256
19-May	480	1824	1.824
20-May	433	1645.4	1.6454
21-May	482	1831.6	1.8316
22-May	462	1755.6	1.7556
23-May	540	2052	2.052
24-May	354	1345.2	1.3452
25-May	455	1729	1.729
26-May	717	2724.6	2.7246
27-May	439	1668.2	1.6682
28-May	581	2207.8	2.2078
29-May	487	1850.6	1.8506
30-May	436	1656.8	1.6568
31-May	437	1660.6	1.6606
01-Jun	446	1694.8	1.6948
02-Jun	518	1968.4	1.9684

03-Jun	557	2116.6	2.1166
04-Jun	445	1691	1.691
05-Jun	561	2131.8	2.1318
06-Jun	623	2367.4	2.3674
07-Jun	714	2713.2	2.7132
08-Jun	543	2063.4	2.0634
09-Jun	850	3230	3.23
10-Jun	616	2340.8	2.3408
11-Jun	712	2705.6	2.7056
12-Jun	684	2599.2	2.5992
13-Jun	640	2432	2.432
14-Jun	537	2040.6	2.0406
15-Jun	540	2052	2.052
16-Jun	567	2154.6	2.1546
17-Jun	742	2819.6	2.8196
18-Jun	597	2268.6	2.2686
19-Jun	494	1877.2	1.8772
20-Jun	567	2154.6	2.1546
21-Jun	578	2196.4	2.1964
22-Jun	601	2283.8	2.2838
23-Jun	615	2337	2.337
24-Jun	417	1584.6	1.5846
25-Jun	482	1831.6	1.8316
26-Jun	532	2021.6	2.0216
27-Jun	423	1607.4	1.6074
28-Jun	509	1934.2	1.9342
29-Jun	452	1717.6	1.7176
30-Jun	411	1561.8	1.5618
01-Jul	431	1637.8	1.6378
02-Jul	572	2173.6	2.1736
03-Jul	708	2690.4	2.6904
04-Jul	673	2557.4	2.5574
05-Jul	657	2496.6	2.4966
06-Jul	704	2675.2	2.6752
07-Jul	653	2481.4	2.4814
08-Jul	637	2420.6	2.4206
09-Jul	659	2504.2	2.5042
10-Jul	701	2663.8	2.6638
11-Jul	567	2154.6	2.1546
12-Jul	737	2800.6	2.8006
13-Jul	406.2	1543.56	1.54356
14-Jul	316.9	1204.22	1.20422
15-Jul	388.9	1477.82	1.47782
16-Jul	378.7	1439.06	1.43906
17-Jul	258.1	980.78	0.98078
18-Jul	373.4	1418.92	1.41892

19-Jul	312.9	1189.02	1.18902
20-Jul	231.7	880.46	0.88046
21-Jul	310.6	1180.28	1.18028
22-Jul	357.3	1357.74	1.35774
23-Jul	440.4	1673.52	1.67352
24-Jul	371.6	1412.08	1.41208
25-Jul	486.5	1848.7	1.8487
26-Jul	575.1	2185.38	2.18538
27-Jul	425.6	1617.28	1.61728
28-Jul	398.4	1513.92	1.51392
29-Jul	406.9	1546.22	1.54622
30-Jul	475.3	1806.14	1.80614
31-Jul	624.7	2373.86	2.37386
01-Aug	393.4	1494.92	1.49492
02-Aug	495.6	1883.28	1.88328
03-Aug	331.1	1258.18	1.25818
04-Aug	447.8	1701.64	1.70164
05-Aug	439.1	1668.58	1.66858
06-Aug	399.8	1519.24	1.51924
07-Aug	413.2	1570.16	1.57016
08-Aug	630.1	2394.38	2.39438
09-Aug	635.7	2415.66	2.41566
10-Aug	420.4	1597.52	1.59752
11-Aug	337.9	1284.02	1.28402
12-Aug	300.8	1143.04	1.14304
13-Aug	233.6	887.68	0.88768
14-Aug	363.8	1382.44	1.38244
15-Aug	307.1	1166.98	1.16698
16-Aug	358.2	1361.16	1.36116
17-Aug	446.2	1695.56	1.69556
18-Aug	342.6	1301.88	1.30188
19-Aug	368.8	1401.44	1.40144
20-Aug	269.1	1022.58	1.02258
21-Aug	281.4	1069.32	1.06932
22-Aug	560.9	2131.42	2.13142
23-Aug	551.3	2094.94	2.09494
24-Aug	458.1	1740.78	1.74078
25-Aug	260.8	991.04	0.99104
26-Aug	166.8	633.84	0.63384
27-Aug	192.3	730.74	0.73074
28-Aug	135.2	513.76	0.51376
29-Aug	137.4	522.12	0.52212
30-Aug	187.7	713.26	0.71326
31-Aug	125.4	476.52	0.47652
01-Sep	122.3	464.74	0.46474
02-Sep	117.8	447.64	0.44764



03-Sep	110	418	0.418
04-Sep	145.6	553.28	0.55328
05-Sep	223.6	849.68	0.84968
06-Sep	199.9	759.62	0.75962
07-Sep	161.1	612.18	0.61218
08-Sep	216.2	821.56	0.82156
09-Sep	147.1	558.98	0.55898
10-Sep	128.3	487.54	0.48754
11-Sep	194.8	740.24	0.74024
12-Sep		pump pulled out for the winter	

#### Appendix IV : Water Usage – Industrial

Izok 2012				
Drill Rig Water Consumption Records		meters were installed May 30 and Jun 01, 2012		
<b>*NOTE: READINGS AT TIMES EXCEED MAXIMUM PUMP CAPACITY, SOURCE OF ERROR IS UNKNOWN</b>				
<b>AS REQUESTED DATA HAS BEEN PRESENTED AS RECORDED WITHOUT ALTERATION</b>				
Date	1466 Meter Reading (m3) totals	1466 Volume (m3)/day	1493 Meter Reading (m3) totals	1493 Volume (m3)/day
31-May	49	49	0	0
01-Jun	119	70	0	0
02-Jun	189	70	32	32
03-Jun	222	33	104	72
04-Jun	257	35	177	73
05-Jun	322	65	229	52
06-Jun	394	72	272	43
07-Jun	462	68	307	35
08-Jun	534	72	355	48
09-Jun	596	62	434	79
10-Jun	672	76	486	52
11-Jun	742	70	537	51
12-Jun	813	71	589	52
13-Jun	884	71	650	61
14-Jun	916	32	702	52
15-Jun	1031	115	749	47
16-Jun	1128	97	797	48
17-Jun	1221	93	853	56
18-Jun	1315	94	909	56
19-Jun	1411	96	963	54
20-Jun	1506	95	1016	53
21-Jun	1600	94	1071	55
22-Jun	1693	93	1124	53

23-Jun	1743	50	1173	49
24-Jun	1859	116	1226	53
25-Jun	1977	118	1276	50
26-Jun	2106	129	1298	22
27-Jun	2223	117	1412	114
28-Jun	2331	108	1456	44
29-Jun	2445	114	1456	0
30-Jun	2554	109	1487	31
01-Jul	2614	60	1538	51
02-Jul	2666	52	1588	50
03-Jul	2743	77	1636	48
04-Jul	2790	47	1826	90
05-Jul	2841	51	1864	38
06-Jul	2860	19	1948	84
07-Jul	2898	38	1961	13
08-Jul	2939	41	2003	42
09-Jul	2997	58	2056	53
10-Jul	3045	48	2072	16
11-Jul	3138	93	2121	49
12-Jul	3238	100	2168	47
13-Jul	3344	106	2218	50
14-Jul	3445	101	2270	52
15-Jul	3555	110	2318	48
16-Jul	3649	94	2345	27
17-Jul	3751	102	2419	74
18-Jul	3751	0	2468	49
19-Jul	3796	45	2516	48
20-Jul	3861	65	2570	54
21-Jul	3932	71	2620	50
22-Jul	3992	60	2666	46
23-Jul	4053	61	2750	84
24-Jul	4093	40	2803	53
25-Jul	4122	29	2900	97
26-Jul	4193	71	2970	70
27-Jul	4308	115	3057	87
28-Jul	4422	114	3057	0
29-Jul	4539	117	3121	64
30-Jul	4655	116	3214	93
31-Jul	4768	113	3293	79
01-Aug	4884	116	3368	75
02-Aug	5002	118	3368	0
03-Aug	5002	0	3399	31
04-Aug	5081	79	3494	95
05-Aug	5184	103	3560	66
06-Aug	5253	69	3627	67
07-Aug	5324	71	3696	69

08-Aug	5403	79	3768	72
09-Aug	5487	84	3840	72
10-Aug	5526	39	3836	-4
11-Aug	drill shut down for season		3924	88
12-Aug			3967	43
13-Aug			3995	28
14-Aug			4075	80
15-Aug			4161	86
16-Aug			4213	52
17-Aug			4245	32
18-Aug			4306	61
19-Aug			drill shut down for season	
20-Aug				
21-Aug				
22-Aug				

Appendix V : Water Testing Results



MMG RESOURCES INC  
ATTN: KIMBERLEY BAILEY  
555 - 999 CANADA PLACE  
VANCOUVER BC V6C 3E1

Date Received: 23-MAR-11  
Report Date: 29-MAR-11 12:49 (MT)  
Version: FINAL

Client Phone: 778-373-5600

## Certificate of Analysis

Lab Work Order #: L988504  
Project P.O. #: NOT SUBMITTED  
Job Reference: IZOK CAMP  
Legal Site Desc:  
C of C Numbers: A067991

A handwritten signature in black ink that reads "Susan Clark".

Susan Clark  
Account Manager

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ALS LABORATORY GROUP ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L988504-1 WS004001 Sampled By: CLIENT on 17-MAR-11 @ 15:20 Matrix: WATER							
<b>Total Metals - CCME</b>							
<b>Mercury (Hg) - Total</b>							
Mercury (Hg)-Total	<0.00010		0.00010	mg/L		24-MAR-11	R2101044
<b>Total Metals in Water by ICPMS (Low)</b>							
Aluminum (Al)-Total	0.024		0.010	mg/L		25-MAR-11	R2109463
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		25-MAR-11	R2109463
Arsenic (As)-Total	<0.00040		0.00040	mg/L		25-MAR-11	R2109463
Barium (Ba)-Total	0.0039		0.0030	mg/L		25-MAR-11	R2109463
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		25-MAR-11	R2109463
Boron (B)-Total	<0.050		0.050	mg/L		25-MAR-11	R2109463
Cadmium (Cd)-Total	<0.000050		0.000050	mg/L		25-MAR-11	R2109463
Chromium (Cr)-Total	<0.0050		0.0050	mg/L		25-MAR-11	R2109463
Cobalt (Co)-Total	<0.0020		0.0020	mg/L		25-MAR-11	R2109463
Copper (Cu)-Total	0.0017		0.0010	mg/L		25-MAR-11	R2109463
Lead (Pb)-Total	<0.00010		0.00010	mg/L		25-MAR-11	R2109463
Lithium (Li)-Total	<0.010		0.010	mg/L		25-MAR-11	R2109463
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		25-MAR-11	R2109463
Nickel (Ni)-Total	<0.0020		0.0020	mg/L		25-MAR-11	R2109463
Selenium (Se)-Total	<0.00040		0.00040	mg/L		25-MAR-11	R2109463
Silver (Ag)-Total	<0.00010		0.00010	mg/L		25-MAR-11	R2109463
Strontium (Sr)-Total	0.00815		0.00020	mg/L		25-MAR-11	R2109463
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		25-MAR-11	R2109463
Tin (Sn)-Total	<0.050		0.050	mg/L		25-MAR-11	R2109463
Titanium (Ti)-Total	<0.0010		0.0010	mg/L		25-MAR-11	R2109463
Uranium (U)-Total	0.00011		0.00010	mg/L		25-MAR-11	R2109463
Vanadium (V)-Total	<0.0010		0.0010	mg/L		25-MAR-11	R2109463
Zinc (Zn)-Total	0.0076		0.0040	mg/L		25-MAR-11	R2109463
<b>Total Metals in Water by ICPOES (Low)</b>							
Calcium (Ca)-Total	1.82		0.50	mg/L		28-MAR-11	R2111566
Iron (Fe)-Total	0.016		0.010	mg/L		28-MAR-11	R2111566
Magnesium (Mg)-Total	0.89		0.10	mg/L		28-MAR-11	R2111566
Manganese (Mn)-Total	<0.0020		0.0020	mg/L		28-MAR-11	R2111566
Potassium (K)-Total	0.63		0.10	mg/L		28-MAR-11	R2111566
Sodium (Na)-Total	<1.0		1.0	mg/L		28-MAR-11	R2111566
L988504-2 WS004002 Sampled By: CLIENT on 17-MAR-11 @ 15:20 Matrix: WATER							
<b>pH and Conductivity</b>							
pH	6.78		0.10	pH		24-MAR-11	R2102883
Conductivity (EC)	19.7		0.20	uS/cm		24-MAR-11	R2102883
L988504-3 WS004003 Sampled By: CLIENT on 17-MAR-11 @ 15:20 Matrix: WATER							
<b>Miscellaneous Parameters</b>							
Total Suspended Solids	<3.0		3.0	mg/L		25-MAR-11	R2104703

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
HG-T-CVAA-ED	Water	Mercury (Hg) - Total	EPA 245.7 / EPA 245.1
MET-T-L-ICP-ED	Water	Total Metals in Water by ICPOES (Low)	APHA 3120 B-ICP-OES
MET-T-L-MS-ED	Water	Total Metals in Water by ICPMS (Low)	SW 846 - 6020-ICPMS
PH/EC-ED	Water	pH and Conductivity	APHA 4500-H, 2510
SOLIDS-TOTSUS-ED	Water	Total Suspended Solids	APHA 2540 D-Gravimetric

\*\* ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
ED	ALS LABORATORY GROUP - EDMONTON, ALBERTA, CANADA

Chain of Custody Numbers:

A067991

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample  
 mg/kg wwt - milligrams per kilogram based on wet weight of sample  
 mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight  
 mg/L - unit of concentration based on volume, parts per million.  
 < - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



MMG RESOURCES INC  
ATTN: KIMBERLEY BAILEY  
555 - 999 CANADA PLACE  
VANCOUVER BC V6C 3E1

Date Received: 28-MAR-11  
Report Date: 06-APR-11 15:36 (MT)  
Version: FINAL

Client Phone: 778-373-5600

## Certificate of Analysis

Lab Work Order #: L989607  
Project P.O. #: 08-130  
Job Reference: IZOK CAMP  
Legal Site Desc:  
C of C Numbers: A067986

Susan Clark  
Account Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L989607-1 WS004004							
Sampled By: CLIENT on 24-MAR-11 @ 11:00							
Matrix: WATER							
<b>Total Metals - CCME</b>							
<b>Mercury (Hg) - Total</b>							
Mercury (Hg)-Total	<0.00010		0.00010	mg/L		29-MAR-11	R2118203
<b>Total Metals in Water by ICPMS (Low)</b>							
Aluminum (Al)-Total	0.024		0.010	mg/L		30-MAR-11	R2122663
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		30-MAR-11	R2122663
Arsenic (As)-Total	<0.00040		0.00040	mg/L		30-MAR-11	R2122663
Barium (Ba)-Total	0.0040		0.0030	mg/L		30-MAR-11	R2122663
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		30-MAR-11	R2122663
Boron (B)-Total	<0.050		0.050	mg/L		30-MAR-11	R2122663
Cadmium (Cd)-Total	<0.000050		0.000050	mg/L		30-MAR-11	R2122663
Chromium (Cr)-Total	<0.0050		0.0050	mg/L		30-MAR-11	R2122663
Cobalt (Co)-Total	<0.0020		0.0020	mg/L		30-MAR-11	R2122663
Copper (Cu)-Total	0.0016		0.0010	mg/L		30-MAR-11	R2122663
Lead (Pb)-Total	0.00024		0.00010	mg/L		30-MAR-11	R2122663
Lithium (Li)-Total	<0.010		0.010	mg/L		30-MAR-11	R2122663
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		30-MAR-11	R2122663
Nickel (Ni)-Total	<0.0020		0.0020	mg/L		30-MAR-11	R2122663
Selenium (Se)-Total	<0.00040		0.00040	mg/L		30-MAR-11	R2122663
Silver (Ag)-Total	<0.00010		0.00010	mg/L		30-MAR-11	R2122663
Strontium (Sr)-Total	0.00898		0.00020	mg/L		30-MAR-11	R2122663
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		30-MAR-11	R2122663
Tin (Sn)-Total	<0.050		0.050	mg/L		30-MAR-11	R2122663
Titanium (Ti)-Total	<0.0010		0.0010	mg/L		30-MAR-11	R2122663
Uranium (U)-Total	<0.00010		0.00010	mg/L		30-MAR-11	R2122663
Vanadium (V)-Total	<0.0010		0.0010	mg/L		30-MAR-11	R2122663
Zinc (Zn)-Total	0.0068		0.0040	mg/L		30-MAR-11	R2122663
<b>Total Metals in Water by ICPOES (Low)</b>							
Calcium (Ca)-Total	1.66		0.50	mg/L		30-MAR-11	R2125626
Iron (Fe)-Total	0.012		0.010	mg/L		30-MAR-11	R2125626
Magnesium (Mg)-Total	0.79		0.10	mg/L		30-MAR-11	R2125626
Manganese (Mn)-Total	<0.0020		0.0020	mg/L		30-MAR-11	R2125626
Potassium (K)-Total	0.52		0.10	mg/L		30-MAR-11	R2125626
Sodium (Na)-Total	<1.0		1.0	mg/L		30-MAR-11	R2125626
<b>Miscellaneous Parameters</b>							
Total Suspended Solids	<3.0		3.0	mg/L		29-MAR-11	R2116643
<b>pH and Conductivity</b>							
pH	6.75		0.10	pH		28-MAR-11	R2110644
Conductivity (EC)	19.0		0.20	uS/cm		28-MAR-11	R2110644
L989607-2 WS004005							
Sampled By: CLIENT on 24-MAR-11 @ 11:30							
Matrix: WATER							
<b>Total Metals - CCME</b>							
<b>Mercury (Hg) - Total</b>							
Mercury (Hg)-Total	<0.00010		0.00010	mg/L		29-MAR-11	R2118203
<b>Total Metals in Water by ICPMS (Low)</b>							
Aluminum (Al)-Total	0.026		0.010	mg/L		30-MAR-11	R2122663
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		30-MAR-11	R2122663
Arsenic (As)-Total	<0.00040		0.00040	mg/L		30-MAR-11	R2122663
Barium (Ba)-Total	0.0045		0.0030	mg/L		30-MAR-11	R2122663
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		30-MAR-11	R2122663
Boron (B)-Total	<0.050		0.050	mg/L		30-MAR-11	R2122663

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.



ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L989607-2 WS004005							
Sampled By: CLIENT on 24-MAR-11 @ 11:30							
Matrix: WATER							
<b>Total Metals in Water by ICPMS (Low)</b>							
Cadmium (Cd)-Total	<0.000050		0.000050	mg/L		30-MAR-11	R2122663
Chromium (Cr)-Total	<0.0050		0.0050	mg/L		30-MAR-11	R2122663
Cobalt (Co)-Total	<0.0020		0.0020	mg/L		30-MAR-11	R2122663
Copper (Cu)-Total	0.0018		0.0010	mg/L		30-MAR-11	R2122663
Lead (Pb)-Total	0.00021		0.00010	mg/L		30-MAR-11	R2122663
Lithium (Li)-Total	<0.010		0.010	mg/L		30-MAR-11	R2122663
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		30-MAR-11	R2122663
Nickel (Ni)-Total	<0.0020		0.0020	mg/L		30-MAR-11	R2122663
Selenium (Se)-Total	<0.00040		0.00040	mg/L		30-MAR-11	R2122663
Silver (Ag)-Total	<0.00010		0.00010	mg/L		30-MAR-11	R2122663
Strontium (Sr)-Total	0.00928		0.00020	mg/L		30-MAR-11	R2122663
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		30-MAR-11	R2122663
Tin (Sn)-Total	<0.050		0.050	mg/L		30-MAR-11	R2122663
Titanium (Ti)-Total	<0.0010		0.0010	mg/L		30-MAR-11	R2122663
Uranium (U)-Total	0.00011		0.00010	mg/L		30-MAR-11	R2122663
Vanadium (V)-Total	<0.0010		0.0010	mg/L		30-MAR-11	R2122663
Zinc (Zn)-Total	0.0082		0.0040	mg/L		30-MAR-11	R2122663
<b>Total Metals in Water by ICPOES (Low)</b>							
Calcium (Ca)-Total	1.91		0.50	mg/L		30-MAR-11	R2125626
Iron (Fe)-Total	0.014		0.010	mg/L		30-MAR-11	R2125626
Magnesium (Mg)-Total	0.93		0.10	mg/L		30-MAR-11	R2125626
Manganese (Mn)-Total	<0.0020		0.0020	mg/L		30-MAR-11	R2125626
Potassium (K)-Total	0.70		0.10	mg/L		30-MAR-11	R2125626
Sodium (Na)-Total	<1.0		1.0	mg/L		30-MAR-11	R2125626
<b>Miscellaneous Parameters</b>							
Total Suspended Solids	<3.0		3.0	mg/L		29-MAR-11	R2116643
<b>pH and Conductivity</b>							
pH	6.76		0.10	pH		28-MAR-11	R2110644
Conductivity (EC)	22.0		0.20	uS/cm		28-MAR-11	R2110644
L989607-3 WS004006							
Sampled By: CLIENT on 24-MAR-11 @ 12:00							
Matrix: WATER							
<b>Total Metals - CCME</b>							
<b>Mercury (Hg) - Total</b>							
Mercury (Hg)-Total	<0.00010		0.00010	mg/L		29-MAR-11	R2118203
<b>Total Metals in Water by ICPMS (Low)</b>							
Aluminum (Al)-Total	0.024		0.010	mg/L		30-MAR-11	R2122663
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		30-MAR-11	R2122663
Arsenic (As)-Total	<0.00040		0.00040	mg/L		30-MAR-11	R2122663
Barium (Ba)-Total	0.0035		0.0030	mg/L		30-MAR-11	R2122663
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		30-MAR-11	R2122663
Boron (B)-Total	<0.050		0.050	mg/L		30-MAR-11	R2122663
Cadmium (Cd)-Total	<0.000050		0.000050	mg/L		30-MAR-11	R2122663
Chromium (Cr)-Total	<0.0050		0.0050	mg/L		30-MAR-11	R2122663
Cobalt (Co)-Total	<0.0020		0.0020	mg/L		30-MAR-11	R2122663
Copper (Cu)-Total	0.0017		0.0010	mg/L		30-MAR-11	R2122663
Lead (Pb)-Total	0.00024		0.00010	mg/L		30-MAR-11	R2122663
Lithium (Li)-Total	<0.010		0.010	mg/L		30-MAR-11	R2122663
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		30-MAR-11	R2122663
Nickel (Ni)-Total	<0.0020		0.0020	mg/L		30-MAR-11	R2122663
Selenium (Se)-Total	<0.00040		0.00040	mg/L		30-MAR-11	R2122663

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L989607-3 WS004006							
Sampled By: CLIENT on 24-MAR-11 @ 12:00							
Matrix: WATER							
<b>Total Metals in Water by ICPMS (Low)</b>							
Silver (Ag)-Total	<0.00010		0.00010	mg/L		30-MAR-11	R2122663
Strontium (Sr)-Total	0.00796		0.00020	mg/L		30-MAR-11	R2122663
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		30-MAR-11	R2122663
Tin (Sn)-Total	<0.050		0.050	mg/L		30-MAR-11	R2122663
Titanium (Ti)-Total	<0.0010		0.0010	mg/L		30-MAR-11	R2122663
Uranium (U)-Total	0.00010		0.00010	mg/L		30-MAR-11	R2122663
Vanadium (V)-Total	<0.0010		0.0010	mg/L		30-MAR-11	R2122663
Zinc (Zn)-Total	0.0065		0.0040	mg/L		30-MAR-11	R2122663
<b>Total Metals in Water by ICPOES (Low)</b>							
Calcium (Ca)-Total	1.61		0.50	mg/L		30-MAR-11	R2125626
Iron (Fe)-Total	0.011		0.010	mg/L		30-MAR-11	R2125626
Magnesium (Mg)-Total	0.78		0.10	mg/L		30-MAR-11	R2125626
Manganese (Mn)-Total	<0.0020		0.0020	mg/L		30-MAR-11	R2125626
Potassium (K)-Total	0.53		0.10	mg/L		30-MAR-11	R2125626
Sodium (Na)-Total	<1.0		1.0	mg/L		30-MAR-11	R2125626
<b>Miscellaneous Parameters</b>							
Total Suspended Solids	<3.0		3.0	mg/L		29-MAR-11	R2116643
<b>pH and Conductivity</b>							
pH	6.83		0.10	pH		28-MAR-11	R2110644
Conductivity (EC)	18.5		0.20	uS/cm		28-MAR-11	R2110644

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
HG-T-CVAA-ED	Water	Mercury (Hg) - Total	EPA 245.7 / EPA 245.1
MET-T-L-ICP-ED	Water	Total Metals in Water by ICPOES (Low)	APHA 3120 B-ICP-OES
MET-T-L-MS-ED	Water	Total Metals in Water by ICPMS (Low)	SW 846 - 6020-ICPMS
PH/EC-ED	Water	pH and Conductivity	APHA 4500-H, 2510
SOLIDS-TOTSUS-ED	Water	Total Suspended Solids	APHA 2540 D-Gravimetric

\*\* ALS test methods may incorporate modifications from specified reference methods to improve performance.

*The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:*

Laboratory Definition Code	Laboratory Location
ED	ALS ENVIRONMENTAL - EDMONTON, ALBERTA, CANADA

Chain of Custody Numbers:

A067986

GLOSSARY OF REPORT TERMS

*Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.*

*mg/kg - milligrams per kilogram based on dry weight of sample  
 mg/kg wwt - milligrams per kilogram based on wet weight of sample  
 mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight  
 mg/L - unit of concentration based on volume, parts per million.*

*< - Less than.*

*D.L. - The reporting limit.*

*N/A - Result not available. Refer to qualifier code and definition for explanation.*

*Test results reported relate only to the samples as received by the laboratory.*

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

*Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.*



MMG RESOURCES INC  
ATTN: KIMBERLEY BAILEY  
555 - 999 CANADA PLACE  
VANCOUVER BC V6C 3E1

Date Received: 06-APR-11  
Report Date: 12-APR-11 15:08 (MT)  
Version: FINAL

Client Phone: 778-373-5600

## Certificate of Analysis

Lab Work Order #: L992496  
Project P.O. #: 08-130  
Job Reference:  
Legal Site Desc:  
C of C Numbers: C026885

Susan Clark  
Account Manager

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## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L992496-1 WS004007							
Sampled By: CLIENT on 03-APR-11							
Matrix: WATER							
<b>Total Metals - CCME</b>							
<b>Mercury (Hg) - Total</b>							
Mercury (Hg)-Total	<0.00010		0.00010	mg/L		07-APR-11	R2154763
<b>Total Metals in Water by ICPMS (Low)</b>							
Aluminum (Al)-Total	0.025		0.010	mg/L		08-APR-11	R2165703
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		08-APR-11	R2165703
Arsenic (As)-Total	<0.00040		0.00040	mg/L		08-APR-11	R2165703
Barium (Ba)-Total	0.0044		0.0030	mg/L		08-APR-11	R2165703
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		08-APR-11	R2165703
Boron (B)-Total	<0.050		0.050	mg/L		08-APR-11	R2165703
Cadmium (Cd)-Total	<0.000050		0.000050	mg/L		08-APR-11	R2165703
Chromium (Cr)-Total	<0.0050		0.0050	mg/L		08-APR-11	R2165703
Cobalt (Co)-Total	<0.0020		0.0020	mg/L		08-APR-11	R2165703
Copper (Cu)-Total	0.0017		0.0010	mg/L		08-APR-11	R2165703
Lead (Pb)-Total	0.00020		0.00010	mg/L		08-APR-11	R2165703
Lithium (Li)-Total	<0.010		0.010	mg/L		08-APR-11	R2165703
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		08-APR-11	R2165703
Nickel (Ni)-Total	<0.0020		0.0020	mg/L		08-APR-11	R2165703
Selenium (Se)-Total	<0.00040		0.00040	mg/L		08-APR-11	R2165703
Silver (Ag)-Total	<0.00010		0.00010	mg/L		08-APR-11	R2165703
Strontium (Sr)-Total	0.00827		0.00020	mg/L		08-APR-11	R2165703
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		08-APR-11	R2165703
Tin (Sn)-Total	<0.050		0.050	mg/L		08-APR-11	R2165703
Titanium (Ti)-Total	<0.0010		0.0010	mg/L		08-APR-11	R2165703
Uranium (U)-Total	0.00010		0.00010	mg/L		08-APR-11	R2165703
Vanadium (V)-Total	<0.0010		0.0010	mg/L		08-APR-11	R2165703
Zinc (Zn)-Total	0.0093		0.0040	mg/L		08-APR-11	R2165703
<b>Total Metals in Water by ICPOES (Low)</b>							
Calcium (Ca)-Total	1.92		0.50	mg/L		07-APR-11	R2155744
Iron (Fe)-Total	0.029		0.010	mg/L		07-APR-11	R2155744
Magnesium (Mg)-Total	1.06		0.10	mg/L		07-APR-11	R2155744
Manganese (Mn)-Total	0.0026		0.0020	mg/L		07-APR-11	R2155744
Potassium (K)-Total	0.68		0.10	mg/L		07-APR-11	R2155744
Sodium (Na)-Total	<1.0		1.0	mg/L		07-APR-11	R2155744
<b>Miscellaneous Parameters</b>							
Total Suspended Solids	<3.0		3.0	mg/L		07-APR-11	R2155008
<b>pH and Conductivity</b>							
pH	6.62		0.10	pH		06-APR-11	R2148203
Conductivity (EC)	20.5		0.20	uS/cm		06-APR-11	R2148203
L992496-2 WS004008							
Sampled By: CLIENT on 03-APR-11 @ 02:30							
Matrix: WATER							
<b>Total Metals - CCME</b>							
<b>Mercury (Hg) - Total</b>							
Mercury (Hg)-Total	<0.00010		0.00010	mg/L		07-APR-11	R2154763
<b>Total Metals in Water by ICPMS (Low)</b>							
Aluminum (Al)-Total	0.026		0.010	mg/L		08-APR-11	R2165703
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		08-APR-11	R2165703
Arsenic (As)-Total	<0.00040		0.00040	mg/L		08-APR-11	R2165703
Barium (Ba)-Total	0.0112		0.0030	mg/L		08-APR-11	R2165703
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		08-APR-11	R2165703
Boron (B)-Total	<0.050		0.050	mg/L		08-APR-11	R2165703

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L992496-2 WS004008							
Sampled By: CLIENT on 03-APR-11 @ 02:30							
Matrix: WATER							
<b>Total Metals in Water by ICPMS (Low)</b>							
Cadmium (Cd)-Total	<0.000050		0.000050	mg/L		08-APR-11	R2165703
Chromium (Cr)-Total	<0.0050		0.0050	mg/L		08-APR-11	R2165703
Cobalt (Co)-Total	<0.0020		0.0020	mg/L		08-APR-11	R2165703
Copper (Cu)-Total	0.0019		0.0010	mg/L		08-APR-11	R2165703
Lead (Pb)-Total	0.00065		0.00010	mg/L		08-APR-11	R2165703
Lithium (Li)-Total	<0.010		0.010	mg/L		08-APR-11	R2165703
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		08-APR-11	R2165703
Nickel (Ni)-Total	<0.0020		0.0020	mg/L		08-APR-11	R2165703
Selenium (Se)-Total	<0.00040		0.00040	mg/L		08-APR-11	R2165703
Silver (Ag)-Total	<0.00010		0.00010	mg/L		08-APR-11	R2165703
Strontium (Sr)-Total	0.00871		0.00020	mg/L		08-APR-11	R2165703
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		08-APR-11	R2165703
Tin (Sn)-Total	<0.050		0.050	mg/L		08-APR-11	R2165703
Titanium (Ti)-Total	<0.0010		0.0010	mg/L		08-APR-11	R2165703
Uranium (U)-Total	0.00010		0.00010	mg/L		08-APR-11	R2165703
Vanadium (V)-Total	<0.0010		0.0010	mg/L		08-APR-11	R2165703
Zinc (Zn)-Total	0.0102		0.0040	mg/L		08-APR-11	R2165703
<b>Total Metals in Water by ICPOES (Low)</b>							
Calcium (Ca)-Total	1.98		0.50	mg/L		07-APR-11	R2155744
Iron (Fe)-Total	0.021		0.010	mg/L		07-APR-11	R2155744
Magnesium (Mg)-Total	1.02		0.10	mg/L		07-APR-11	R2155744
Manganese (Mn)-Total	<0.0020		0.0020	mg/L		07-APR-11	R2155744
Potassium (K)-Total	0.58		0.10	mg/L		07-APR-11	R2155744
Sodium (Na)-Total	<1.0		1.0	mg/L		07-APR-11	R2155744
<b>Miscellaneous Parameters</b>							
Total Suspended Solids	<3.0		3.0	mg/L		07-APR-11	R2155008
<b>pH and Conductivity</b>							
pH	6.66		0.10	pH		06-APR-11	R2148203
Conductivity (EC)	20.4		0.20	uS/cm		06-APR-11	R2148203
L992496-3 WS004009							
Sampled By: CLIENT on 03-APR-11 @ 04:30							
Matrix: WATER							
<b>Total Metals - CCME</b>							
<b>Mercury (Hg) - Total</b>							
Mercury (Hg)-Total	<0.00010		0.00010	mg/L		07-APR-11	R2154763
<b>Total Metals in Water by ICPMS (Low)</b>							
Aluminum (Al)-Total	0.020		0.010	mg/L		08-APR-11	R2165703
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		08-APR-11	R2165703
Arsenic (As)-Total	<0.00040		0.00040	mg/L		08-APR-11	R2165703
Barium (Ba)-Total	0.0030		0.0030	mg/L		08-APR-11	R2165703
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		08-APR-11	R2165703
Boron (B)-Total	<0.050		0.050	mg/L		08-APR-11	R2165703
Cadmium (Cd)-Total	<0.000050		0.000050	mg/L		08-APR-11	R2165703
Chromium (Cr)-Total	<0.0050		0.0050	mg/L		08-APR-11	R2165703
Cobalt (Co)-Total	<0.0020		0.0020	mg/L		08-APR-11	R2165703
Copper (Cu)-Total	0.0012		0.0010	mg/L		08-APR-11	R2165703
Lead (Pb)-Total	<0.00010		0.00010	mg/L		08-APR-11	R2165703
Lithium (Li)-Total	<0.010		0.010	mg/L		08-APR-11	R2165703
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		08-APR-11	R2165703
Nickel (Ni)-Total	<0.0020		0.0020	mg/L		08-APR-11	R2165703
Selenium (Se)-Total	<0.00040		0.00040	mg/L		08-APR-11	R2165703

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L992496-3      WS004009							
Sampled By: CLIENT on 03-APR-11 @ 04:30							
Matrix: WATER							
<b>Total Metals in Water by ICPMS (Low)</b>							
Silver (Ag)-Total	<0.00010		0.00010	mg/L		08-APR-11	R2165703
Strontium (Sr)-Total	0.00650		0.00020	mg/L		08-APR-11	R2165703
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		08-APR-11	R2165703
Tin (Sn)-Total	<0.050		0.050	mg/L		08-APR-11	R2165703
Titanium (Ti)-Total	<0.0010		0.0010	mg/L		08-APR-11	R2165703
Uranium (U)-Total	<0.00010		0.00010	mg/L		08-APR-11	R2165703
Vanadium (V)-Total	<0.0010		0.0010	mg/L		08-APR-11	R2165703
Zinc (Zn)-Total	0.0041		0.0040	mg/L		08-APR-11	R2165703
<b>Total Metals in Water by ICPOES (Low)</b>							
Calcium (Ca)-Total	1.43		0.50	mg/L		07-APR-11	R2155744
Iron (Fe)-Total	<0.010		0.010	mg/L		07-APR-11	R2155744
Magnesium (Mg)-Total	0.78		0.10	mg/L		07-APR-11	R2155744
Manganese (Mn)-Total	<0.0020		0.0020	mg/L		07-APR-11	R2155744
Potassium (K)-Total	0.43		0.10	mg/L		07-APR-11	R2155744
Sodium (Na)-Total	<1.0		1.0	mg/L		07-APR-11	R2155744
<b>Miscellaneous Parameters</b>							
Total Suspended Solids	<3.0		3.0	mg/L		07-APR-11	R2155008
<b>pH and Conductivity</b>							
pH	6.69		0.10	pH		06-APR-11	R2148203
Conductivity (EC)	16.3		0.20	uS/cm		06-APR-11	R2148203

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.



MMG RESOURCES INC  
ATTN: KIMBERLEY BAILEY  
555 - 999 CANADA PLACE  
VANCOUVER BC V6C 3E1

Date Received: 14-APR-11  
Report Date: 20-APR-11 12:12 (MT)  
Version: FINAL

Client Phone: 778-373-5600

## Certificate of Analysis

**Lab Work Order #:** L995040  
Project P.O. #: 10-00433  
Job Reference: IZOK  
Legal Site Desc:  
C of C Numbers: C026886

Susan Clark  
Account Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L995040-1 WS004010 Sampled By: KB on 10-APR-11 @ 10:30 Matrix: WATER							
<b>Total Metals - CCME</b>							
<b>Mercury (Hg) - Total</b>							
Mercury (Hg)-Total	<0.00010		0.00010	mg/L		16-APR-11	R2177293
<b>Total Metals in Water by ICPMS (Low)</b>							
Aluminum (Al)-Total	0.024		0.010	mg/L		15-APR-11	R2177621
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		15-APR-11	R2177621
Arsenic (As)-Total	<0.00040		0.00040	mg/L		15-APR-11	R2177621
Barium (Ba)-Total	0.0034		0.0030	mg/L		15-APR-11	R2177621
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		15-APR-11	R2177621
Boron (B)-Total	<0.050		0.050	mg/L		15-APR-11	R2177621
Cadmium (Cd)-Total	<0.000050		0.000050	mg/L		15-APR-11	R2177621
Chromium (Cr)-Total	<0.0050		0.0050	mg/L		15-APR-11	R2177621
Cobalt (Co)-Total	<0.0020		0.0020	mg/L		15-APR-11	R2177621
Copper (Cu)-Total	0.0016		0.0010	mg/L		15-APR-11	R2177621
Lead (Pb)-Total	0.00018		0.00010	mg/L		15-APR-11	R2177621
Lithium (Li)-Total	<0.010		0.010	mg/L		15-APR-11	R2177621
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		15-APR-11	R2177621
Nickel (Ni)-Total	<0.0020		0.0020	mg/L		15-APR-11	R2177621
Selenium (Se)-Total	<0.00040		0.00040	mg/L		15-APR-11	R2177621
Silver (Ag)-Total	<0.00010		0.00010	mg/L		15-APR-11	R2177621
Strontium (Sr)-Total	0.00731		0.00020	mg/L		15-APR-11	R2177621
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		15-APR-11	R2177621
Tin (Sn)-Total	<0.050		0.050	mg/L		15-APR-11	R2177621
Titanium (Ti)-Total	<0.0010		0.0010	mg/L		15-APR-11	R2177621
Uranium (U)-Total	<0.00010		0.00010	mg/L		15-APR-11	R2177621
Vanadium (V)-Total	<0.0010		0.0010	mg/L		15-APR-11	R2177621
Zinc (Zn)-Total	0.0066		0.0040	mg/L		15-APR-11	R2177621
<b>Total Metals in Water by ICPOES (Low)</b>							
Calcium (Ca)-Total	1.68		0.50	mg/L		15-APR-11	R2177265
Iron (Fe)-Total	0.016		0.010	mg/L		15-APR-11	R2177265
Magnesium (Mg)-Total	0.78		0.10	mg/L		15-APR-11	R2177265
Manganese (Mn)-Total	<0.0020		0.0020	mg/L		15-APR-11	R2177265
Potassium (K)-Total	0.48		0.10	mg/L		15-APR-11	R2177265
Sodium (Na)-Total	<1.0		1.0	mg/L		15-APR-11	R2177265
<b>Miscellaneous Parameters</b>							
Total Suspended Solids	<3.0		3.0	mg/L		15-APR-11	R2176576
<b>pH and Conductivity</b>							
pH	6.97		0.10	pH		14-APR-11	R2174970
Conductivity (EC)	15.6		0.20	uS/cm		14-APR-11	R2174970
L995040-2 WS004011 Sampled By: KB on 10-APR-11 @ 11:00 Matrix: WATER							
<b>Total Metals - CCME</b>							
<b>Mercury (Hg) - Total</b>							
Mercury (Hg)-Total	<0.00010		0.00010	mg/L		16-APR-11	R2177293
<b>Total Metals in Water by ICPMS (Low)</b>							
Aluminum (Al)-Total	0.040		0.010	mg/L		15-APR-11	R2177621
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		15-APR-11	R2177621
Arsenic (As)-Total	<0.00040		0.00040	mg/L		15-APR-11	R2177621
Barium (Ba)-Total	0.0050		0.0030	mg/L		15-APR-11	R2177621
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		15-APR-11	R2177621
Boron (B)-Total	<0.050		0.050	mg/L		15-APR-11	R2177621

