2011 Annual Geotechnical Inspection
Various Earth Structures
Ulu, Nunavut

Prepared For:

Elgin Mining Inc.

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November 24, 2011

Ref. No. 11-293

TBT ENGINEERING
CONSULTING GROUP

November 24, 2011
TBTE Ref. No. 10-069

Patrick Downey
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Re:

2011 Annual Geotechnical Inspection
Various Earth Structures
Ulu Gold Project, Nunavut

Introduction

In order to fulfill terms of the Water License (Water License ID 2BM-ULU0914) for the Ulu Gold Project site, Elgin Mining Inc. has requested geotechnical inspections be conducted for the 2011 season. The inspections were undertaken by TBT Engineering Limited on September 22, 2011. This report provides a summary of these inspections and documents the findings.

The Ulu Gold Project is an advanced exploration project, owned by Elgin Mining Inc.. The Water Board License for the mine was transferred to Elgin Mining Inc. when Elgin Mining acquired ownership of the Ulu Gold Project. The project is located in Nunavut, approximately 530 km north east of Yellowknife at 66º55'N and 110º58'W, as shown in Enclosure 1. Project locations and layout have been illustrated on Enclosures 1-3.

The purpose of the annual geotechnical inspection is to visually evaluate the performance of water- and waste-retaining structures from a geotechnical perspective. Following the inspection, the owner (Elgin Mining Inc.) is to be notified of any deficiencies.

Ulu Gold Project Site

The following facilities and structures have been identified previously for the annual geotechnical inspection program:

- Ulu Gold Project Main tank farm containment berm.
- Day tank containment berm.
- Camp 3 tank farm containment berm.
- Mine sump
- Ore storage pad.
- Portal laydown pad.

Background

The following description of the mine history was provided in earlier inspection reports (BGC Engineering Inc. 2007)

> "The Ulu Property was originally discovered by BHP Minerals in 1988, then there followed several years of additional exploration work. Mining consultant H.A. Simons Ltd. completed a pre-feasibility study of the project in September 1995, followed by the sale of the property to Echo Bay Mines Ltd. (Echo Bay) in November 1995. After receipt of appropriate permits and approvals in early 1996, Echo Bay mobilized camp and mining equipment over the winter road to their temporary Camp 3, located south of the Ulu site. Following from that initial mobilization, Echo Bay built the 8 km all-weather road to the Ulu airstrip and the Ulu camp facilities undertook surface diamond drilling and excavated a portal and completed a 632 m ramp to the 75 m level.
>
> In February 1997, Echo Bay submitted an environmental assessment for the project. Also in 1997, additional ramp development was undertaken to the 155 m level, along with other development and diamond drilling work, but the project was shut down in August 1997 due to low gold prices. Echo Bay then provided updated Feasibility Studies

> in December 1997 and October 1998, but the project activity generally remained dormant.
>
> In December 2003, Wolfden purchased the Ulu Property from Echo Bay. Echo Bay's Water License for the site was transferred to Wolfden by the NWB in a letter dated March 23, 2004. Zinifex subsequently purchased Wolfden earlier in 2007, and then merged with Oxiana Ltd. in 2008 to form OZ Minerals. "

In 2009 the property was transferred to MMG Resources Inc. (MMG) as a part of the acquisition of Oz Minerals. Elgin Mining Inc. purchased the property from MMG in July 2011.

The Project is currently under care and maintenance.

Project Elements

The Ulu Gold Project site consists of three main components, from south to north:

1. Camp 3 (fuel tank farm and maintenance building), borrow pits and explosives magazines located on an esker just northwest of Reno Lake North.
2. An airstrip, approximately 1350 m long x 30 m wide, located over bedrock exposures to the north.
3. The Ulu Gold Project camp and portal, located at the north end of the site.

As reported earlier (BGC Engineering Inc. 2007), the Ulu Gold Project camp location is on a glacially modified bedrock outcrop bounded by West Lake and East Lake to the southeast. Ulu Lake is located to the northeast. The terrain consists of exposed bedrock, boulder fields, and occasional glacial erratics. Areas near the lakes and watercourses contain wetlands and sedge grasses. The majority of the surface drainage from the camp site, waste rock and ore storage pads drains into East Lake, which discharges into Ulu Lake. Some surface drainage from the northern end of the campsite pad flows overland and then into Ulu lake. A small southwestern portion of the ore storage pad flows west, possibly into West Lake.