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L995040-2 WS004011 Sampled By: KB on 10-APR-11 @ 11:00 Matrix: WATER							
<b>Total Metals in Water by ICPMS (Low)</b>							
Cadmium (Cd)-Total	<0.000050		0.000050	mg/L		15-APR-11	R2177621
Chromium (Cr)-Total	<0.0050		0.0050	mg/L		15-APR-11	R2177621
Cobalt (Co)-Total	<0.0020		0.0020	mg/L		15-APR-11	R2177621
Copper (Cu)-Total	0.0023		0.0010	mg/L		15-APR-11	R2177621
Lead (Pb)-Total	0.00060		0.00010	mg/L		15-APR-11	R2177621
Lithium (Li)-Total	<0.010		0.010	mg/L		15-APR-11	R2177621
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		15-APR-11	R2177621
Nickel (Ni)-Total	<0.0020		0.0020	mg/L		15-APR-11	R2177621
Selenium (Se)-Total	<0.00040		0.00040	mg/L		15-APR-11	R2177621
Silver (Ag)-Total	<0.00010		0.00010	mg/L		15-APR-11	R2177621
Strontium (Sr)-Total	0.00935		0.00020	mg/L		15-APR-11	R2177621
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		15-APR-11	R2177621
Tin (Sn)-Total	<0.050		0.050	mg/L		15-APR-11	R2177621
Titanium (Ti)-Total	<0.0010		0.0010	mg/L		15-APR-11	R2177621
Uranium (U)-Total	0.00012		0.00010	mg/L		15-APR-11	R2177621
Vanadium (V)-Total	<0.0010		0.0010	mg/L		15-APR-11	R2177621
Zinc (Zn)-Total	0.0106		0.0040	mg/L		15-APR-11	R2177621
<b>Total Metals in Water by ICPOES (Low)</b>							
Calcium (Ca)-Total	1.94		0.50	mg/L		18-APR-11	R2177780
Iron (Fe)-Total	0.040		0.010	mg/L		18-APR-11	R2177780
Magnesium (Mg)-Total	0.83		0.10	mg/L		18-APR-11	R2177780
Manganese (Mn)-Total	0.0048		0.0020	mg/L		18-APR-11	R2177780
Potassium (K)-Total	0.55		0.10	mg/L		18-APR-11	R2177780
Sodium (Na)-Total	<1.0		1.0	mg/L		18-APR-11	R2177780
<b>Miscellaneous Parameters</b>							
Total Suspended Solids	4.0		3.0	mg/L		15-APR-11	R2176576
<b>pH and Conductivity</b>							
pH	7.03		0.10	pH		14-APR-11	R2174970
Conductivity (EC)	22.3		0.20	uS/cm		14-APR-11	R2174970
L995040-3 WS004012 Sampled By: KB on 10-APR-11 @ 11:30 Matrix: WATER							
<b>Total Metals - CCME</b>							
<b>Mercury (Hg) - Total</b>							
Mercury (Hg)-Total	<0.00010		0.00010	mg/L		16-APR-11	R2177293
<b>Total Metals in Water by ICPMS (Low)</b>							
Aluminum (Al)-Total	0.023		0.010	mg/L		15-APR-11	R2177621
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		15-APR-11	R2177621
Arsenic (As)-Total	<0.00040		0.00040	mg/L		15-APR-11	R2177621
Barium (Ba)-Total	0.0032		0.0030	mg/L		15-APR-11	R2177621
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		15-APR-11	R2177621
Boron (B)-Total	<0.050		0.050	mg/L		15-APR-11	R2177621
Cadmium (Cd)-Total	<0.000050		0.000050	mg/L		15-APR-11	R2177621
Chromium (Cr)-Total	<0.0050		0.0050	mg/L		15-APR-11	R2177621
Cobalt (Co)-Total	<0.0020		0.0020	mg/L		15-APR-11	R2177621
Copper (Cu)-Total	0.0016		0.0010	mg/L		15-APR-11	R2177621
Lead (Pb)-Total	0.00022		0.00010	mg/L		15-APR-11	R2177621
Lithium (Li)-Total	<0.010		0.010	mg/L		15-APR-11	R2177621
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		15-APR-11	R2177621
Nickel (Ni)-Total	<0.0020		0.0020	mg/L		15-APR-11	R2177621
Selenium (Se)-Total	<0.00040		0.00040	mg/L		15-APR-11	R2177621

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L995040-3 WS004012							
Sampled By: KB on 10-APR-11 @ 11:30							
Matrix: WATER							
<b>Total Metals in Water by ICPMS (Low)</b>							
Silver (Ag)-Total	<0.00010		0.00010	mg/L		15-APR-11	R2177621
Strontium (Sr)-Total	0.00688		0.00020	mg/L		15-APR-11	R2177621
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		15-APR-11	R2177621
Tin (Sn)-Total	<0.050		0.050	mg/L		15-APR-11	R2177621
Titanium (Ti)-Total	<0.0010		0.0010	mg/L		15-APR-11	R2177621
Uranium (U)-Total	<0.00010		0.00010	mg/L		15-APR-11	R2177621
Vanadium (V)-Total	<0.0010		0.0010	mg/L		15-APR-11	R2177621
Zinc (Zn)-Total	0.0062		0.0040	mg/L		15-APR-11	R2177621
<b>Total Metals in Water by ICPOES (Low)</b>							
Calcium (Ca)-Total	1.41		0.50	mg/L		15-APR-11	R2177265
Iron (Fe)-Total	<0.010		0.010	mg/L		15-APR-11	R2177265
Magnesium (Mg)-Total	0.68		0.10	mg/L		15-APR-11	R2177265
Manganese (Mn)-Total	<0.0020		0.0020	mg/L		15-APR-11	R2177265
Potassium (K)-Total	0.44		0.10	mg/L		15-APR-11	R2177265
Sodium (Na)-Total	<1.0		1.0	mg/L		15-APR-11	R2177265
<b>Miscellaneous Parameters</b>							
Total Suspended Solids	<3.0		3.0	mg/L		15-APR-11	R2176576
<b>pH and Conductivity</b>							
pH	7.00		0.10	pH		14-APR-11	R2174970
Conductivity (EC)	14.7		0.20	uS/cm		14-APR-11	R2174970
L995040-4 WS004013							
Sampled By: KB on 10-APR-11 @ 13:30							
Matrix: WATER							
<b>Total Metals - CCME</b>							
<b>Mercury (Hg) - Total</b>							
Mercury (Hg)-Total	<0.00010		0.00010	mg/L		16-APR-11	R2177293
<b>Total Metals in Water by ICPMS (Low)</b>							
Aluminum (Al)-Total	0.023		0.010	mg/L		15-APR-11	R2177621
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		15-APR-11	R2177621
Arsenic (As)-Total	<0.00040		0.00040	mg/L		15-APR-11	R2177621
Barium (Ba)-Total	0.0034		0.0030	mg/L		15-APR-11	R2177621
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		15-APR-11	R2177621
Boron (B)-Total	<0.050		0.050	mg/L		15-APR-11	R2177621
Cadmium (Cd)-Total	<0.000050		0.000050	mg/L		15-APR-11	R2177621
Chromium (Cr)-Total	<0.0050		0.0050	mg/L		15-APR-11	R2177621
Cobalt (Co)-Total	<0.0020		0.0020	mg/L		15-APR-11	R2177621
Copper (Cu)-Total	0.0015		0.0010	mg/L		15-APR-11	R2177621
Lead (Pb)-Total	0.00020		0.00010	mg/L		15-APR-11	R2177621
Lithium (Li)-Total	<0.010		0.010	mg/L		15-APR-11	R2177621
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		15-APR-11	R2177621
Nickel (Ni)-Total	<0.0020		0.0020	mg/L		15-APR-11	R2177621
Selenium (Se)-Total	<0.00040		0.00040	mg/L		15-APR-11	R2177621
Silver (Ag)-Total	<0.00010		0.00010	mg/L		15-APR-11	R2177621
Strontium (Sr)-Total	0.00700		0.00020	mg/L		15-APR-11	R2177621
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		15-APR-11	R2177621
Tin (Sn)-Total	<0.050		0.050	mg/L		15-APR-11	R2177621
Titanium (Ti)-Total	<0.0010		0.0010	mg/L		15-APR-11	R2177621
Uranium (U)-Total	<0.00010		0.00010	mg/L		15-APR-11	R2177621
Vanadium (V)-Total	<0.0010		0.0010	mg/L		15-APR-11	R2177621
Zinc (Zn)-Total	0.0098		0.0040	mg/L		15-APR-11	R2177621
<b>Total Metals in Water by ICPOES (Low)</b>							

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L995040-3 WS004012							
Sampled By: KB on 10-APR-11 @ 11:30							
Matrix: WATER							
<b>Total Metals in Water by ICPMS (Low)</b>							
Silver (Ag)-Total	<0.00010		0.00010	mg/L		15-APR-11	R2177621
Strontium (Sr)-Total	0.00688		0.00020	mg/L		15-APR-11	R2177621
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		15-APR-11	R2177621
Tin (Sn)-Total	<0.050		0.050	mg/L		15-APR-11	R2177621
Titanium (Ti)-Total	<0.0010		0.0010	mg/L		15-APR-11	R2177621
Uranium (U)-Total	<0.00010		0.00010	mg/L		15-APR-11	R2177621
Vanadium (V)-Total	<0.0010		0.0010	mg/L		15-APR-11	R2177621
Zinc (Zn)-Total	0.0062		0.0040	mg/L		15-APR-11	R2177621
<b>Total Metals in Water by ICPOES (Low)</b>							
Calcium (Ca)-Total	1.41		0.50	mg/L		15-APR-11	R2177265
Iron (Fe)-Total	<0.010		0.010	mg/L		15-APR-11	R2177265
Magnesium (Mg)-Total	0.68		0.10	mg/L		15-APR-11	R2177265
Manganese (Mn)-Total	<0.0020		0.0020	mg/L		15-APR-11	R2177265
Potassium (K)-Total	0.44		0.10	mg/L		15-APR-11	R2177265
Sodium (Na)-Total	<1.0		1.0	mg/L		15-APR-11	R2177265
<b>Miscellaneous Parameters</b>							
Total Suspended Solids	<3.0		3.0	mg/L		15-APR-11	R2176576
<b>pH and Conductivity</b>							
pH	7.00		0.10	pH		14-APR-11	R2174970
Conductivity (EC)	14.7		0.20	uS/cm		14-APR-11	R2174970
L995040-4 WS004013							
Sampled By: KB on 10-APR-11 @ 13:30							
Matrix: WATER							
<b>Total Metals - CCME</b>							
<b>Mercury (Hg) - Total</b>							
Mercury (Hg)-Total	<0.00010		0.00010	mg/L		16-APR-11	R2177293
<b>Total Metals in Water by ICPMS (Low)</b>							
Aluminum (Al)-Total	0.023		0.010	mg/L		15-APR-11	R2177621
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		15-APR-11	R2177621
Arsenic (As)-Total	<0.00040		0.00040	mg/L		15-APR-11	R2177621
Barium (Ba)-Total	0.0034		0.0030	mg/L		15-APR-11	R2177621
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		15-APR-11	R2177621
Boron (B)-Total	<0.050		0.050	mg/L		15-APR-11	R2177621
Cadmium (Cd)-Total	<0.000050		0.000050	mg/L		15-APR-11	R2177621
Chromium (Cr)-Total	<0.0050		0.0050	mg/L		15-APR-11	R2177621
Cobalt (Co)-Total	<0.0020		0.0020	mg/L		15-APR-11	R2177621
Copper (Cu)-Total	0.0015		0.0010	mg/L		15-APR-11	R2177621
Lead (Pb)-Total	0.00020		0.00010	mg/L		15-APR-11	R2177621
Lithium (Li)-Total	<0.010		0.010	mg/L		15-APR-11	R2177621
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		15-APR-11	R2177621
Nickel (Ni)-Total	<0.0020		0.0020	mg/L		15-APR-11	R2177621
Selenium (Se)-Total	<0.00040		0.00040	mg/L		15-APR-11	R2177621
Silver (Ag)-Total	<0.00010		0.00010	mg/L		15-APR-11	R2177621
Strontium (Sr)-Total	0.00700		0.00020	mg/L		15-APR-11	R2177621
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		15-APR-11	R2177621
Tin (Sn)-Total	<0.050		0.050	mg/L		15-APR-11	R2177621
Titanium (Ti)-Total	<0.0010		0.0010	mg/L		15-APR-11	R2177621
Uranium (U)-Total	<0.00010		0.00010	mg/L		15-APR-11	R2177621
Vanadium (V)-Total	<0.0010		0.0010	mg/L		15-APR-11	R2177621
Zinc (Zn)-Total	0.0098		0.0040	mg/L		15-APR-11	R2177621
<b>Total Metals in Water by ICPOES (Low)</b>							

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L995040-4    WS004013							
Sampled By:    KB on 10-APR-11 @ 13:30							
Matrix:        WATER							
<b>Total Metals in Water by ICPOES (Low)</b>							
Calcium (Ca)-Total	1.43		0.50	mg/L		15-APR-11	R2177265
Iron (Fe)-Total	0.016		0.010	mg/L		15-APR-11	R2177265
Magnesium (Mg)-Total	0.70		0.10	mg/L		15-APR-11	R2177265
Manganese (Mn)-Total	<0.0020		0.0020	mg/L		15-APR-11	R2177265
Potassium (K)-Total	0.48		0.10	mg/L		15-APR-11	R2177265
Sodium (Na)-Total	<1.0		1.0	mg/L		15-APR-11	R2177265
<b>Miscellaneous Parameters</b>							
Total Suspended Solids	<3.0		3.0	mg/L		15-APR-11	R2176576
<b>pH and Conductivity</b>							
pH	6.98		0.10	pH		14-APR-11	R2174970
Conductivity (EC)	14.6		0.20	uS/cm		14-APR-11	R2174970

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
HG-T-CVAA-ED	Water	Mercury (Hg) - Total	EPA 245.7 / EPA 245.1
MET-T-L-ICP-ED	Water	Total Metals in Water by ICPOES (Low)	APHA 3120 B-ICP-OES
MET-T-L-MS-ED	Water	Total Metals in Water by ICPMS (Low)	SW 846 - 6020-ICPMS
PH/EC-ED	Water	pH and Conductivity	APHA 4500-H, 2510
SOLIDS-TOTSUS-ED	Water	Total Suspended Solids	APHA 2540 D-Gravimetric

\*\* ALS test methods may incorporate modifications from specified reference methods to improve performance.

*The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:*

Laboratory Definition Code	Laboratory Location
ED	ALS ENVIRONMENTAL - EDMONTON, ALBERTA, CANADA

Chain of Custody Numbers:

C026886

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample  
 mg/kg wwt - milligrams per kilogram based on wet weight of sample  
 mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight  
 mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



MMG RESOURCES INC  
ATTN: KIMBERLEY BAILEY  
555 - 999 CANADA PLACE  
VANCOUVER BC V6C 3E1

Date Received: 20-APR-11  
Report Date: 28-APR-11 15:36 (MT)  
Version: FINAL

Client Phone: 778-373-5600

## Certificate of Analysis

**Lab Work Order #:** L996714  
Project P.O. #: 4500891125  
Job Reference: IZOK  
Legal Site Desc:  
C of C Numbers: CO20572

Susan Clark  
Account Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L996714-1 WS004014							
Sampled By: CLIENT on 16-APR-11 @ 13:00							
Matrix: WATER							
<b>Total Metals - CCME</b>							
<b>Mercury (Hg) - Total</b>							
Mercury (Hg)-Total	<0.00010		0.00010	mg/L		21-APR-11	R2179375
<b>Total Metals in Water by ICPMS (Low)</b>							
Aluminum (Al)-Total	0.023		0.010	mg/L		27-APR-11	R2181289
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		27-APR-11	R2181289
Arsenic (As)-Total	<0.00040		0.00040	mg/L		27-APR-11	R2181289
Barium (Ba)-Total	0.0038		0.0030	mg/L		27-APR-11	R2181289
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		27-APR-11	R2181289
Boron (B)-Total	<0.050		0.050	mg/L		27-APR-11	R2181289
Cadmium (Cd)-Total	<0.000050		0.000050	mg/L		27-APR-11	R2181289
Chromium (Cr)-Total	<0.0050		0.0050	mg/L		27-APR-11	R2181289
Cobalt (Co)-Total	<0.0020		0.0020	mg/L		27-APR-11	R2181289
Copper (Cu)-Total	0.0015		0.0010	mg/L		27-APR-11	R2181289
Lead (Pb)-Total	0.00030		0.00010	mg/L		27-APR-11	R2181289
Lithium (Li)-Total	<0.010		0.010	mg/L		27-APR-11	R2181289
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		27-APR-11	R2181289
Nickel (Ni)-Total	<0.0020		0.0020	mg/L		27-APR-11	R2181289
Selenium (Se)-Total	<0.00040		0.00040	mg/L		27-APR-11	R2181289
Silver (Ag)-Total	<0.00010		0.00010	mg/L		27-APR-11	R2181289
Strontium (Sr)-Total	0.00679		0.00020	mg/L		27-APR-11	R2181289
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		27-APR-11	R2181289
Tin (Sn)-Total	<0.050		0.050	mg/L		27-APR-11	R2181289
Titanium (Ti)-Total	<0.0010		0.0010	mg/L		27-APR-11	R2181289
Uranium (U)-Total	0.00010		0.00010	mg/L		27-APR-11	R2181289
Vanadium (V)-Total	<0.0010		0.0010	mg/L		27-APR-11	R2181289
Zinc (Zn)-Total	0.0060		0.0040	mg/L		27-APR-11	R2181289
<b>Total Metals in Water by ICPOES (Low)</b>							
Calcium (Ca)-Total	1.55		0.50	mg/L		25-APR-11	R2180191
Iron (Fe)-Total	<0.010		0.010	mg/L		25-APR-11	R2180191
Magnesium (Mg)-Total	0.83		0.10	mg/L		25-APR-11	R2180191
Manganese (Mn)-Total	0.0028		0.0020	mg/L		25-APR-11	R2180191
Potassium (K)-Total	0.45		0.10	mg/L		25-APR-11	R2180191
Sodium (Na)-Total	<1.0		1.0	mg/L		25-APR-11	R2180191
<b>Miscellaneous Parameters</b>							
Total Suspended Solids	<3.0		3.0	mg/L		25-APR-11	R2179917
<b>pH and Conductivity</b>							
pH	6.90		0.10	pH		21-APR-11	R2179245
Conductivity (EC)	16.5		0.20	uS/cm		21-APR-11	R2179245
L996714-2 WS004015							
Sampled By: CLIENT on 16-APR-11 @ 13:30							
Matrix: WATER							
<b>Total Metals - CCME</b>							
<b>Mercury (Hg) - Total</b>							
Mercury (Hg)-Total	<0.00010		0.00010	mg/L		21-APR-11	R2179375
<b>Total Metals in Water by ICPMS (Low)</b>							
Aluminum (Al)-Total	0.024		0.010	mg/L		27-APR-11	R2181289
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		27-APR-11	R2181289
Arsenic (As)-Total	<0.00040		0.00040	mg/L		27-APR-11	R2181289
Barium (Ba)-Total	0.0039		0.0030	mg/L		27-APR-11	R2181289
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		27-APR-11	R2181289
Boron (B)-Total	<0.050		0.050	mg/L		27-APR-11	R2181289

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.



ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L996714-2 WS004015							
Sampled By: CLIENT on 16-APR-11 @ 13:30							
Matrix: WATER							
<b>Total Metals in Water by ICPMS (Low)</b>							
Cadmium (Cd)-Total	<0.000050		0.000050	mg/L		27-APR-11	R2181289
Chromium (Cr)-Total	<0.0050		0.0050	mg/L		27-APR-11	R2181289
Cobalt (Co)-Total	<0.0020		0.0020	mg/L		27-APR-11	R2181289
Copper (Cu)-Total	0.0014		0.0010	mg/L		27-APR-11	R2181289
Lead (Pb)-Total	0.00022		0.00010	mg/L		27-APR-11	R2181289
Lithium (Li)-Total	<0.010		0.010	mg/L		27-APR-11	R2181289
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		27-APR-11	R2181289
Nickel (Ni)-Total	<0.0020		0.0020	mg/L		27-APR-11	R2181289
Selenium (Se)-Total	<0.00040		0.00040	mg/L		27-APR-11	R2181289
Silver (Ag)-Total	<0.00010		0.00010	mg/L		27-APR-11	R2181289
Strontium (Sr)-Total	0.00724		0.00020	mg/L		27-APR-11	R2181289
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		27-APR-11	R2181289
Tin (Sn)-Total	<0.050		0.050	mg/L		27-APR-11	R2181289
Titanium (Ti)-Total	<0.0010		0.0010	mg/L		27-APR-11	R2181289
Uranium (U)-Total	0.00010		0.00010	mg/L		27-APR-11	R2181289
Vanadium (V)-Total	<0.0010		0.0010	mg/L		27-APR-11	R2181289
Zinc (Zn)-Total	0.0062		0.0040	mg/L		27-APR-11	R2181289
<b>Total Metals in Water by ICPOES (Low)</b>							
Calcium (Ca)-Total	1.74		0.50	mg/L		25-APR-11	R2180191
Iron (Fe)-Total	<0.010		0.010	mg/L		25-APR-11	R2180191
Magnesium (Mg)-Total	0.89		0.10	mg/L		25-APR-11	R2180191
Manganese (Mn)-Total	0.0027		0.0020	mg/L		25-APR-11	R2180191
Potassium (K)-Total	0.44		0.10	mg/L		25-APR-11	R2180191
Sodium (Na)-Total	<1.0		1.0	mg/L		25-APR-11	R2180191
<b>Miscellaneous Parameters</b>							
Total Suspended Solids	<3.0		3.0	mg/L		25-APR-11	R2179917
<b>pH and Conductivity</b>							
pH	6.92		0.10	pH		21-APR-11	R2179245
Conductivity (EC)	17.0		0.20	uS/cm		21-APR-11	R2179245
L996714-3 WS004016							
Sampled By: CLIENT on 18-APR-11 @ 11:00							
Matrix: WATER							
<b>Total Metals - CCME</b>							
<b>Mercury (Hg) - Total</b>							
Mercury (Hg)-Total	<0.00010		0.00010	mg/L		21-APR-11	R2179375
<b>Total Metals in Water by ICPMS (Low)</b>							
Aluminum (Al)-Total	0.023		0.010	mg/L		27-APR-11	R2181289
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		27-APR-11	R2181289
Arsenic (As)-Total	<0.00040		0.00040	mg/L		27-APR-11	R2181289
Barium (Ba)-Total	0.0040		0.0030	mg/L		27-APR-11	R2181289
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		27-APR-11	R2181289
Boron (B)-Total	<0.050		0.050	mg/L		27-APR-11	R2181289
Cadmium (Cd)-Total	<0.000050		0.000050	mg/L		27-APR-11	R2181289
Chromium (Cr)-Total	<0.0050		0.0050	mg/L		27-APR-11	R2181289
Cobalt (Co)-Total	<0.0020		0.0020	mg/L		27-APR-11	R2181289
Copper (Cu)-Total	0.0017		0.0010	mg/L		27-APR-11	R2181289
Lead (Pb)-Total	0.00021		0.00010	mg/L		27-APR-11	R2181289
Lithium (Li)-Total	<0.010		0.010	mg/L		27-APR-11	R2181289
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		27-APR-11	R2181289
Nickel (Ni)-Total	<0.0020		0.0020	mg/L		27-APR-11	R2181289
Selenium (Se)-Total	<0.00040		0.00040	mg/L		27-APR-11	R2181289

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L996714-3 WS004016							
Sampled By: CLIENT on 18-APR-11 @ 11:00							
Matrix: WATER							
<b>Total Metals in Water by ICPMS (Low)</b>							
Silver (Ag)-Total	<0.00010		0.00010	mg/L		27-APR-11	R2181289
Strontium (Sr)-Total	0.00710		0.00020	mg/L		27-APR-11	R2181289
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		27-APR-11	R2181289
Tin (Sn)-Total	<0.050		0.050	mg/L		27-APR-11	R2181289
Titanium (Ti)-Total	<0.0010		0.0010	mg/L		27-APR-11	R2181289
Uranium (U)-Total	0.00010		0.00010	mg/L		27-APR-11	R2181289
Vanadium (V)-Total	<0.0010		0.0010	mg/L		27-APR-11	R2181289
Zinc (Zn)-Total	0.0079		0.0040	mg/L		27-APR-11	R2181289
<b>Total Metals in Water by ICPOES (Low)</b>							
Calcium (Ca)-Total	1.64		0.50	mg/L		25-APR-11	R2180191
Iron (Fe)-Total	<0.010		0.010	mg/L		25-APR-11	R2180191
Magnesium (Mg)-Total	0.87		0.10	mg/L		25-APR-11	R2180191
Manganese (Mn)-Total	0.0025		0.0020	mg/L		25-APR-11	R2180191
Potassium (K)-Total	0.55		0.10	mg/L		25-APR-11	R2180191
Sodium (Na)-Total	<1.0		1.0	mg/L		25-APR-11	R2180191
<b>Miscellaneous Parameters</b>							
Total Suspended Solids	<3.0		3.0	mg/L		25-APR-11	R2179917
<b>pH and Conductivity</b>							
pH	6.92		0.10	pH		21-APR-11	R2179245
Conductivity (EC)	16.6		0.20	uS/cm		21-APR-11	R2179245

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
HG-T-CVAA-ED	Water	Mercury (Hg) - Total	EPA 245.7 / EPA 245.1
MET-T-L-ICP-ED	Water	Total Metals in Water by ICPOES (Low)	APHA 3120 B-ICP-OES
MET-T-L-MS-ED	Water	Total Metals in Water by ICPMS (Low)	SW 846 - 6020-ICPMS
PH/EC-ED	Water	pH and Conductivity	APHA 4500-H, 2510
SOLIDS-TOTSUS-ED	Water	Total Suspended Solids	APHA 2540 D-Gravimetric

\*\* ALS test methods may incorporate modifications from specified reference methods to improve performance.

*The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:*

Laboratory Definition Code	Laboratory Location
ED	ALS ENVIRONMENTAL - EDMONTON, ALBERTA, CANADA

Chain of Custody Numbers:

CO20572

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample  
 mg/kg wwt - milligrams per kilogram based on wet weight of sample  
 mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight  
 mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



MMG RESOURCES INC  
ATTN: KIMBERLEY BAILEY  
555 - 999 CANADA PLACE  
VANCOUVER BC V6C 3E1

Date Received: 27-APR-11  
Report Date: 03-MAY-11 14:59 (MT)  
Version: FINAL

Client Phone: 778-373-5600

## Certificate of Analysis

**Lab Work Order #:** L998450  
Project P.O. #: 4500891125  
Job Reference: IZOK  
Legal Site Desc:  
C of C Numbers: C020573

Susan Clark  
Account Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L998450-1 WS004017							
Sampled By: CLIENT on 21-APR-11 @ 13:30							
Matrix: WATER							
<b>Total Metals - CCME</b>							
<b>Mercury (Hg) - Total</b>							
Mercury (Hg)-Total	<0.00010		0.00010	mg/L		28-APR-11	R2182332
<b>Total Metals in Water by ICPMS (Low)</b>							
Aluminum (Al)-Total	0.023		0.010	mg/L		29-APR-11	R2182267
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		29-APR-11	R2182267
Arsenic (As)-Total	<0.00040		0.00040	mg/L		29-APR-11	R2182267
Barium (Ba)-Total	0.0035		0.0030	mg/L		29-APR-11	R2182267
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		29-APR-11	R2182267
Boron (B)-Total	<0.050		0.050	mg/L		29-APR-11	R2182267
Cadmium (Cd)-Total	<0.000050		0.000050	mg/L		29-APR-11	R2182267
Chromium (Cr)-Total	<0.0050		0.0050	mg/L		29-APR-11	R2182267
Cobalt (Co)-Total	<0.0020		0.0020	mg/L		29-APR-11	R2182267
Copper (Cu)-Total	0.0016		0.0010	mg/L		29-APR-11	R2182267
Lead (Pb)-Total	0.00027		0.00010	mg/L		29-APR-11	R2182267
Lithium (Li)-Total	<0.010		0.010	mg/L		29-APR-11	R2182267
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		29-APR-11	R2182267
Nickel (Ni)-Total	<0.0020		0.0020	mg/L		29-APR-11	R2182267
Selenium (Se)-Total	<0.00040		0.00040	mg/L		29-APR-11	R2182267
Silver (Ag)-Total	<0.00010		0.00010	mg/L		29-APR-11	R2182267
Strontium (Sr)-Total	0.00803		0.00020	mg/L		29-APR-11	R2182267
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		29-APR-11	R2182267
Tin (Sn)-Total	<0.050		0.050	mg/L		29-APR-11	R2182267
Titanium (Ti)-Total	<0.0010		0.0010	mg/L		29-APR-11	R2182267
Uranium (U)-Total	0.00010		0.00010	mg/L		29-APR-11	R2182267
Vanadium (V)-Total	<0.0010		0.0010	mg/L		29-APR-11	R2182267
Zinc (Zn)-Total	0.0064		0.0040	mg/L		29-APR-11	R2182267
<b>Total Metals in Water by ICPOES (Low)</b>							
Calcium (Ca)-Total	1.56		0.50	mg/L		28-APR-11	R2182754
Iron (Fe)-Total	0.011		0.010	mg/L		28-APR-11	R2182754
Magnesium (Mg)-Total	0.74		0.10	mg/L		28-APR-11	R2182754
Manganese (Mn)-Total	0.0028		0.0020	mg/L		28-APR-11	R2182754
Potassium (K)-Total	0.48		0.10	mg/L		28-APR-11	R2182754
Sodium (Na)-Total	<1.0		1.0	mg/L		28-APR-11	R2182754
<b>Miscellaneous Parameters</b>							
Total Suspended Solids	<3.0		3.0	mg/L		28-APR-11	R2182084
<b>pH and Conductivity</b>							
pH	6.97		0.10	pH		27-APR-11	R2180814
Conductivity (EC)	15.6		0.20	uS/cm		27-APR-11	R2180814
L998450-2 WS004018							
Sampled By: CLIENT on 21-APR-11 @ 14:00							
Matrix: WATER							
<b>Total Metals - CCME</b>							
<b>Mercury (Hg) - Total</b>							
Mercury (Hg)-Total	<0.00010		0.00010	mg/L		28-APR-11	R2182332
<b>Total Metals in Water by ICPMS (Low)</b>							
Aluminum (Al)-Total	0.024		0.010	mg/L		29-APR-11	R2182267
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		29-APR-11	R2182267
Arsenic (As)-Total	<0.00040		0.00040	mg/L		29-APR-11	R2182267
Barium (Ba)-Total	0.0038		0.0030	mg/L		29-APR-11	R2182267
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		29-APR-11	R2182267
Boron (B)-Total	<0.050		0.050	mg/L		29-APR-11	R2182267

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L998450-2 WS004018 Sampled By: CLIENT on 21-APR-11 @ 14:00 Matrix: WATER							
<b>Total Metals in Water by ICPMS (Low)</b>							
Cadmium (Cd)-Total	<0.000050		0.000050	mg/L		29-APR-11	R2182267
Chromium (Cr)-Total	<0.0050		0.0050	mg/L		29-APR-11	R2182267
Cobalt (Co)-Total	<0.0020		0.0020	mg/L		29-APR-11	R2182267
Copper (Cu)-Total	0.0016		0.0010	mg/L		29-APR-11	R2182267
Lead (Pb)-Total	0.00035		0.00010	mg/L		29-APR-11	R2182267
Lithium (Li)-Total	<0.010		0.010	mg/L		29-APR-11	R2182267
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		29-APR-11	R2182267
Nickel (Ni)-Total	<0.0020		0.0020	mg/L		29-APR-11	R2182267
Selenium (Se)-Total	<0.00040		0.00040	mg/L		29-APR-11	R2182267
Silver (Ag)-Total	<0.00010		0.00010	mg/L		29-APR-11	R2182267
Strontium (Sr)-Total	0.00848		0.00020	mg/L		29-APR-11	R2182267
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		29-APR-11	R2182267
Tin (Sn)-Total	<0.050		0.050	mg/L		29-APR-11	R2182267
Titanium (Ti)-Total	<0.0010		0.0010	mg/L		29-APR-11	R2182267
Uranium (U)-Total	0.00011		0.00010	mg/L		29-APR-11	R2182267
Vanadium (V)-Total	<0.0010		0.0010	mg/L		29-APR-11	R2182267
Zinc (Zn)-Total	0.0063		0.0040	mg/L		29-APR-11	R2182267
<b>Total Metals in Water by ICPOES (Low)</b>							
Calcium (Ca)-Total	1.68		0.50	mg/L		28-APR-11	R2182754
Iron (Fe)-Total	<0.010		0.010	mg/L		28-APR-11	R2182754
Magnesium (Mg)-Total	0.81		0.10	mg/L		28-APR-11	R2182754
Manganese (Mn)-Total	0.0034		0.0020	mg/L		28-APR-11	R2182754
Potassium (K)-Total	0.58		0.10	mg/L		28-APR-11	R2182754
Sodium (Na)-Total	<1.0		1.0	mg/L		28-APR-11	R2182754
<b>Miscellaneous Parameters</b>							
Total Suspended Solids	<3.0		3.0	mg/L		28-APR-11	R2182084
<b>pH and Conductivity</b>							
pH	6.95		0.10	pH		27-APR-11	R2180814
Conductivity (EC)	16.8		0.20	uS/cm		27-APR-11	R2180814
L998450-3 WS004019 Sampled By: CLIENT on 24-APR-11 @ 13:30 Matrix: WATER							
<b>Total Metals - CCME</b>							
<b>Mercury (Hg) - Total</b>							
Mercury (Hg)-Total	<0.00010		0.00010	mg/L		28-APR-11	R2182332
<b>Total Metals in Water by ICPMS (Low)</b>							
Aluminum (Al)-Total	0.021		0.010	mg/L		29-APR-11	R2182267
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		29-APR-11	R2182267
Arsenic (As)-Total	<0.00040		0.00040	mg/L		29-APR-11	R2182267
Barium (Ba)-Total	0.0044		0.0030	mg/L		29-APR-11	R2182267
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		29-APR-11	R2182267
Boron (B)-Total	<0.050		0.050	mg/L		29-APR-11	R2182267
Cadmium (Cd)-Total	<0.000050		0.000050	mg/L		29-APR-11	R2182267
Chromium (Cr)-Total	<0.0050		0.0050	mg/L		29-APR-11	R2182267
Cobalt (Co)-Total	<0.0020		0.0020	mg/L		29-APR-11	R2182267
Copper (Cu)-Total	0.0017		0.0010	mg/L		29-APR-11	R2182267
Lead (Pb)-Total	0.00062		0.00010	mg/L		29-APR-11	R2182267
Lithium (Li)-Total	<0.010		0.010	mg/L		29-APR-11	R2182267
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		29-APR-11	R2182267
Nickel (Ni)-Total	<0.0020		0.0020	mg/L		29-APR-11	R2182267
Selenium (Se)-Total	<0.00040		0.00040	mg/L		29-APR-11	R2182267

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L998450-3 WS004019							
Sampled By: CLIENT on 24-APR-11 @ 13:30							
Matrix: WATER							
<b>Total Metals in Water by ICPMS (Low)</b>							
Silver (Ag)-Total	<0.00010		0.00010	mg/L		29-APR-11	R2182267
Strontium (Sr)-Total	0.00768		0.00020	mg/L		29-APR-11	R2182267
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		29-APR-11	R2182267
Tin (Sn)-Total	<0.050		0.050	mg/L		29-APR-11	R2182267
Titanium (Ti)-Total	<0.0010		0.0010	mg/L		29-APR-11	R2182267
Uranium (U)-Total	0.00010		0.00010	mg/L		29-APR-11	R2182267
Vanadium (V)-Total	<0.0010		0.0010	mg/L		29-APR-11	R2182267
Zinc (Zn)-Total	0.0070		0.0040	mg/L		29-APR-11	R2182267
<b>Total Metals in Water by ICPOES (Low)</b>							
Calcium (Ca)-Total	1.63		0.50	mg/L		28-APR-11	R2182754
Iron (Fe)-Total	<0.010		0.010	mg/L		28-APR-11	R2182754
Magnesium (Mg)-Total	0.74		0.10	mg/L		28-APR-11	R2182754
Manganese (Mn)-Total	0.0033		0.0020	mg/L		28-APR-11	R2182754
Potassium (K)-Total	0.51		0.10	mg/L		28-APR-11	R2182754
Sodium (Na)-Total	<1.0		1.0	mg/L		28-APR-11	R2182754
<b>Miscellaneous Parameters</b>							
Total Suspended Solids	<3.0		3.0	mg/L		28-APR-11	R2182084
<b>pH and Conductivity</b>							
pH	6.92		0.10	pH		27-APR-11	R2180814
Conductivity (EC)	16.6		0.20	uS/cm		27-APR-11	R2180814

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## Reference Information

## Qualifiers for Individual Samples Listed:

Sample Number	Client ID	Qualifier	Description
L998450-1	WS004017	LPM	total metals - Lab Preserved for Metals. Received with pH > 2, preserved at the lab and held for 16 hours in accordance with EPA 200.8
L998450-2	WS004018	LPM	total metals - Lab Preserved for Metals. Received with pH > 2, preserved at the lab and held for 16 hours in accordance with EPA 200.8
L998450-3	WS004019	LPM	total metals - Lab Preserved for Metals. Received with pH > 2, preserved at the lab and held for 16 hours in accordance with EPA 200.8

## Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
HG-T-CVAA-ED	Water	Mercury (Hg) - Total	EPA 245.7 / EPA 245.1
MET-T-L-ICP-ED	Water	Total Metals in Water by ICPOES (Low)	APHA 3120 B-ICP-OES
MET-T-L-MS-ED	Water	Total Metals in Water by ICPMS (Low)	SW 846 - 6020-ICPMS
PH/EC-ED	Water	pH and Conductivity	APHA 4500-H, 2510
SOLIDS-TOTSUS-ED	Water	Total Suspended Solids	APHA 2540 D-Gravimetric

\*\* ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
ED	ALS ENVIRONMENTAL - EDMONTON, ALBERTA, CANADA

## Chain of Custody Numbers:

C020573

## GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample  
 mg/kg wwt - milligrams per kilogram based on wet weight of sample  
 mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight  
 mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.





MMG RESOURCES INC  
ATTN: KIMBERLEY BAILEY  
555 - 999 CANADA PLACE  
VANCOUVER BC V6C 3E1

Date Received: 05-MAY-11  
Report Date: 12-MAY-11 14:32 (MT)  
Version: FINAL

Client Phone: 778-373-5600

## Certificate of Analysis

**Lab Work Order #:** L1001405  
Project P.O. #: 4500891125  
Job Reference: IZOK  
Legal Site Desc:  
C of C Numbers: c020571

Susan Clark  
Account Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1001405-1 WS 004020							
Sampled By: CLIENT on 28-APR-11 @ 14:00							
Matrix: WATER							
<b>Total Metals - CCME</b>							
<b>Mercury (Hg) - Total</b>							
Mercury (Hg)-Total	<0.00010		0.00010	mg/L		06-MAY-11	R2185652
<b>Total Metals in Water by ICPMS (Low)</b>							
Aluminum (Al)-Total	0.018		0.010	mg/L		06-MAY-11	R2186574
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		06-MAY-11	R2186574
Arsenic (As)-Total	<0.00040		0.00040	mg/L		06-MAY-11	R2186574
Barium (Ba)-Total	<0.0030		0.0030	mg/L		06-MAY-11	R2186574
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		06-MAY-11	R2186574
Boron (B)-Total	<0.050		0.050	mg/L		06-MAY-11	R2186574
Cadmium (Cd)-Total	<0.000050		0.000050	mg/L		06-MAY-11	R2186574
Chromium (Cr)-Total	<0.0050		0.0050	mg/L		06-MAY-11	R2186574
Cobalt (Co)-Total	<0.0020		0.0020	mg/L		06-MAY-11	R2186574
Copper (Cu)-Total	0.0014		0.0010	mg/L		06-MAY-11	R2186574
Lead (Pb)-Total	0.00036		0.00010	mg/L		06-MAY-11	R2186574
Lithium (Li)-Total	<0.010		0.010	mg/L		06-MAY-11	R2186574
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		06-MAY-11	R2186574
Nickel (Ni)-Total	<0.0020		0.0020	mg/L		06-MAY-11	R2186574
Selenium (Se)-Total	<0.00040		0.00040	mg/L		06-MAY-11	R2186574
Silver (Ag)-Total	<0.00010		0.00010	mg/L		06-MAY-11	R2186574
Strontium (Sr)-Total	0.00525		0.00020	mg/L		06-MAY-11	R2186574
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		06-MAY-11	R2186574
Tin (Sn)-Total	<0.050		0.050	mg/L		06-MAY-11	R2186574
Titanium (Ti)-Total	<0.0010		0.0010	mg/L		06-MAY-11	R2186574
Uranium (U)-Total	<0.00010		0.00010	mg/L		06-MAY-11	R2186574
Vanadium (V)-Total	<0.0010		0.0010	mg/L		06-MAY-11	R2186574
Zinc (Zn)-Total	<0.0040		0.0040	mg/L		06-MAY-11	R2186574
<b>Total Metals in Water by ICPOES (Low)</b>							
Calcium (Ca)-Total	1.06		0.50	mg/L		06-MAY-11	R2186328
Iron (Fe)-Total	0.010		0.010	mg/L		06-MAY-11	R2186328
Magnesium (Mg)-Total	0.59		0.10	mg/L		06-MAY-11	R2186328
Manganese (Mn)-Total	<0.0020		0.0020	mg/L		06-MAY-11	R2186328
Potassium (K)-Total	0.40		0.10	mg/L		06-MAY-11	R2186328
Sodium (Na)-Total	<1.0		1.0	mg/L		06-MAY-11	R2186328
<b>Miscellaneous Parameters</b>							
Total Suspended Solids	<3.0		3.0	mg/L		06-MAY-11	R2185706
<b>pH and Conductivity</b>							
pH	6.96		0.10	pH		05-MAY-11	R2185129
Conductivity (EC)	15.4		0.20	uS/cm		05-MAY-11	R2185129
L1001405-2 WS 004021							
Sampled By: CLIENT on 28-APR-11 @ 14:30							
Matrix: WATER							
<b>Total Metals - CCME</b>							
<b>Mercury (Hg) - Total</b>							
Mercury (Hg)-Total	<0.00010		0.00010	mg/L		06-MAY-11	R2185652
<b>Total Metals in Water by ICPMS (Low)</b>							
Aluminum (Al)-Total	0.023		0.010	mg/L		06-MAY-11	R2186574
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		06-MAY-11	R2186574
Arsenic (As)-Total	<0.00040		0.00040	mg/L		06-MAY-11	R2186574
Barium (Ba)-Total	0.0040		0.0030	mg/L		06-MAY-11	R2186574
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		06-MAY-11	R2186574
Boron (B)-Total	<0.050		0.050	mg/L		06-MAY-11	R2186574

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1001405-2 WS 004021 Sampled By: CLIENT on 28-APR-11 @ 14:30 Matrix: WATER							
<b>Total Metals in Water by ICPMS (Low)</b>							
Cadmium (Cd)-Total	<0.000050		0.000050	mg/L		06-MAY-11	R2186574
Chromium (Cr)-Total	<0.0050		0.0050	mg/L		06-MAY-11	R2186574
Cobalt (Co)-Total	<0.0020		0.0020	mg/L		06-MAY-11	R2186574
Copper (Cu)-Total	0.0021		0.0010	mg/L		06-MAY-11	R2186574
Lead (Pb)-Total	0.00042		0.00010	mg/L		06-MAY-11	R2186574
Lithium (Li)-Total	<0.010		0.010	mg/L		06-MAY-11	R2186574
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		06-MAY-11	R2186574
Nickel (Ni)-Total	<0.0020		0.0020	mg/L		06-MAY-11	R2186574
Selenium (Se)-Total	<0.00040		0.00040	mg/L		06-MAY-11	R2186574
Silver (Ag)-Total	<0.00010		0.00010	mg/L		06-MAY-11	R2186574
Strontium (Sr)-Total	0.00673		0.00020	mg/L		06-MAY-11	R2186574
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		06-MAY-11	R2186574
Tin (Sn)-Total	<0.050		0.050	mg/L		06-MAY-11	R2186574
Titanium (Ti)-Total	<0.0010		0.0010	mg/L		06-MAY-11	R2186574
Uranium (U)-Total	<0.00010		0.00010	mg/L		06-MAY-11	R2186574
Vanadium (V)-Total	<0.0010		0.0010	mg/L		06-MAY-11	R2186574
Zinc (Zn)-Total	0.0070		0.0040	mg/L		06-MAY-11	R2186574
<b>Total Metals in Water by ICPOES (Low)</b>							
Calcium (Ca)-Total	1.50		0.50	mg/L		06-MAY-11	R2186328
Iron (Fe)-Total	0.011		0.010	mg/L		06-MAY-11	R2186328
Magnesium (Mg)-Total	0.75		0.10	mg/L		06-MAY-11	R2186328
Manganese (Mn)-Total	<0.0020		0.0020	mg/L		06-MAY-11	R2186328
Potassium (K)-Total	0.51		0.10	mg/L		06-MAY-11	R2186328
Sodium (Na)-Total	<1.0		1.0	mg/L		06-MAY-11	R2186328
<b>Miscellaneous Parameters</b>							
Total Suspended Solids	<3.0		3.0	mg/L		06-MAY-11	R2185706
<b>pH and Conductivity</b>							
pH	6.96		0.10	pH		05-MAY-11	R2185129
Conductivity (EC)	18.6		0.20	uS/cm		05-MAY-11	R2185129
L1001405-3 WS 004022 Sampled By: CLIENT on 28-APR-11 @ 14:50 Matrix: WATER							
<b>Total Metals - CCME</b>							
<b>Mercury (Hg) - Total</b>							
Mercury (Hg)-Total	<0.00010		0.00010	mg/L		06-MAY-11	R2185652
<b>Total Metals in Water by ICPMS (Low)</b>							
Aluminum (Al)-Total	0.021		0.010	mg/L		06-MAY-11	R2186574
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		06-MAY-11	R2186574
Arsenic (As)-Total	<0.00040		0.00040	mg/L		06-MAY-11	R2186574
Barium (Ba)-Total	0.0039		0.0030	mg/L		06-MAY-11	R2186574
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		06-MAY-11	R2186574
Boron (B)-Total	<0.050		0.050	mg/L		06-MAY-11	R2186574
Cadmium (Cd)-Total	<0.000050		0.000050	mg/L		06-MAY-11	R2186574
Chromium (Cr)-Total	<0.0050		0.0050	mg/L		06-MAY-11	R2186574
Cobalt (Co)-Total	<0.0020		0.0020	mg/L		06-MAY-11	R2186574
Copper (Cu)-Total	0.0016		0.0010	mg/L		06-MAY-11	R2186574
Lead (Pb)-Total	0.00038		0.00010	mg/L		06-MAY-11	R2186574
Lithium (Li)-Total	<0.010		0.010	mg/L		06-MAY-11	R2186574
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		06-MAY-11	R2186574
Nickel (Ni)-Total	<0.0020		0.0020	mg/L		06-MAY-11	R2186574
Selenium (Se)-Total	<0.00040		0.00040	mg/L		06-MAY-11	R2186574

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1001405-3 WS 004022							
Sampled By: CLIENT on 28-APR-11 @ 14:50							
Matrix: WATER							
<b>Total Metals in Water by ICPMS (Low)</b>							
Silver (Ag)-Total	<0.00010		0.00010	mg/L		06-MAY-11	R2186574
Strontium (Sr)-Total	0.00721		0.00020	mg/L		06-MAY-11	R2186574
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		06-MAY-11	R2186574
Tin (Sn)-Total	<0.050		0.050	mg/L		06-MAY-11	R2186574
Titanium (Ti)-Total	<0.0010		0.0010	mg/L		06-MAY-11	R2186574
Uranium (U)-Total	<0.00010		0.00010	mg/L		06-MAY-11	R2186574
Vanadium (V)-Total	<0.0010		0.0010	mg/L		06-MAY-11	R2186574
Zinc (Zn)-Total	0.0067		0.0040	mg/L		06-MAY-11	R2186574
<b>Total Metals in Water by ICPOES (Low)</b>							
Calcium (Ca)-Total	1.54		0.50	mg/L		06-MAY-11	R2186328
Iron (Fe)-Total	0.012		0.010	mg/L		06-MAY-11	R2186328
Magnesium (Mg)-Total	0.85		0.10	mg/L		06-MAY-11	R2186328
Manganese (Mn)-Total	<0.0020		0.0020	mg/L		06-MAY-11	R2186328
Potassium (K)-Total	0.55		0.10	mg/L		06-MAY-11	R2186328
Sodium (Na)-Total	<1.0		1.0	mg/L		06-MAY-11	R2186328
<b>Miscellaneous Parameters</b>							
Total Suspended Solids	<3.0		3.0	mg/L		06-MAY-11	R2185706
<b>pH and Conductivity</b>							
pH	6.97		0.10	pH		05-MAY-11	R2185129
Conductivity (EC)	18.9		0.20	uS/cm		05-MAY-11	R2185129

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## Reference Information

## Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
HG-T-CVAA-ED	Water	Mercury (Hg) - Total	EPA 245.7 / EPA 245.1
MET-T-L-ICP-ED	Water	Total Metals in Water by ICPOES (Low)	APHA 3120 B-ICP-OES
MET-T-L-MS-ED	Water	Total Metals in Water by ICPMS (Low)	SW 846 - 6020-ICPMS
PH/EC-ED	Water	pH and Conductivity	APHA 4500-H, 2510
SOLIDS-TOTSUS-ED	Water	Total Suspended Solids	APHA 2540 D-Gravimetric

\*\* ALS test methods may incorporate modifications from specified reference methods to improve performance.

*The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:*

Laboratory Definition Code	Laboratory Location
ED	ALS ENVIRONMENTAL - EDMONTON, ALBERTA, CANADA

## Chain of Custody Numbers:

c020571

## GLOSSARY OF REPORT TERMS

*Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.*

*mg/kg - milligrams per kilogram based on dry weight of sample*

*mg/kg wwt - milligrams per kilogram based on wet weight of sample*

*mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight*

*mg/L - unit of concentration based on volume, parts per million.*

*< - Less than.*

*D.L. - The reporting limit.*

*N/A - Result not available. Refer to qualifier code and definition for explanation.*

*Test results reported relate only to the samples as received by the laboratory.*

*UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.*

*Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.*



MMG RESOURCES INC  
ATTN: KIMBERLEY BAILEY  
555 - 999 CANADA PLACE  
VANCOUVER BC V6C 3E1

Date Received: 12-MAY-11  
Report Date: 19-MAY-11 09:06 (MT)  
Version: FINAL

Client Phone: 778-373-5600

## Certificate of Analysis

**Lab Work Order #:** L1004177  
Project P.O. #: 4500891125  
Job Reference: IZOK  
Legal Site Desc:  
C of C Numbers: C026887

Susan Clark  
Account Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1004177-1 WS004023							
Sampled By: CLIENT on 05-MAY-11 @ 14:00							
Matrix: WATER							
<b>Total Metals - CCME</b>							
<b>Mercury (Hg) - Total</b>							
Mercury (Hg)-Total	<0.00010		0.00010	mg/L		13-MAY-11	R2188688
<b>Total Metals in Water by ICPMS (Low)</b>							
Aluminum (Al)-Total	0.028		0.010	mg/L		13-MAY-11	R2189634
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		13-MAY-11	R2189634
Arsenic (As)-Total	<0.00040		0.00040	mg/L		13-MAY-11	R2189634
Barium (Ba)-Total	0.0042		0.0030	mg/L		13-MAY-11	R2189634
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		13-MAY-11	R2189634
Boron (B)-Total	<0.050		0.050	mg/L		13-MAY-11	R2189634
Cadmium (Cd)-Total	0.000052		0.000050	mg/L		13-MAY-11	R2189634
Chromium (Cr)-Total	<0.0050		0.0050	mg/L		13-MAY-11	R2189634
Cobalt (Co)-Total	<0.0020		0.0020	mg/L		13-MAY-11	R2189634
Copper (Cu)-Total	0.0027		0.0010	mg/L		13-MAY-11	R2189634
Lead (Pb)-Total	0.00088		0.00010	mg/L		13-MAY-11	R2189634
Lithium (Li)-Total	<0.010		0.010	mg/L		13-MAY-11	R2189634
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		13-MAY-11	R2189634
Nickel (Ni)-Total	<0.0020		0.0020	mg/L		13-MAY-11	R2189634
Selenium (Se)-Total	<0.00040		0.00040	mg/L		13-MAY-11	R2189634
Silver (Ag)-Total	<0.00010		0.00010	mg/L		13-MAY-11	R2189634
Strontium (Sr)-Total	0.00693		0.00020	mg/L		13-MAY-11	R2189634
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		13-MAY-11	R2189634
Tin (Sn)-Total	<0.050		0.050	mg/L		13-MAY-11	R2189634
Titanium (Ti)-Total	<0.0010		0.0010	mg/L		13-MAY-11	R2189634
Uranium (U)-Total	<0.00010		0.00010	mg/L		13-MAY-11	R2189634
Vanadium (V)-Total	<0.0010		0.0010	mg/L		13-MAY-11	R2189634
Zinc (Zn)-Total	0.0134		0.0040	mg/L		13-MAY-11	R2189634
<b>Total Metals in Water by ICPOES (Low)</b>							
Calcium (Ca)-Total	1.85		0.50	mg/L		13-MAY-11	R2188782
Iron (Fe)-Total	0.033		0.010	mg/L		13-MAY-11	R2188782
Magnesium (Mg)-Total	0.82		0.10	mg/L		13-MAY-11	R2188782
Manganese (Mn)-Total	0.0028		0.0020	mg/L		13-MAY-11	R2188782
Potassium (K)-Total	0.48		0.10	mg/L		13-MAY-11	R2188782
Sodium (Na)-Total	<1.0		1.0	mg/L		13-MAY-11	R2188782
<b>Miscellaneous Parameters</b>							
Total Suspended Solids	<3.0		3.0	mg/L		13-MAY-11	R2188680
<b>pH and Conductivity</b>							
pH	6.87		0.10	pH		12-MAY-11	R2188390
Conductivity (EC)	17.4		0.20	uS/cm		12-MAY-11	R2188390
L1004177-2 WS004024							
Sampled By: CLIENT on 05-MAY-11 @ 14:15							
Matrix: WATER							
<b>Total Metals - CCME</b>							
<b>Mercury (Hg) - Total</b>							
Mercury (Hg)-Total	<0.00010		0.00010	mg/L		13-MAY-11	R2188688
<b>Total Metals in Water by ICPMS (Low)</b>							
Aluminum (Al)-Total	0.041		0.010	mg/L		16-MAY-11	R2190281
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		16-MAY-11	R2190281
Arsenic (As)-Total	<0.00040		0.00040	mg/L		16-MAY-11	R2190281
Barium (Ba)-Total	0.0044		0.0030	mg/L		16-MAY-11	R2190281
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		16-MAY-11	R2190281
Boron (B)-Total	<0.050		0.050	mg/L		16-MAY-11	R2190281

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1004177-2 WS004024 Sampled By: CLIENT on 05-MAY-11 @ 14:15 Matrix: WATER							
<b>Total Metals in Water by ICPMS (Low)</b>							
Cadmium (Cd)-Total	<0.000050		0.000050	mg/L		16-MAY-11	R2190281
Chromium (Cr)-Total	<0.0050		0.0050	mg/L		16-MAY-11	R2190281
Cobalt (Co)-Total	<0.0020		0.0020	mg/L		16-MAY-11	R2190281
Copper (Cu)-Total	0.0021		0.0010	mg/L		16-MAY-11	R2190281
Lead (Pb)-Total	0.00056		0.00010	mg/L		16-MAY-11	R2190281
Lithium (Li)-Total	<0.010		0.010	mg/L		16-MAY-11	R2190281
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		16-MAY-11	R2190281
Nickel (Ni)-Total	<0.0020		0.0020	mg/L		16-MAY-11	R2190281
Selenium (Se)-Total	<0.00040		0.00040	mg/L		16-MAY-11	R2190281
Silver (Ag)-Total	<0.00010		0.00010	mg/L		16-MAY-11	R2190281
Strontium (Sr)-Total	0.00846		0.00020	mg/L		16-MAY-11	R2190281
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		16-MAY-11	R2190281
Tin (Sn)-Total	<0.050		0.050	mg/L		16-MAY-11	R2190281
Titanium (Ti)-Total	<0.0010		0.0010	mg/L		16-MAY-11	R2190281
Uranium (U)-Total	0.00013		0.00010	mg/L		16-MAY-11	R2190281
Vanadium (V)-Total	<0.00010		0.0010	mg/L		16-MAY-11	R2190281
Zinc (Zn)-Total	0.0103		0.0040	mg/L		16-MAY-11	R2190281
<b>Total Metals in Water by ICPOES (Low)</b>							
Calcium (Ca)-Total	1.76		0.50	mg/L		13-MAY-11	R2188782
Iron (Fe)-Total	0.054		0.010	mg/L		13-MAY-11	R2188782
Magnesium (Mg)-Total	0.88		0.10	mg/L		13-MAY-11	R2188782
Manganese (Mn)-Total	0.0022		0.0020	mg/L		13-MAY-11	R2188782
Potassium (K)-Total	0.58		0.10	mg/L		13-MAY-11	R2188782
Sodium (Na)-Total	<1.0		1.0	mg/L		13-MAY-11	R2188782
<b>Miscellaneous Parameters</b>							
Total Suspended Solids	<3.0		3.0	mg/L		13-MAY-11	R2188680
<b>pH and Conductivity</b>							
pH	6.95		0.10	pH		12-MAY-11	R2188390
Conductivity (EC)	17.9		0.20	uS/cm		12-MAY-11	R2188390
L1004177-3 WS004025 Sampled By: CLIENT on 07-MAY-11 @ 13:50 Matrix: WATER							
<b>Total Metals - CCME</b>							
<b>Mercury (Hg) - Total</b>							
Mercury (Hg)-Total	<0.00010		0.00010	mg/L		13-MAY-11	R2188688
<b>Total Metals in Water by ICPMS (Low)</b>							
Aluminum (Al)-Total	0.028		0.010	mg/L		13-MAY-11	R2189634
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		13-MAY-11	R2189634
Arsenic (As)-Total	<0.00040		0.00040	mg/L		13-MAY-11	R2189634
Barium (Ba)-Total	0.0047		0.0030	mg/L		13-MAY-11	R2189634
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		13-MAY-11	R2189634
Boron (B)-Total	<0.050		0.050	mg/L		13-MAY-11	R2189634
Cadmium (Cd)-Total	<0.000050		0.000050	mg/L		13-MAY-11	R2189634
Chromium (Cr)-Total	<0.0050		0.0050	mg/L		13-MAY-11	R2189634
Cobalt (Co)-Total	<0.0020		0.0020	mg/L		13-MAY-11	R2189634
Copper (Cu)-Total	0.0024		0.0010	mg/L		13-MAY-11	R2189634
Lead (Pb)-Total	0.00080		0.00010	mg/L		13-MAY-11	R2189634
Lithium (Li)-Total	<0.010		0.010	mg/L		13-MAY-11	R2189634
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		13-MAY-11	R2189634
Nickel (Ni)-Total	<0.0020		0.0020	mg/L		13-MAY-11	R2189634
Selenium (Se)-Total	<0.00040		0.00040	mg/L		13-MAY-11	R2189634

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.



ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1004177-3 WS004025							
Sampled By: CLIENT on 07-MAY-11 @ 13:50							
Matrix: WATER							
<b>Total Metals in Water by ICPMS (Low)</b>							
Silver (Ag)-Total	<0.00010		0.00010	mg/L		13-MAY-11	R2189634
Strontium (Sr)-Total	0.00808		0.00020	mg/L		13-MAY-11	R2189634
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		13-MAY-11	R2189634
Tin (Sn)-Total	<0.050		0.050	mg/L		13-MAY-11	R2189634
Titanium (Ti)-Total	<0.0010		0.0010	mg/L		13-MAY-11	R2189634
Uranium (U)-Total	0.00011		0.00010	mg/L		13-MAY-11	R2189634
Vanadium (V)-Total	<0.0010		0.0010	mg/L		13-MAY-11	R2189634
Zinc (Zn)-Total	0.0135		0.0040	mg/L		13-MAY-11	R2189634
<b>Total Metals in Water by ICPOES (Low)</b>							
Calcium (Ca)-Total	1.79		0.50	mg/L		13-MAY-11	R2188782
Iron (Fe)-Total	0.026		0.010	mg/L		13-MAY-11	R2188782
Magnesium (Mg)-Total	0.96		0.10	mg/L		13-MAY-11	R2188782
Manganese (Mn)-Total	0.0024		0.0020	mg/L		13-MAY-11	R2188782
Potassium (K)-Total	0.58		0.10	mg/L		13-MAY-11	R2188782
Sodium (Na)-Total	<1.0		1.0	mg/L		13-MAY-11	R2188782
<b>Miscellaneous Parameters</b>							
Total Suspended Solids	<3.0		3.0	mg/L		13-MAY-11	R2188680
<b>pH and Conductivity</b>							
pH	6.92		0.10	pH		12-MAY-11	R2188390
Conductivity (EC)	18.0		0.20	uS/cm		12-MAY-11	R2188390
L1004177-4 WS004026							
Sampled By: CLIENT on 07-MAY-11 @ 14:15							
Matrix: WATER							
<b>Total Metals - CCME</b>							
<b>Mercury (Hg) - Total</b>							
Mercury (Hg)-Total	<0.00010		0.00010	mg/L		13-MAY-11	R2188688
<b>Total Metals in Water by ICPMS (Low)</b>							
Aluminum (Al)-Total	0.025		0.010	mg/L		13-MAY-11	R2189634
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		13-MAY-11	R2189634
Arsenic (As)-Total	<0.00040		0.00040	mg/L		13-MAY-11	R2189634
Barium (Ba)-Total	0.0036		0.0030	mg/L		13-MAY-11	R2189634
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		13-MAY-11	R2189634
Boron (B)-Total	<0.050		0.050	mg/L		13-MAY-11	R2189634
Cadmium (Cd)-Total	<0.000050		0.000050	mg/L		13-MAY-11	R2189634
Chromium (Cr)-Total	<0.0050		0.0050	mg/L		13-MAY-11	R2189634
Cobalt (Co)-Total	<0.0020		0.0020	mg/L		13-MAY-11	R2189634
Copper (Cu)-Total	0.0017		0.0010	mg/L		13-MAY-11	R2189634
Lead (Pb)-Total	0.00023		0.00010	mg/L		13-MAY-11	R2189634
Lithium (Li)-Total	<0.010		0.010	mg/L		13-MAY-11	R2189634
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		13-MAY-11	R2189634
Nickel (Ni)-Total	<0.0020		0.0020	mg/L		13-MAY-11	R2189634
Selenium (Se)-Total	<0.00040		0.00040	mg/L		13-MAY-11	R2189634
Silver (Ag)-Total	<0.00010		0.00010	mg/L		13-MAY-11	R2189634
Strontium (Sr)-Total	0.00754		0.00020	mg/L		13-MAY-11	R2189634
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		13-MAY-11	R2189634
Tin (Sn)-Total	<0.050		0.050	mg/L		13-MAY-11	R2189634
Titanium (Ti)-Total	<0.0010		0.0010	mg/L		13-MAY-11	R2189634
Uranium (U)-Total	0.00010		0.00010	mg/L		13-MAY-11	R2189634
Vanadium (V)-Total	<0.0010		0.0010	mg/L		13-MAY-11	R2189634
Zinc (Zn)-Total	0.0073		0.0040	mg/L		13-MAY-11	R2189634
<b>Total Metals in Water by ICPOES (Low)</b>							

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1004177-4 WS004026 Sampled By: CLIENT on 07-MAY-11 @ 14:15 Matrix: WATER <b>Total Metals in Water by ICPOES (Low)</b> Calcium (Ca)-Total 1.61 0.50 mg/L 13-MAY-11 R2188782 Iron (Fe)-Total <0.010 0.010 mg/L 13-MAY-11 R2188782 Magnesium (Mg)-Total 0.90 0.10 mg/L 13-MAY-11 R2188782 Manganese (Mn)-Total 0.0026 0.0020 mg/L 13-MAY-11 R2188782 Potassium (K)-Total 0.55 0.10 mg/L 13-MAY-11 R2188782 Sodium (Na)-Total <1.0 1.0 mg/L 13-MAY-11 R2188782 <b>Miscellaneous Parameters</b> Total Suspended Solids <3.0 3.0 mg/L 13-MAY-11 R2188680 <b>pH and Conductivity</b> pH 6.94 0.10 pH 12-MAY-11 R2188390 Conductivity (EC) 17.9 0.20 uS/cm 12-MAY-11 R2188390							
L1004177-5 WS004027 Sampled By: CLIENT on 07-MAY-11 @ 14:40 Matrix: WATER <b>Total Metals - CCME</b> <b>Mercury (Hg) - Total</b> Mercury (Hg)-Total <0.00010 0.00010 mg/L 13-MAY-11 R2188688 <b>Total Metals in Water by ICPMS (Low)</b> Aluminum (Al)-Total 0.022 0.010 mg/L 13-MAY-11 R2189634 Antimony (Sb)-Total <0.00040 0.00040 mg/L 13-MAY-11 R2189634 Arsenic (As)-Total <0.00040 0.00040 mg/L 13-MAY-11 R2189634 Barium (Ba)-Total <0.0030 0.0030 mg/L 13-MAY-11 R2189634 Beryllium (Be)-Total <0.0010 0.0010 mg/L 13-MAY-11 R2189634 Boron (B)-Total <0.050 0.050 mg/L 13-MAY-11 R2189634 Cadmium (Cd)-Total <0.000050 0.000050 mg/L 13-MAY-11 R2189634 Chromium (Cr)-Total <0.0050 0.0050 mg/L 13-MAY-11 R2189634 Cobalt (Co)-Total <0.0020 0.0020 mg/L 13-MAY-11 R2189634 Copper (Cu)-Total 0.0012 0.0010 mg/L 13-MAY-11 R2189634 Lead (Pb)-Total <0.00010 0.00010 mg/L 13-MAY-11 R2189634 Lithium (Li)-Total <0.010 0.010 mg/L 13-MAY-11 R2189634 Molybdenum (Mo)-Total <0.0050 0.0050 mg/L 13-MAY-11 R2189634 Nickel (Ni)-Total <0.0020 0.0020 mg/L 13-MAY-11 R2189634 Selenium (Se)-Total <0.00040 0.00040 mg/L 13-MAY-11 R2189634 Silver (Ag)-Total <0.00010 0.00010 mg/L 13-MAY-11 R2189634 Strontium (Sr)-Total 0.00638 0.00020 mg/L 13-MAY-11 R2189634 Thallium (Tl)-Total <0.00010 0.00010 mg/L 13-MAY-11 R2189634 Tin (Sn)-Total <0.050 0.050 mg/L 13-MAY-11 R2189634 Titanium (Ti)-Total <0.0010 0.0010 mg/L 13-MAY-11 R2189634 Uranium (U)-Total <0.00010 0.00010 mg/L 13-MAY-11 R2189634 Vanadium (V)-Total <0.0010 0.0010 mg/L 13-MAY-11 R2189634 Zinc (Zn)-Total 0.0059 0.0040 mg/L 13-MAY-11 R2189634 <b>Total Metals in Water by ICPOES (Low)</b> Calcium (Ca)-Total 1.41 0.50 mg/L 13-MAY-11 R2188782 Iron (Fe)-Total <0.010 0.010 mg/L 13-MAY-11 R2188782 Magnesium (Mg)-Total 0.79 0.10 mg/L 13-MAY-11 R2188782 Manganese (Mn)-Total <0.0020 0.0020 mg/L 13-MAY-11 R2188782 Potassium (K)-Total 0.47 0.10 mg/L 13-MAY-11 R2188782 Sodium (Na)-Total <1.0 1.0 mg/L 13-MAY-11 R2188782 <b>Miscellaneous Parameters</b> Total Suspended Solids <3.0 3.0 mg/L 13-MAY-11 R2188680 <b>pH and Conductivity</b>							

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1004177-5    WS004027							
Sampled By:    CLIENT on 07-MAY-11 @ 14:40							
Matrix:            WATER							
<b>pH and Conductivity</b>							
pH	6.94		0.10	pH		12-MAY-11	R2188390
Conductivity (EC)	14.2		0.20	uS/cm		12-MAY-11	R2188390

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## Reference Information

## Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
HG-T-CVAA-ED	Water	Mercury (Hg) - Total	EPA 245.7 / EPA 245.1
MET-T-L-ICP-ED	Water	Total Metals in Water by ICPOES (Low)	APHA 3120 B-ICP-OES
MET-T-L-MS-ED	Water	Total Metals in Water by ICPMS (Low)	SW 846 - 6020-ICPMS
PH/EC-ED	Water	pH and Conductivity	APHA 4500-H, 2510
SOLIDS-TOTSUS-ED	Water	Total Suspended Solids	APHA 2540 D-Gravimetric

\*\* ALS test methods may incorporate modifications from specified reference methods to improve performance.

*The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:*

Laboratory Definition Code	Laboratory Location
ED	ALS ENVIRONMENTAL - EDMONTON, ALBERTA, CANADA

## Chain of Custody Numbers:

C026887

## GLOSSARY OF REPORT TERMS

*Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.*

*mg/kg - milligrams per kilogram based on dry weight of sample*

*mg/kg wwt - milligrams per kilogram based on wet weight of sample*

*mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight*

*mg/L - unit of concentration based on volume, parts per million.*

*< - Less than.*

*D.L. - The reporting limit.*

*N/A - Result not available. Refer to qualifier code and definition for explanation.*

*Test results reported relate only to the samples as received by the laboratory.*

*UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.*

*Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.*



MMG RESOURCES INC  
ATTN: KIMBERLEY BAILEY  
555 - 999 CANADA PLACE  
VANCOUVER BC V6C 3E1

Date Received: 17-MAY-11  
Report Date: 25-MAY-11 16:47 (MT)  
Version: FINAL

Client Phone: 778-373-5600

## Certificate of Analysis

**Lab Work Order #:** L1005873  
Project P.O. #: 4500891125  
Job Reference:  
Legal Site Desc:  
C of C Numbers: C026888

Susan Clark  
Account Manager

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## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1005873-1 WSOO4028							
Sampled By: NA on 10-MAY-11 @ 14:00							
Matrix: WATER							
<b>Total Metals - CCME</b>							
<b>Mercury (Hg) - Total</b>							
Mercury (Hg)-Total	<0.00010		0.00010	mg/L		20-MAY-11	R2191997
<b>Total Metals in Water by ICPMS (Low)</b>							
Aluminum (Al)-Total	0.029		0.010	mg/L		19-MAY-11	R2191880
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		19-MAY-11	R2191880
Arsenic (As)-Total	<0.00040		0.00040	mg/L		19-MAY-11	R2191880
Barium (Ba)-Total	0.0054		0.0030	mg/L		19-MAY-11	R2191880
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		19-MAY-11	R2191880
Boron (B)-Total	<0.050		0.050	mg/L		19-MAY-11	R2191880
Cadmium (Cd)-Total	<0.000050		0.000050	mg/L		19-MAY-11	R2191880
Chromium (Cr)-Total	<0.0050		0.0050	mg/L		19-MAY-11	R2191880
Cobalt (Co)-Total	<0.0020		0.0020	mg/L		19-MAY-11	R2191880
Copper (Cu)-Total	0.0059		0.0010	mg/L		19-MAY-11	R2191880
Lead (Pb)-Total	0.00146		0.00010	mg/L		19-MAY-11	R2191880
Lithium (Li)-Total	<0.010		0.010	mg/L		19-MAY-11	R2191880
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		19-MAY-11	R2191880
Nickel (Ni)-Total	<0.0020		0.0020	mg/L		19-MAY-11	R2191880
Selenium (Se)-Total	<0.00040		0.00040	mg/L		19-MAY-11	R2191880
Silver (Ag)-Total	<0.00010		0.00010	mg/L		19-MAY-11	R2191880
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		19-MAY-11	R2191880
Tin (Sn)-Total	<0.050		0.050	mg/L		19-MAY-11	R2191880
Titanium (Ti)-Total	<0.0010		0.0010	mg/L		19-MAY-11	R2191880
Uranium (U)-Total	0.00010		0.00010	mg/L		19-MAY-11	R2191880
Vanadium (V)-Total	<0.0010		0.0010	mg/L		19-MAY-11	R2191880
Zinc (Zn)-Total	0.0146		0.0040	mg/L		19-MAY-11	R2191880
<b>Total Metals in Water by ICPOES (Low)</b>							
Calcium (Ca)-Total	1.99		0.50	mg/L		19-MAY-11	R2191608
Iron (Fe)-Total	0.037		0.010	mg/L		19-MAY-11	R2191608
Magnesium (Mg)-Total	0.74		0.10	mg/L		19-MAY-11	R2191608
Manganese (Mn)-Total	<0.0020		0.0020	mg/L		19-MAY-11	R2191608
Potassium (K)-Total	0.51		0.10	mg/L		19-MAY-11	R2191608
Sodium (Na)-Total	<1.0		1.0	mg/L		19-MAY-11	R2191608
<b>Miscellaneous Parameters</b>							
Total Suspended Solids	<3.0		3.0	mg/L		19-MAY-11	R2191371
<b>pH and Conductivity</b>							
pH	7.09		0.10	pH		18-MAY-11	R2190547
Conductivity (EC)	21.9		0.20	uS/cm		18-MAY-11	R2190547

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## Reference Information

**Test Method References:**

ALS Test Code	Matrix	Test Description	Method Reference**
HG-T-CVAA-ED	Water	Mercury (Hg) - Total	EPA 245.7 / EPA 245.1
MET-T-L-ICP-ED	Water	Total Metals in Water by ICPOES (Low)	APHA 3120 B-ICP-OES
MET-T-L-MS-ED	Water	Total Metals in Water by ICPMS (Low)	SW 846 - 6020-ICPMS
PH/EC-ED	Water	pH and Conductivity	APHA 4500-H, 2510
SOLIDS-TOTSUS-ED	Water	Total Suspended Solids	APHA 2540 D-Gravimetric

\*\* ALS test methods may incorporate modifications from specified reference methods to improve performance.

*The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:*

Laboratory Definition Code	Laboratory Location
ED	ALS ENVIRONMENTAL - EDMONTON, ALBERTA, CANADA

**Chain of Custody Numbers:**

C026888

**GLOSSARY OF REPORT TERMS**

*Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.*

*mg/kg - milligrams per kilogram based on dry weight of sample  
 mg/kg wwt - milligrams per kilogram based on wet weight of sample  
 mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight  
 mg/L - unit of concentration based on volume, parts per million.*

*< - Less than.*

*D.L. - The reporting limit.*

*N/A - Result not available. Refer to qualifier code and definition for explanation.*

*Test results reported relate only to the samples as received by the laboratory.*

*UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.*

*Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.*



MMG RESOURCES INC  
ATTN: KIMBERLEY BAILEY  
555 - 999 CANADA PLACE  
VANCOUVER BC V6C 3E1

Date Received: 25-MAY-11  
Report Date: 02-JUN-11 22:30 (MT)  
Version: FINAL

Client Phone: 778-373-5600

## Certificate of Analysis

**Lab Work Order #:** L1008504  
Project P.O. #: 4500891125  
Job Reference: IZOK  
Legal Site Desc:  
C of C Numbers:

Susan Clark  
Account Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1008504-1 WSOO4029							
Sampled By: CLIENT on 17-MAY-11 @ 14:00							
Matrix: WATER							
<b>Total Metals - CCME</b>							
<b>Mercury (Hg) - Total</b>							
Mercury (Hg)-Total	<0.00010		0.00010	mg/L		31-MAY-11	R2196249
<b>Total Metals in Water by ICPMS (Low)</b>							
Aluminum (Al)-Total	0.019		0.010	mg/L		29-MAY-11	R2195885
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		29-MAY-11	R2195885
Arsenic (As)-Total	<0.00040		0.00040	mg/L		29-MAY-11	R2195885
Barium (Ba)-Total	0.0042		0.0030	mg/L		29-MAY-11	R2195885
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		29-MAY-11	R2195885
Boron (B)-Total	<0.050		0.050	mg/L		29-MAY-11	R2195885
Cadmium (Cd)-Total	<0.000050		0.000050	mg/L		29-MAY-11	R2195885
Chromium (Cr)-Total	<0.0050		0.0050	mg/L		29-MAY-11	R2195885
Cobalt (Co)-Total	<0.0020		0.0020	mg/L		29-MAY-11	R2195885
Copper (Cu)-Total	0.0012		0.0010	mg/L		29-MAY-11	R2195885
Lead (Pb)-Total	0.00076		0.00010	mg/L		29-MAY-11	R2195885
Lithium (Li)-Total	<0.010		0.010	mg/L		29-MAY-11	R2195885
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		29-MAY-11	R2195885
Nickel (Ni)-Total	<0.0020		0.0020	mg/L		29-MAY-11	R2195885
Selenium (Se)-Total	<0.00040		0.00040	mg/L		29-MAY-11	R2195885
Silver (Ag)-Total	<0.00010		0.00010	mg/L		29-MAY-11	R2195885
Strontium (Sr)-Total	0.00214		0.00020	mg/L		29-MAY-11	R2195885
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		29-MAY-11	R2195885
Tin (Sn)-Total	<0.050		0.050	mg/L		29-MAY-11	R2195885
Titanium (Ti)-Total	<0.0010		0.0010	mg/L		29-MAY-11	R2195885
Uranium (U)-Total	<0.00010		0.00010	mg/L		29-MAY-11	R2195885
Vanadium (V)-Total	<0.0010		0.0010	mg/L		29-MAY-11	R2195885
Zinc (Zn)-Total	0.0176		0.0040	mg/L		29-MAY-11	R2195885
<b>Total Metals in Water by ICPOES (Low)</b>							
Calcium (Ca)-Total	0.57		0.50	mg/L		28-MAY-11	R2194913
Iron (Fe)-Total	0.037		0.010	mg/L		28-MAY-11	R2194913
Magnesium (Mg)-Total	0.19		0.10	mg/L		28-MAY-11	R2194913
Manganese (Mn)-Total	<0.0020		0.0020	mg/L		28-MAY-11	R2194913
Potassium (K)-Total	0.11		0.10	mg/L		28-MAY-11	R2194913
Sodium (Na)-Total	<1.0		1.0	mg/L		28-MAY-11	R2194913
<b>Miscellaneous Parameters</b>							
Total Suspended Solids	<3.0		3.0	mg/L		30-MAY-11	R2195620
<b>pH and Conductivity</b>							
pH	6.41		0.10	pH		25-MAY-11	R2192863
Conductivity (EC)	5.61		0.20	uS/cm		25-MAY-11	R2192863
L1008504-2 WSOO4030							
Sampled By: CLIENT on 17-MAY-11 @ 14:00							
Matrix: WATER							
<b>Total Metals - CCME</b>							
<b>Mercury (Hg) - Total</b>							
Mercury (Hg)-Total	<0.00010		0.00010	mg/L		31-MAY-11	R2196249
<b>Total Metals in Water by ICPMS (Low)</b>							
Aluminum (Al)-Total	0.028		0.010	mg/L		29-MAY-11	R2195885
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		29-MAY-11	R2195885
Arsenic (As)-Total	<0.00040		0.00040	mg/L		29-MAY-11	R2195885
Barium (Ba)-Total	0.0059		0.0030	mg/L		29-MAY-11	R2195885
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		29-MAY-11	R2195885
Boron (B)-Total	<0.050		0.050	mg/L		29-MAY-11	R2195885

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1008504-2 WSOO4030 Sampled By: CLIENT on 17-MAY-11 @ 14:00 Matrix: WATER							
<b>Total Metals in Water by ICPMS (Low)</b>							
Cadmium (Cd)-Total	<0.000050		0.000050	mg/L		29-MAY-11	R2195885
Chromium (Cr)-Total	<0.0050		0.0050	mg/L		29-MAY-11	R2195885
Cobalt (Co)-Total	<0.0020		0.0020	mg/L		29-MAY-11	R2195885
Copper (Cu)-Total	0.0023		0.0010	mg/L		29-MAY-11	R2195885
Lead (Pb)-Total	0.00185		0.00010	mg/L		29-MAY-11	R2195885
Lithium (Li)-Total	<0.010		0.010	mg/L		29-MAY-11	R2195885
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		29-MAY-11	R2195885
Nickel (Ni)-Total	<0.0020		0.0020	mg/L		29-MAY-11	R2195885
Selenium (Se)-Total	<0.00040		0.00040	mg/L		29-MAY-11	R2195885
Silver (Ag)-Total	<0.00010		0.00010	mg/L		29-MAY-11	R2195885
Strontium (Sr)-Total	0.00598		0.00020	mg/L		29-MAY-11	R2195885
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		29-MAY-11	R2195885
Tin (Sn)-Total	<0.050		0.050	mg/L		29-MAY-11	R2195885
Titanium (Ti)-Total	<0.0010		0.0010	mg/L		29-MAY-11	R2195885
Uranium (U)-Total	<0.00010		0.00010	mg/L		29-MAY-11	R2195885
Vanadium (V)-Total	<0.0010		0.0010	mg/L		29-MAY-11	R2195885
Zinc (Zn)-Total	0.0136		0.0040	mg/L		29-MAY-11	R2195885
<b>Total Metals in Water by ICPOES (Low)</b>							
Calcium (Ca)-Total	2.02		0.50	mg/L		28-MAY-11	R2194913
Iron (Fe)-Total	0.032		0.010	mg/L		28-MAY-11	R2194913
Magnesium (Mg)-Total	0.52		0.10	mg/L		28-MAY-11	R2194913
Manganese (Mn)-Total	0.0044		0.0020	mg/L		28-MAY-11	R2194913
Potassium (K)-Total	0.35		0.10	mg/L		28-MAY-11	R2194913
Sodium (Na)-Total	<1.0		1.0	mg/L		28-MAY-11	R2194913
<b>Miscellaneous Parameters</b>							
Total Suspended Solids	<3.0		3.0	mg/L		30-MAY-11	R2195620
<b>pH and Conductivity</b>							
pH	6.81		0.10	pH		25-MAY-11	R2192863
Conductivity (EC)	20.4		0.20	uS/cm		25-MAY-11	R2192863
L1008504-3 WSOO4032 Sampled By: CLIENT on 22-MAY-11 @ 16:00 Matrix: WATER							
<b>Total Metals - CCME</b>							
<b>Mercury (Hg) - Total</b>							
Mercury (Hg)-Total	<0.00010		0.00010	mg/L		31-MAY-11	R2196249
<b>Total Metals in Water by ICPMS (Low)</b>							
Aluminum (Al)-Total	0.025		0.010	mg/L		29-MAY-11	R2195885
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		29-MAY-11	R2195885
Arsenic (As)-Total	<0.00040		0.00040	mg/L		29-MAY-11	R2195885
Barium (Ba)-Total	<0.0030		0.0030	mg/L		29-MAY-11	R2195885
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		29-MAY-11	R2195885
Boron (B)-Total	<0.050		0.050	mg/L		29-MAY-11	R2195885
Cadmium (Cd)-Total	<0.000050		0.000050	mg/L		29-MAY-11	R2195885
Chromium (Cr)-Total	<0.0050		0.0050	mg/L		29-MAY-11	R2195885
Cobalt (Co)-Total	<0.0020		0.0020	mg/L		29-MAY-11	R2195885
Copper (Cu)-Total	<0.0010		0.0010	mg/L		29-MAY-11	R2195885
Lead (Pb)-Total	0.00065		0.00010	mg/L		29-MAY-11	R2195885
Lithium (Li)-Total	<0.010		0.010	mg/L		29-MAY-11	R2195885
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		29-MAY-11	R2195885
Nickel (Ni)-Total	<0.0020		0.0020	mg/L		29-MAY-11	R2195885
Selenium (Se)-Total	<0.00040		0.00040	mg/L		29-MAY-11	R2195885