The Ulu Gold Project site is located within the continuous permafrost zone of northern Canada. The Lupin Mine, approximately 150 km to the south is reported to have a permafrost depth of approximately 540 m. At High Lake, approximately 50 km to the north of the Ulu Gold Project site, permafrost has been calculated from temperature measurements taken in exploration drill holes to be approximately 440 m deep.

Climatic Information

The following climatic data is referenced from the BGC 2007 annual inspection report.

Based on regional correlations of proximal weather stations, RWDI (2006) have estimated parameters for the "Wolfden Project area", as summarized below:

- Mean annual air temperature of -11.8 °C
- Extreme annual temperatures values of -53.9 °C and -34.9 °C

Site Inspections

The various earth structures at the Ulu Gold Project site were inspected by TBT Engineering on September 22, 2011. The inspections were completed by Gordon Maki, P.Eng. and Ernie Krause, Sr. Technologist of TBT Engineering.

Each of the earth structures were visually inspected, photographed and a standardized site inspection form was completed. Findings of the inspection were discussed with representatives of Elgin Mining Inc. who accompanied TBT during the visit.

Findings And Conclusions

Details of the various site inspections have been documented on the attached individual site reports (Appendix A). These have been provided in a standardized format to be consistent with previous Annual Inspections.

The inspections confirm the earth structures are generally in satisfactory condition with some liner related issues to be attended to. Repairs and restoration of the gravel covers are required at the following structures:

- Ulu Gold Project Tank Farm Containment Berm
- Day Tank Containment Berm (one seam separated)
- Camp 3 Tank Farm

Additional potential issues other than liner / cover maintenance are as follows:

Camp 3 Tank Farm Containment Berm:

Several of the smaller tanks are leaning due to broken timber foundations supports. This should be assessed and repaired if deemed necessary.

Mine Sump:

The mine sump pit remains in the same condition over the last 2 years with exposed liner with small holes and loose ends. This should be repaired before the sump is ever put back into operation.

Portal Laydown (Waste Rock) Pad:

The existing silt curtain downstream of the Portal Laydown Pad is in need of repair / maintenance. Toe seepage was observed and sampled by a representative of Elgin Mining Inc. Pending the results of analytical testing, additional measures may be required address the seepage.

Ore Storage Pad:

The pad appears stable with no signs of erosion or instability. A sample of seepage (identified by a representative of Elgin Mining Inc.) located outside the toe of the pad was collected. Pending the results of analytical testing, additional measures to address the seepage may be required.

The above comments are based on the current Ulu Gold Project operational conditions; the site is currently not being used, there are no mining or exploration activities. Prior to reinstatement of operations the earth structures should be re-evaluated to confirm their suitability to the specific operational situations.

Closure

We trust the above addresses your requirements at this time. Please contact us at your convenience should you have any questions.

Yours truly,
For TBT Engineering

REGISTERED PROFESSIONAL ENGINEER
G.C. MAKI
LICENSEE
NWT/NU

Gordon Maki, P. Eng.
Manager of Geotechnical Engineering

Wayne Hurley
Principal

PERMIT TO PRACTICE
TBT ENGINEERING LIMITED
Signature
Date Nov 24/11
PERMIT NUMBER: P561
NWT/NU Association of Professional Engineers and Geoscientists

REFERENCES

TBT Engineering Limited, 2010 Annual Geotechnical Inspection, Various Earth Structures, Ulu, Prepared for MMG Resources Inc., Reference No. 10-069, November 3, 2010.

TBT Engineering Limited, 2009 Annual Geotechnical Inspection, Various Earth Structures, Ulu, Prepared for MMG Resources Inc., Reference No. 09-161, December 1, 2009.

BGC Engineering Inc.,2008 Annual Geotechnical Inspection, Selected Structures, Ulu Gold Project, NU, Report submitted to OZ Minerals Canada Ltd., Project No. 0385-007-02, December 16, 2008.

BGC Engineering Inc.,2007 Geotechnical Inspection, Selected Strucutres, Ulu Gold Project, NU, Report submitted to Zinafex Canada Inc., Project No. 0385-006-02, October 29, 2007.

APPENDIX “A”

2011 ANNUAL GEOTECHNICAL INSPECTION
OF SELECTED STRUCTURES

ULU GOLD PROJECT TANK FARM CONTAINMENT BERM

LOCATION: Northeast corner of the Ulu Gold Project camp pad.

FUNCTION: Provides secondary containment for five large fuel tanks and numerous barrels of fuel.

SIZE: ~20 m wide by ~50 m long.

BERM HEIGHT: ~1.5 to 2 m above adjacent grade.

CREST ELEVATION: No survey information available

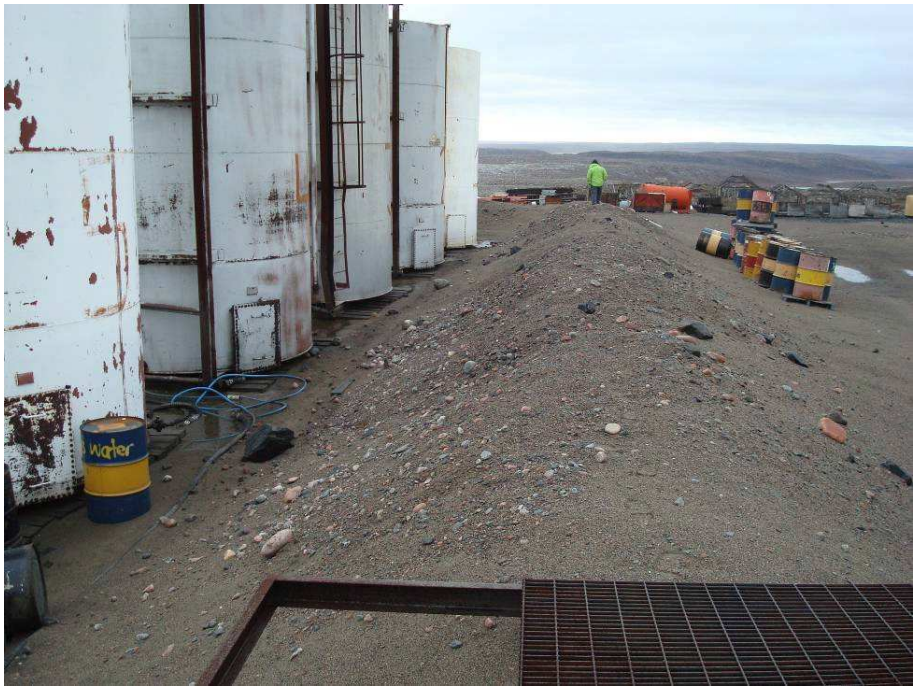
BERM CONDITION: Berm is constructed from esker sand and gravel and appears in good condition. Numerous animal burrows observed on the outside slope of the berm. Several areas of exposed liner along interior of berm. Exposed liner appears to be in good shape (no visible holes).

SEEPAGE: No evidence of seepage observed at the exterior berm toe. Small amounts of water with oil sheen are being retained within the storage area. Slightly more water being retained this year as compared to last year.

MAINTENANCE/MONITORING RECOMMENDATIONS: Cover areas of exposed liner.

CONCLUSIONS: The berm appears in generally satisfactory condition. Areas of exposed liner to be covered.