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1008504-3 WSOO4032							
Sampled By: CLIENT on 22-MAY-11 @ 16:00							
Matrix: WATER							
<b>Total Metals in Water by ICPMS (Low)</b>							
Silver (Ag)-Total	<0.00010		0.00010	mg/L		29-MAY-11	R2195885
Strontium (Sr)-Total	0.00193		0.00020	mg/L		29-MAY-11	R2195885
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		29-MAY-11	R2195885
Tin (Sn)-Total	<0.050		0.050	mg/L		29-MAY-11	R2195885
Titanium (Ti)-Total	<0.0010		0.0010	mg/L		29-MAY-11	R2195885
Uranium (U)-Total	<0.00010		0.00010	mg/L		29-MAY-11	R2195885
Vanadium (V)-Total	<0.0010		0.0010	mg/L		29-MAY-11	R2195885
Zinc (Zn)-Total	0.0072		0.0040	mg/L		29-MAY-11	R2195885
<b>Total Metals in Water by ICPOES (Low)</b>							
Calcium (Ca)-Total	0.66		0.50	mg/L		28-MAY-11	R2194913
Iron (Fe)-Total	0.022		0.010	mg/L		28-MAY-11	R2194913
Magnesium (Mg)-Total	0.15		0.10	mg/L		28-MAY-11	R2194913
Manganese (Mn)-Total	0.0037		0.0020	mg/L		28-MAY-11	R2194913
Potassium (K)-Total	0.16		0.10	mg/L		28-MAY-11	R2194913
Sodium (Na)-Total	<1.0		1.0	mg/L		28-MAY-11	R2194913
<b>Miscellaneous Parameters</b>							
Total Suspended Solids	<3.0		3.0	mg/L		30-MAY-11	R2195620
<b>pH and Conductivity</b>							
pH	6.31		0.10	pH		25-MAY-11	R2192863
Conductivity (EC)	6.70		0.20	uS/cm		25-MAY-11	R2192863
L1008504-4 WSOO4033							
Sampled By: CLIENT on 22-MAY-11 @ 16:00							
Matrix: WATER							
<b>Total Metals - CCME</b>							
<b>Mercury (Hg) - Total</b>							
Mercury (Hg)-Total	<0.00010		0.00010	mg/L		31-MAY-11	R2196249
<b>Total Metals in Water by ICPMS (Low)</b>							
Aluminum (Al)-Total	0.030		0.010	mg/L		29-MAY-11	R2195885
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		29-MAY-11	R2195885
Arsenic (As)-Total	<0.00040		0.00040	mg/L		29-MAY-11	R2195885
Barium (Ba)-Total	0.0053		0.0030	mg/L		29-MAY-11	R2195885
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		29-MAY-11	R2195885
Boron (B)-Total	<0.050		0.050	mg/L		29-MAY-11	R2195885
Cadmium (Cd)-Total	<0.000050		0.000050	mg/L		29-MAY-11	R2195885
Chromium (Cr)-Total	<0.0050		0.0050	mg/L		29-MAY-11	R2195885
Cobalt (Co)-Total	<0.0020		0.0020	mg/L		29-MAY-11	R2195885
Copper (Cu)-Total	0.0015		0.0010	mg/L		29-MAY-11	R2195885
Lead (Pb)-Total	0.00026		0.00010	mg/L		29-MAY-11	R2195885
Lithium (Li)-Total	<0.010		0.010	mg/L		29-MAY-11	R2195885
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		29-MAY-11	R2195885
Nickel (Ni)-Total	<0.0020		0.0020	mg/L		29-MAY-11	R2195885
Selenium (Se)-Total	<0.00040		0.00040	mg/L		29-MAY-11	R2195885
Silver (Ag)-Total	<0.00010		0.00010	mg/L		29-MAY-11	R2195885
Strontium (Sr)-Total	0.00517		0.00020	mg/L		29-MAY-11	R2195885
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		29-MAY-11	R2195885
Tin (Sn)-Total	<0.050		0.050	mg/L		29-MAY-11	R2195885
Titanium (Ti)-Total	<0.0010		0.0010	mg/L		29-MAY-11	R2195885
Uranium (U)-Total	<0.00010		0.00010	mg/L		29-MAY-11	R2195885
Vanadium (V)-Total	<0.0010		0.0010	mg/L		29-MAY-11	R2195885
Zinc (Zn)-Total	0.0124		0.0040	mg/L		29-MAY-11	R2195885
<b>Total Metals in Water by ICPOES (Low)</b>							

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1008504-4 WSOO4033							
Sampled By: CLIENT on 22-MAY-11 @ 16:00							
Matrix: WATER							
<b>Total Metals in Water by ICPOES (Low)</b>							
Calcium (Ca)-Total	1.13		0.50	mg/L		28-MAY-11	R2194913
Iron (Fe)-Total	0.040		0.010	mg/L		28-MAY-11	R2194913
Magnesium (Mg)-Total	0.44		0.10	mg/L		28-MAY-11	R2194913
Manganese (Mn)-Total	0.0111		0.0020	mg/L		28-MAY-11	R2194913
Potassium (K)-Total	0.27		0.10	mg/L		28-MAY-11	R2194913
Sodium (Na)-Total	<1.0		1.0	mg/L		28-MAY-11	R2194913
<b>Miscellaneous Parameters</b>							
Total Suspended Solids	<3.0		3.0	mg/L		30-MAY-11	R2195620
<b>pH and Conductivity</b>							
pH	6.63		0.10	pH		25-MAY-11	R2192863
Conductivity (EC)	13.4		0.20	uS/cm		25-MAY-11	R2192863

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.



MMG RESOURCES INC  
ATTN: KIMBERLEY BAILEY  
555 - 999 CANADA PLACE  
VANCOUVER BC V6C 3E1

Date Received: 01-JUN-11  
Report Date: 07-JUN-11 14:48 (MT)  
Version: FINAL

Client Phone: 778-373-5600

## Certificate of Analysis

**Lab Work Order #:** L1011349  
Project P.O. #: 4500891125  
Job Reference: IZOK  
Legal Site Desc:  
C of C Numbers: C048808

Susan Clark  
Account Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1011349-1 WS004034							
Sampled By: CLIENT on 26-MAY-11 @ 09:30							
Matrix: WATER							
<b>Total Metals - CCME</b>							
<b>Mercury (Hg) - Total</b>							
Mercury (Hg)-Total	<0.00010		0.00010	mg/L		02-JUN-11	R2197781
<b>Total Metals in Water by ICPMS (Low)</b>							
Aluminum (Al)-Total	0.059		0.010	mg/L		03-JUN-11	R2198517
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		03-JUN-11	R2198517
Arsenic (As)-Total	<0.00040		0.00040	mg/L		03-JUN-11	R2198517
Barium (Ba)-Total	0.0105		0.0030	mg/L		03-JUN-11	R2198517
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		03-JUN-11	R2198517
Boron (B)-Total	<0.050		0.050	mg/L		03-JUN-11	R2198517
Cadmium (Cd)-Total	0.000067		0.000050	mg/L		03-JUN-11	R2198517
Chromium (Cr)-Total	<0.0050		0.0050	mg/L		03-JUN-11	R2198517
Cobalt (Co)-Total	<0.0020		0.0020	mg/L		03-JUN-11	R2198517
Copper (Cu)-Total	0.0036		0.0010	mg/L		03-JUN-11	R2198517
Lead (Pb)-Total	0.00468		0.00010	mg/L		03-JUN-11	R2198517
Lithium (Li)-Total	<0.010		0.010	mg/L		03-JUN-11	R2198517
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		03-JUN-11	R2198517
Nickel (Ni)-Total	<0.0020		0.0020	mg/L		03-JUN-11	R2198517
Selenium (Se)-Total	<0.00040		0.00040	mg/L		03-JUN-11	R2198517
Silver (Ag)-Total	<0.00010		0.00010	mg/L		03-JUN-11	R2198517
Strontium (Sr)-Total	0.00448		0.00020	mg/L		03-JUN-11	R2198517
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		03-JUN-11	R2198517
Tin (Sn)-Total	<0.050		0.050	mg/L		03-JUN-11	R2198517
Titanium (Ti)-Total	0.0019		0.0010	mg/L		03-JUN-11	R2198517
Uranium (U)-Total	<0.00010		0.00010	mg/L		03-JUN-11	R2198517
Vanadium (V)-Total	<0.0010		0.0010	mg/L		03-JUN-11	R2198517
Zinc (Zn)-Total	0.0238		0.0040	mg/L		03-JUN-11	R2198517
<b>Total Metals in Water by ICPOES (Low)</b>							
Calcium (Ca)-Total	0.93		0.50	mg/L		04-JUN-11	R2198499
Iron (Fe)-Total	0.069		0.010	mg/L		04-JUN-11	R2198499
Magnesium (Mg)-Total	0.43		0.10	mg/L		04-JUN-11	R2198499
Manganese (Mn)-Total	0.0093		0.0020	mg/L		04-JUN-11	R2198499
Potassium (K)-Total	0.48		0.10	mg/L		04-JUN-11	R2198499
Sodium (Na)-Total	<1.0		1.0	mg/L		04-JUN-11	R2198499
<b>Miscellaneous Parameters</b>							
Total Suspended Solids	<3.0		3.0	mg/L		03-JUN-11	R2198093
<b>pH and Conductivity</b>							
pH	6.56		0.10	pH		02-JUN-11	R2197622
Conductivity (EC)	6.91		0.20	uS/cm		02-JUN-11	R2197622
L1011349-2 WS004035							
Sampled By: CLIENT on 26-MAY-11 @ 10:00							
Matrix: WATER							
<b>Total Metals - CCME</b>							
<b>Mercury (Hg) - Total</b>							
Mercury (Hg)-Total	<0.00010		0.00010	mg/L		02-JUN-11	R2197781
<b>Total Metals in Water by ICPMS (Low)</b>							
Aluminum (Al)-Total	0.018		0.010	mg/L		03-JUN-11	R2198517
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		03-JUN-11	R2198517
Arsenic (As)-Total	<0.00040		0.00040	mg/L		03-JUN-11	R2198517
Barium (Ba)-Total	0.0054		0.0030	mg/L		03-JUN-11	R2198517
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		03-JUN-11	R2198517
Boron (B)-Total	<0.050		0.050	mg/L		03-JUN-11	R2198517

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1011349-2 WS004035							
Sampled By: CLIENT on 26-MAY-11 @ 10:00							
Matrix: WATER							
<b>Total Metals in Water by ICPMS (Low)</b>							
Cadmium (Cd)-Total	<0.000050		0.000050	mg/L		03-JUN-11	R2198517
Chromium (Cr)-Total	<0.0050		0.0050	mg/L		03-JUN-11	R2198517
Cobalt (Co)-Total	<0.0020		0.0020	mg/L		03-JUN-11	R2198517
Copper (Cu)-Total	0.0015		0.0010	mg/L		03-JUN-11	R2198517
Lead (Pb)-Total	0.00088		0.00010	mg/L		03-JUN-11	R2198517
Lithium (Li)-Total	<0.010		0.010	mg/L		03-JUN-11	R2198517
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		03-JUN-11	R2198517
Nickel (Ni)-Total	<0.0020		0.0020	mg/L		03-JUN-11	R2198517
Selenium (Se)-Total	<0.00040		0.00040	mg/L		03-JUN-11	R2198517
Silver (Ag)-Total	<0.00010		0.00010	mg/L		03-JUN-11	R2198517
Strontium (Sr)-Total	0.00199		0.00020	mg/L		03-JUN-11	R2198517
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		03-JUN-11	R2198517
Tin (Sn)-Total	<0.050		0.050	mg/L		03-JUN-11	R2198517
Titanium (Ti)-Total	<0.0010		0.0010	mg/L		03-JUN-11	R2198517
Uranium (U)-Total	<0.00010		0.00010	mg/L		03-JUN-11	R2198517
Vanadium (V)-Total	<0.0010		0.0010	mg/L		03-JUN-11	R2198517
Zinc (Zn)-Total	0.0079		0.0040	mg/L		03-JUN-11	R2198517
<b>Total Metals in Water by ICPOES (Low)</b>							
Calcium (Ca)-Total	0.60		0.50	mg/L		04-JUN-11	R2198499
Iron (Fe)-Total	0.029		0.010	mg/L		04-JUN-11	R2198499
Magnesium (Mg)-Total	0.16		0.10	mg/L		04-JUN-11	R2198499
Manganese (Mn)-Total	0.0028		0.0020	mg/L		04-JUN-11	R2198499
Potassium (K)-Total	0.16		0.10	mg/L		04-JUN-11	R2198499
Sodium (Na)-Total	<1.0		1.0	mg/L		04-JUN-11	R2198499
<b>Miscellaneous Parameters</b>							
Total Suspended Solids	<3.0		3.0	mg/L		03-JUN-11	R2198093
<b>pH and Conductivity</b>							
pH	6.73		0.10	pH		02-JUN-11	R2197622
Conductivity (EC)	11.7		0.20	uS/cm		02-JUN-11	R2197622

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## Reference Information

## Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
HG-T-CVAA-ED	Water	Mercury (Hg) - Total	EPA 245.7 / EPA 245.1
MET-T-L-ICP-ED	Water	Total Metals in Water by ICPOES (Low)	APHA 3120 B-ICP-OES
MET-T-L-MS-ED	Water	Total Metals in Water by ICPMS (Low)	SW 846 - 6020-ICPMS
PH/EC-ED	Water	pH and Conductivity	APHA 4500-H, 2510
SOLIDS-TOTSUS-ED	Water	Total Suspended Solids	APHA 2540 D-Gravimetric

\*\* ALS test methods may incorporate modifications from specified reference methods to improve performance.

*The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:*

Laboratory Definition Code	Laboratory Location
ED	ALS ENVIRONMENTAL - EDMONTON, ALBERTA, CANADA

## Chain of Custody Numbers:

C048808

## GLOSSARY OF REPORT TERMS

*Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.*

*mg/kg - milligrams per kilogram based on dry weight of sample*

*mg/kg wwt - milligrams per kilogram based on wet weight of sample*

*mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight*

*mg/L - unit of concentration based on volume, parts per million.*

*< - Less than.*

*D.L. - The reporting limit.*

*N/A - Result not available. Refer to qualifier code and definition for explanation.*

*Test results reported relate only to the samples as received by the laboratory.*

*UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.*

*Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.*



Appendix VI : Water Sampling Photos



BH – 01: Pre



BH – 01: Post



BH – 02: Pre



BH – 02: Post

Remaining water sample photos are provided in digital form on the CD that accompanies this report. They are located in the folder by the same name.

Appendix IV : Wildlife Sightings

2012 01

Wildlife Monitoring

Date	Location	Description of wildlife activity	Name of observer
MAR 29	120K LAKE RUEMUNDY	SAW A WEASEL	ROB LYGH
MAR 31	120K LAKE	SAW A RED FOX	ROB LYGH
APR 18	120K LAKE	WOLF → yosame one?	GREG DUSO
APR 22	120K LAKE GOOD LAKE	Red fox 1200 GOOD LAKE	DOUG & LEE GREG DUSO
APR 23	CAMP	Wolverine behind tents	Kevin Hengshing
APR 24	120K LAKE	Red fox	Sean Deen
APR 25	Same as yesterday	same fox? was it red?	Sean Deen
APR 27	120K LAKE	WOLF	Nessi
APR 29	off runway	wolf → pack on Esker	Clay
APR 30	NEK STRIP	WOLF	GEORCH
MAY 11	120K LAKE RUEMUNDY	120K LAKE HEADING EAST	GRAHAM LEROUX
MAY 14	CAMP	red fox	GREG DUSO
MAY 14	W ENDS SUSAN	Grizzly Bear	MURIN SELL
MAY 14	W ENDS SUSAN	20 MUSKOF	ROB LYGH

2012 P2.

Wildlife Monitoring			
Date	Location	Description of wildlife activity	Name of observer
May 18		ARM LAKE Red Fox	M. Stodd
MAY 21	ICE STRIP TICHIN LAKE	6 CARIBOU STROLLING ACROSS LAKE	M. Tims
May 22	Airstrip	1 bull caribou on airstrip, then approached camp	G. Pelchat
May 19-22	2 km W of camp	23 muskox (19 adults, 4 calves) grazing meadows S and N of Esker for 4 days	G. Pelchat
May 22	1 km of camp	5 Caribou east side of runway	Heathur Kilengeberg
MAY 25	CAMP	1 FOX @ SOUTH SIDE OF CAMP, APPROACHED FENCE, DID A LOT OF BARKING NEAR PAD	TED MURARO
MAY 26	ICE STRIP 2000m	4-12 CARIBOU ON 1200000Y LAKE NEAR ICE STRIP	TED MURARO
MAY 31	E of Airstrip	Bear (Grizzly)	Ryan Heather
Jun 1	Esker Base of camp	Bear - Blonde	Tyler
May 31	E of Hamlet	~20 Muskox	Heathur
JUNE 1	50E AIRSTRIP	~30 Muskox	NAT + CHARMIN BEAR + MAX
JUNE 2	HEAD CAMP	BEAR	T. DOOLEY + T. BUCKLANDS
JUNE 12	120K CAMP	BEAR WALKING EAST ALONG ARM LAKE ESKER	ALL PEOPLE IN CAMP
June 10	South of Head Camp	Willow Ptarmigan (420555E, 7328158N NAD83)	Max + Rob
June 23	@ Head Camp	Muskox popping and eating	Heathur + Rob







**KBL Environmental LTD.**

Date: June 2nd, 2012

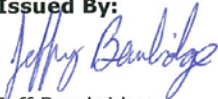
KBL Job #K903  
Invoice #1516

KBL Environmental Ltd hereby certifies that the waste shipped from MMG - Izok, on KBL Bill of Lading #1966 which was received at KBL Environmental Ltd. on May 2nd, 2012 and has been processed, recycled/disposed of in accordance with all applicable Federal and Territorial /Provincial Regulations.

**Generator:**

MMG  
NUG 1000026

**Issued By:**



Jeff Bembridge  
Operations Manager  
KBL Environmental Ltd.  
NTR 0000123

PO Box 1108 - 17 Cameron Road - Yellowknife, NT - X1A 2N8



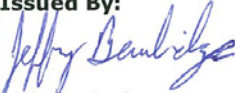
 **KBL Environmental LTD.**

Date: June 9th, 2012

KBL Job #K918  
Invoice #1530

KBL Environmental Ltd hereby certifies that the waste shipped from MMG - Izok, on KBL Bill of Lading #1994 which was received at KBL Environmental Ltd. on May 9<sup>th</sup>, 2012 and has been processed, recycled/disposed of in accordance with all applicable Federal and Territorial /Provincial Regulations.

**Generator:**  
MMG  
NUG 1000026

**Issued By:**  
  
Jeff Bembridge  
Operations Manager  
KBL Environmental Ltd.  
NTR 0000123

PO Box 1108 - 17 Cameron Road - Yellowknife, NT - X1A 2N8

 **KBL Environmental LTD.**


Date: June 12th, 2012

KBL Job #K923  
Invoice #1539

KBL Environmental Ltd hereby certifies that the waste shipped from MMG - Izok, on KBL Bill of Lading #1999 which was received at KBL Environmental Ltd. on May 12th, 2012 and has been processed, recycled/disposed of in accordance with all applicable Federal and Territorial /Provincial Regulations.

**Generator:**  
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**Issued By:**



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Operations Manager  
KBL Environmental Ltd.  
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**KBL Environmental LTD.**

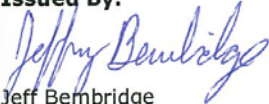
Date: June 14th, 2012

KBL Job #K939  
Invoice #1552

KBL Environmental Ltd hereby certifies that the waste shipped from MMG - Izok, on KBL Bill of Lading #2072 which was received at KBL Environmental Ltd. on May 14<sup>th</sup>, 2012 and has been processed, recycled/disposed of in accordance with all applicable Federal and Territorial /Provincial Regulations.

**Generator:**  
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**Issued By:**



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Operations Manager  
KBL Environmental Ltd.  
NTR 0000123

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 **KBL Environmental LTD.**

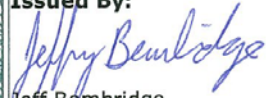
Date: June 18th, 2012

KBL Job #K963  
Invoice #1587

KBL Environmental Ltd hereby certifies that the waste shipped from MMG - Izok, on KBL Bill of Lading #2009 which was received at KBL Environmental Ltd. on May 18<sup>th</sup>, 2012 and has been processed, recycled/disposed of in accordance with all applicable Federal and Territorial /Provincial Regulations.

**Generator:**  
MMG  
NUG 1000026

**Issued By:**



Jeff Bembridge  
Operations Manager  
KBL Environmental Ltd.  
NTR 0000123

PO Box 1108 - 17 Cameron Road - Yellowknife, NT - X1A 2N8

 **KBL Environmental LTD.**

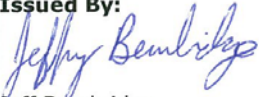
Date: June 25th, 2012

KBL Job #K942  
Invoice #1555

KBL Environmental Ltd hereby certifies that the waste shipped from MMG - Izok, on KBL Bill of Lading #2074 which was received at KBL Environmental Ltd. on May 25th, 2012 and has been processed, recycled/disposed of in accordance with all applicable Federal and Territorial /Provincial Regulations.

**Generator:**  
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NUG 1000026

**Issued By:**



Jeff Bembridge  
Operations Manager  
KBL Environmental Ltd.  
NTR 0000123

PO Box 1108 - 17 Cameron Road - Yellowknife, NT - X1A 2N8

 **KBL Environmental LTD.**

Date: June 25th, 2012

KBL Job #K943  
Invoice #1556

KBL Environmental Ltd hereby certifies that the waste shipped from MMG - Izok, on KBL Bill of Lading #2078 which was received at KBL Environmental Ltd. on May 25<sup>th</sup>, 2012 and has been processed, recycled/disposed of in accordance with all applicable Federal and Territorial /Provincial Regulations.

**Generator:**

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NUG 1000026

**Issued By:**



Jeff Bembridge  
Operations Manager  
KBL Environmental Ltd.  
NTR 0000123

PO Box 1108 - 17 Cameron Road - Yellowknife, NT - X1A 2N8

 **KBL Environmental LTD.**

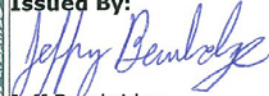
Date: June 29, 2012

KBL Job #K958  
Invoice #1577

KBL Environmental Ltd hereby certifies that the waste shipped from MMG - Izok, on KBL Bill of Lading #2095 which was received at KBL Environmental Ltd. on May 31st, 2012 and has been processed, recycled/disposed of in accordance with all applicable Federal and Territorial /Provincial Regulations.

**Generator:**  
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**Issued By:**



Jeff Bembridge  
Operations Manager  
KBL Environmental Ltd.  
NTR 0000123

PO Box 1108 - 17 Cameron Road - Yellowknife, NT - X1A 2N8

 **KBL Environmental LTD.**

Date: June 29th, 2012

KBL Job #K952  
Invoice #1574

KBL Environmental Ltd hereby certifies that the waste shipped from MMG - Izok, on KBL Bill of Lading #2031 which was received at KBL Environmental Ltd. on May 29<sup>th</sup>, 2012 and has been processed, recycled/disposed of in accordance with all applicable Federal and Territorial /Provincial Regulations.

**Generator:**  
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**Issued By:**



Jeff Bembridge  
Operations Manager  
KBL Environmental Ltd.  
NTR 0000123

PO Box 1108 - 17 Cameron Road - Yellowknife, NT - X1A 2N8



 **KBL Environmental LTD.**

Date: July 5th, 2012

KBL Job #K976  
Invoice #1600

KBL Environmental Ltd hereby certifies that the waste shipped from MMG - Izok, on KBL Bill of Lading #2011 which was received at KBL Environmental Ltd. on June 1st, 2012 and has been processed, recycled/disposed of in accordance with all applicable Federal and Territorial /Provincial Regulations.

**Generator:**  
MMG  
NUG 1000026

**Issued By:**

  
Jeff Bembridge  
Operations Manager  
KBL Environmental Ltd.  
NTR 0000123

PO Box 1108 - 17 Cameron Road - Yellowknife, NT - X1A 2N8

 **KBL Environmental LTD.**

Date: September 17th, 2012

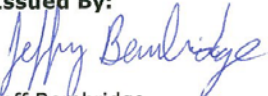
KBL Job #K1146  
Invoice #1800

KBL Environmental Ltd hereby certifies that the waste shipped from MMG - Izok, on KBL Bill of Lading #2315 which was received at KBL Environmental Ltd. on August 17<sup>th</sup>, 2012 and has been processed, recycled/disposed of in accordance with all applicable Federal and Territorial /Provincial Regulations.

**Generator:**

MMG  
NUG 1000026

**Issued By:**



Jeff Bembridge  
Operations Manager  
KBL Environmental Ltd.  
NTR 0000123

PO Box 1108 - 17 Cameron Road - Yellowknife, NT - X1A 2N8



 **KBL Environmental LTD.**

Date: September 23rd, 2012

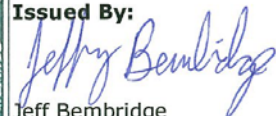
KBL Job #K1148  
Invoice #1799

KBL Environmental Ltd hereby certifies that the waste shipped from MMG - Izok, on KBL Bill of Lading #2353 which was received at KBL Environmental Ltd. on August 23<sup>rd</sup>, 2012 and has been processed, recycled/disposed of in accordance with all applicable Federal and Territorial /Provincial Regulations.

**Generator:**

MMG  
NUG 1000026

**Issued By:**



Jeff Bembridge  
Operations Manager  
KBL Environmental Ltd.  
NTR 0000123

PO Box 1108 - 17 Cameron Road - Yellowknife, NT - X1A 2N8

 **KBL Environmental LTD.**

Date: September 29th, 2012

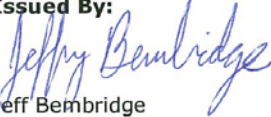
KBL Job #K1160  
Invoice #1835

KBL Environmental Ltd hereby certifies that the waste shipped from MMG - Izok, on KBL Bill of Lading #2360 which was received at KBL Environmental Ltd. on August 29<sup>th</sup>, 2012 and has been processed, recycled/disposed of in accordance with all applicable Federal and Territorial /Provincial Regulations.

**Generator:**

MMG  
NUG 1000026

**Issued By:**



Jeff Bembridge  
Operations Manager  
KBL Environmental Ltd.  
NTR 0000123

PO Box 1108 - 17 Cameron Road - Yellowknife, NT - X1A 2N8

 **KBL Environmental LTD.**

Date: October 5th, 2012

KBL Job #K1170  
Invoice #1851

KBL Environmental Ltd hereby certifies that the waste shipped from MMG - Izok, on KBL Bill of Lading #2436 which was received at KBL Environmental Ltd. on September 5<sup>th</sup>, 2012 and has been processed, recycled/disposed of in accordance with all applicable Federal and Territorial /Provincial Regulations.

**Generator:**

MMG  
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**Issued By:**



Jeff Bembridge  
Operations Manager  
KBL Environmental Ltd.  
NTR 0000123

PO Box 1108 - 17 Cameron Road - Yellowknife, NT - X1A 2N8



**WASTE DISPOSAL PLAN**  
**SLAVE PROJECTS**

**AMMENDED OCTOBER 2012**

**MMG RESOURCES**  
**26 – 1177 W. HASTINGS ST.**  
**VANCOUVER, BC**  
**V6E2K3**

## **Guidelines for Waste Incineration**

1. All waste will be categorized and any materials not in accordance with the Department of Environments Policy “Municipal Solid Wastes Suitable for Open Burning” will be removed from the waste stream. Only kitchen waste, sewage, and untreated wood and paper products are approved for incineration.
2. Kitchen and human waste is to be collected and incinerated on a daily basis. If volumes warrant then twice daily.
3. “wet” biological waste from kitchens or toilet facilities will be mixed in small volumes with more combustible paper and cardboard materials to ensure total elimination during incineration.
4. A suitable temporary storage facility for garbage awaiting incineration is required that is impervious to wildlife and decreases odours.
5. Any recyclable materials (plastic bottles, aluminium cans) will be separated, packaged appropriately for transport and removed from site for handling in Yellowknife.
6. Clearly marked separate containers for easy categorization of refuse is encouraged.
7. Any industrial refuse contaminated with petroleum based products from lubricants, fuels, or additives will be appropriately packaged for transport to Yellowknife and handling by KBL.
8. Any batteries, chemicals, or other waste categorized as dangerous or hazardous goods will be appropriately packaged and transported to Yellowknife for proper handling and disposal KBL.
9. Records will be kept of all refuse shipped to Yellowknife for disposal, including date, volume, and category. Chain of custody and final disposal records will be requested from Expediter and KBL Environmental to fully document waste disposal. Copies of final disposal records will be provided to AANDC with annual reports.

Waste handling procedure and incinerators at exploration camp locations will be inspected on a monthly basis and reviewed for adequacy and performance in regards to the waste stream that they handle, with the following specifics in mind:

- Operating temperature and complete incineration of waste.
- Composition of remaining ash
- Containment of liquid waste within combustion chamber and structural integrity of the burn chamber.
- Integrity and proper function of the stack.
- Care and maintenance of incinerator and burner.
- Accuracy of records and reporting of transport and disposal

For further information Environment Canada's guide to batch incineration should be consulted. A copy of summary information for this document is provided here.

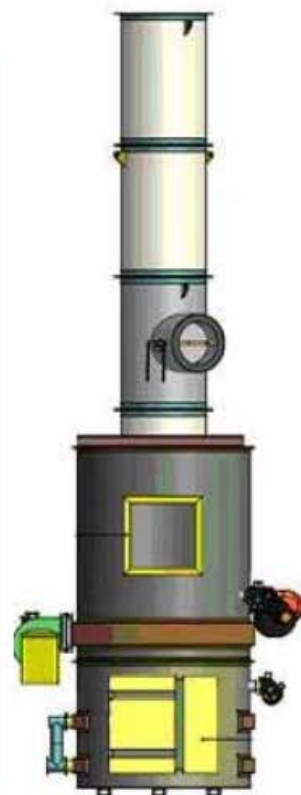


## Fact Sheet: Technical Document for Batch Waste Incineration

The *Technical Document for Batch Waste Incineration* provides guidance for owners, operators and regulators on the appropriate incineration technologies and best management practices to minimize releases of toxic substances into the environment.

### Six Steps to Better Incineration

- 1 Understand Your Waste Stream
- 2 Select the Appropriate Incinerator (or Evaluate the Existing System)
- 3 Properly Equip and Install the Incinerator
- 4 Operate the Incinerator for Optimum Combustion
- 5 Safely Handle and Dispose of Incinerator Residues
- 6 Maintain Records and Report



For more information, please see the complete document at:  
[www.ec.gc.ca/gdd-mw/default.asp?lang=En&n=F53EDE13-1](http://www.ec.gc.ca/gdd-mw/default.asp?lang=En&n=F53EDE13-1)

Contact information:  
TMB@ec.gc.ca or 819-997-3377

## More Details About the Six-Step Process for Batch Waste Incineration

**1**

### **Understand Your Waste Stream**

The first step in managing your waste is understanding what the waste is. Perform a waste audit to understand its quantity and composition. Based on the results, you can assess what appropriate disposal options should be undertaken. Remember the “3Rs”: Reduce, Reuse and Recycle.

**2**

### **Select the Appropriate Incinerator (or Evaluate the Existing System)**

To ensure that a suitable incinerator is chosen, the call for proposals for incinerator manufacturers who want to provide service for you should include specific information on the characteristics of the residual waste stream you need to dispose of. For facilities with existing incinerators, owners/operators should reassess the suitability of the existing system to manage the current waste stream. The recommended configuration is a dual chamber controlled air incinerator.

**3**

### **Properly Equip and Install the Incinerator**

Make sure that building and equipment considerations are well planned during the design phase, before installing the incinerator.

**4**

### **Operate the Incinerator for Optimum Combustion**

To ensure optimum combustion conditions, the incinerator must be operating correctly. Proper operation includes separating the waste, weighing it, mixing it for a specified calorific value, and closing the incinerator door once the waste is loaded, and not re-opening it until the burn is complete. Important considerations such as appropriate operator safety training should be completed.

**5**

### **Safely Handle and Dispose of Incinerator Residues**

Ash from the primary chamber of the incinerator can contain materials that are hazardous to the operator’s health and to the environment. Operators should use personal protective equipment when handling this material. The ash should be disposed of at an approved disposal site.

**6**

### **Maintain Records and Report**

To demonstrate appropriate operation and maintenance of the incinerator, the facility must maintain records and prepare an annual report.

**For more information, please see the complete document at:**  
[www.ec.gc.ca/gdd-mw/default.asp?lang=En&n=F53EDE13-1](http://www.ec.gc.ca/gdd-mw/default.asp?lang=En&n=F53EDE13-1)

**Contact information:**  
TMB@ec.gc.ca or 819-997-3377

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Aussi disponible en français







**DOUBLE CHAMBER  
CYCLONATOR  
INCINERATOR  
SERIES CY2000**



**CY-2020-FA "D"** [Photo: Diesel fired unit]

- **Built In Safety Features**
- **Readily Transportable**
- **Economical Operation**
- **Clean Burning**

**Designed for Waste Disposal**

**Primary Chamber Volume / Heat Release**

- 0.5 m<sup>3</sup> / 300 MJ/h

**Waste Types / Approx. Capacity**

- Type No. 1: 20\* kg/h
  - Type No. 2: 30\* kg/h
  - Type No. 3: 50\* kg/h
- (\* based on 6 loads/h)

**Power Requirements**

- 115 volts 60 cycle single phase.

**Stack**

- 14 gauge stainless steel.
- 33 cm diameter.
- 3 m high.
- c/w stainless steel spark arrester and a hinged base plate for transport.

**Casing**

- 12 gauge steel.
- Lining: high heat duty castable refractory over high temperature insulation.

**Hearth**

- Refractory hearth over 6.35 mm steel base.

**Doors**

- 6.35 mm steel plate c/w heavy duty blade latch.
- Charging Door
  - 46 cm x 61 cm clear opening.
  - Refractory lined over steel plate.
- Ash Door
  - 46 cm x 30 cm clear opening.
  - Refractory lined over steel plate.

**Air Supply**

- Forced air fan c/w duct to primary air jets and to secondary over-fire air jets.

**Timers**

- Cycle timer interconnected to air supply fan and gun type burner enclosed in burner housing.

**Burners**

- 490,000 Btu gun type primary burner. The gun burner is enclosed in protective plate steel housing.
- 280,000 Btu gun type burner in the secondary combustion chamber.

**Fuel Supply Options:**

- Natural gas "N".
- LPG "LPG".
- Diesel "D" – requires a 450 litre fuel storage tank c/w filter and flexible hose type connection.

**Transporter**

- Incinerator and fuel storage mounted on skid type frame 365 cm long x 152 cm wide.
- Height: 2.64 m, with stack folded.
- Constructed of 15 cm I Beam c/w bumper posts.

**Weight**

- 2268 kg.

**Options**

- LPG fired burner.
- Diesel fired burner.
- 2.3 m Electric power cord.
- Stack winch.
- 1.3 m<sup>3</sup> model CY-2050-FA.
- Cold climate assembly.

MANUFACTURED BY:

DISTRIBUTED BY:



Environmental Services Inc.  
20204 – 110 Avenue, Edmonton, AB Canada T5S 1X8  
Phone: (780) 447-5052 Fax: (780) 447-4912  
E-MAIL: info@westlandenvironmental.com

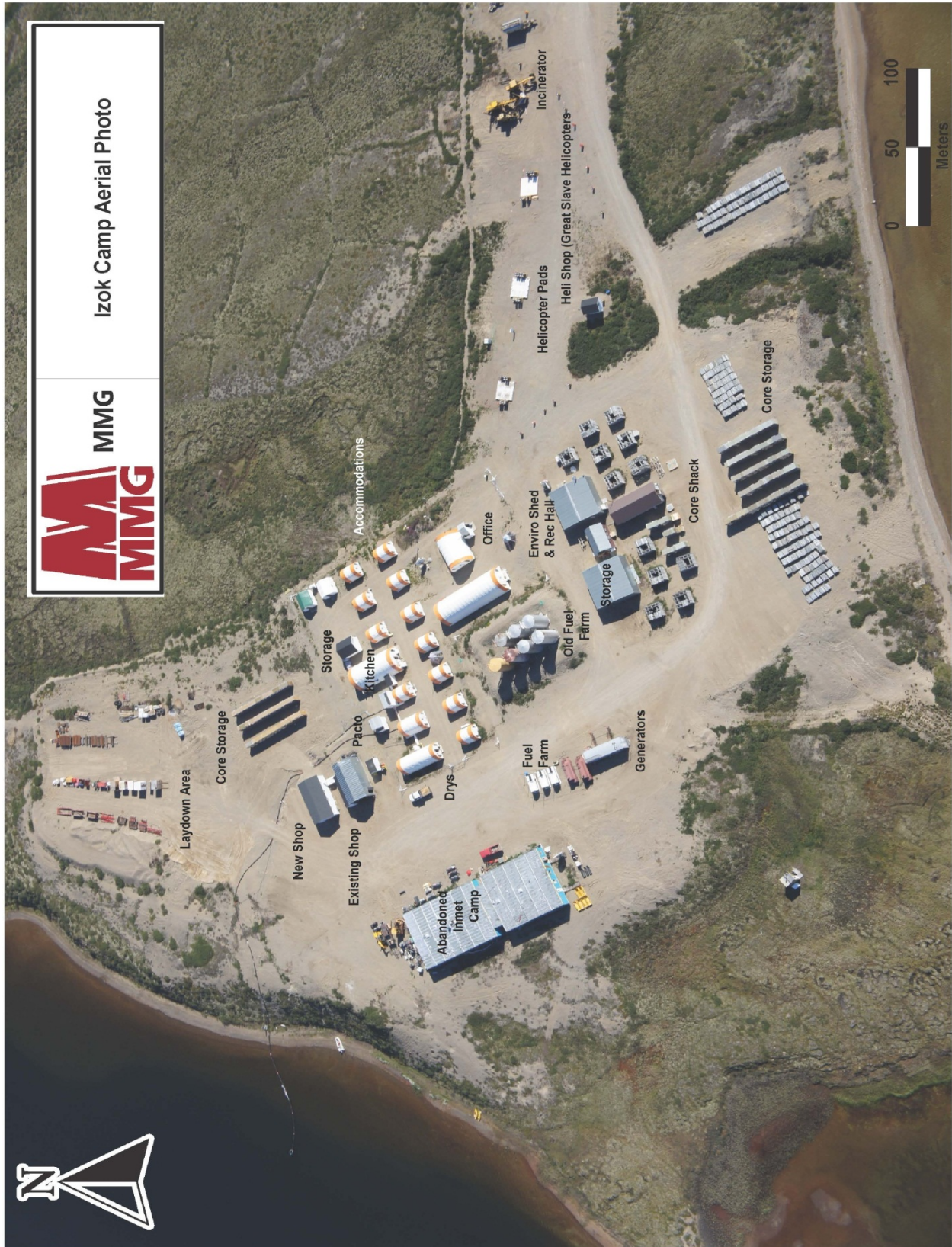
## Appendix VII : Spill Contingency Plan

The complete Spill Contingency Plan is provided in digital format on the CD that accompanies this report.

## Appendix VIII : Abandonment and Restoration Plan

The complete Abandonment and Restoration Plan is provided in digital format on the CD that accompanies this report.

Appendix Apendix IX : Photos Izok  
Izok Camp on Ham Lake – August 2012



Fuel farm 11,000L double walled storage tanks with spill kit – August 2011



Drum storage onsite with secondary containment berms – August 2012



Photos - Hood:

Hood site – August 2012



Hood site showing Core Storage area