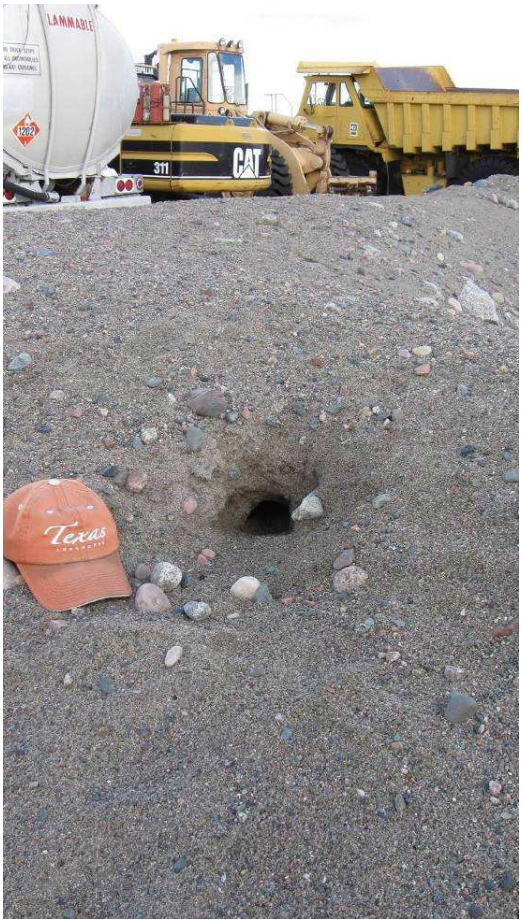
Exterior Berm – 2010



Exterior Berm – 2011

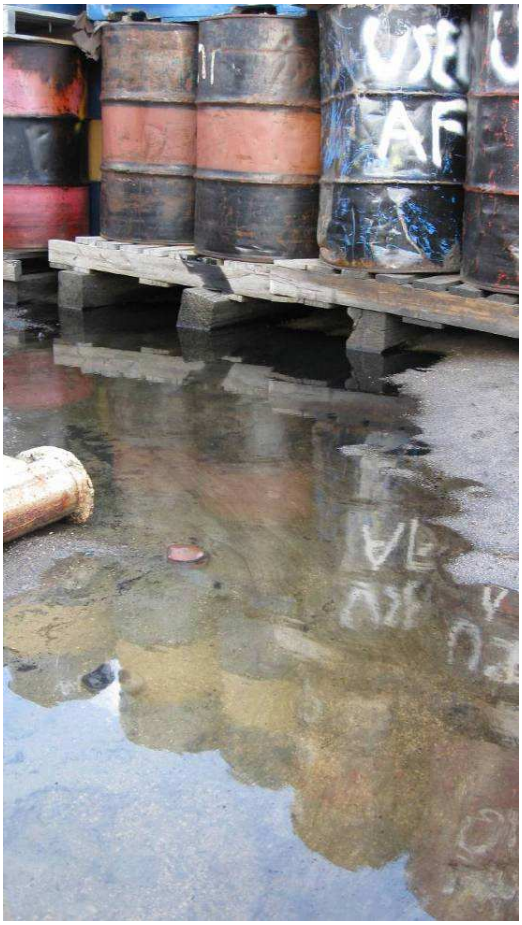
Exterior Berm – 2010

Exterior Berm – 2011



Animal Burrow – 2010

Animal Burrow – 2011



Small amount of water with oily sheen – 2010

Small amount of water with oily sheen – 2011

One Area of Exposed Liner – 2011

DAY TANK CONTAINMENT BERM

LOCATION: Adjacent to powerhouse area.

FUNCTION: Provides secondary containment for one fuel tank.

SIZE: ~5 m wide by ~5 m long.

BERM HEIGHT: ~1 to 1.2 m above adjacent grade.

CREST ELEVATION: No survey information available.

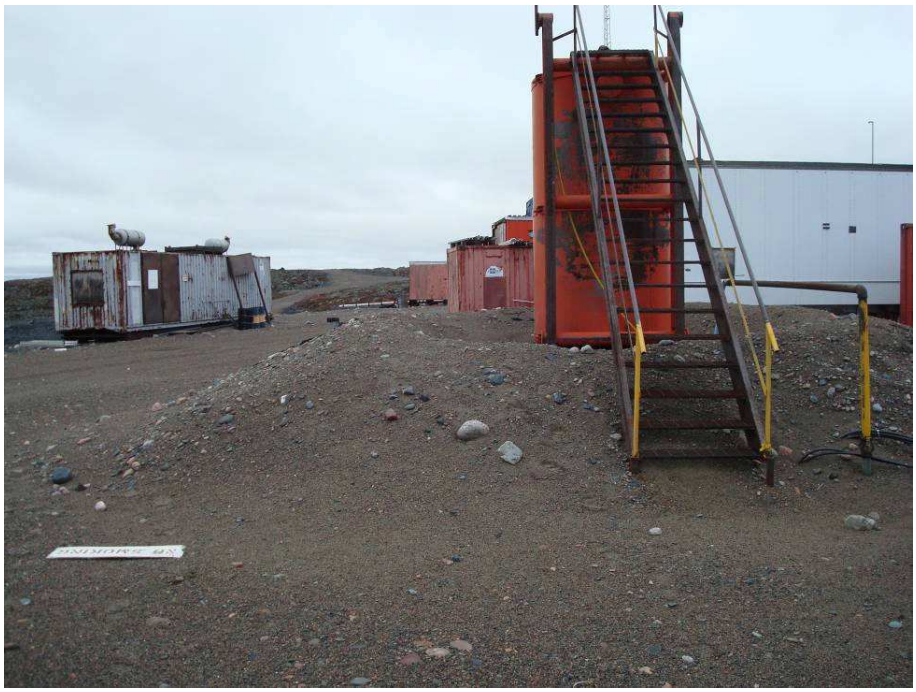
BERM CONDITION: Berm is constructed from esker sand and gravel and appears in overall good condition. Liner is exposed at one location along the interior of the berm. Where the liner is exposed, it is also separated at a seam.

SEEPAGE: No evidence of seepage observed at the berm toe. Approximately 50 mm of water has accumulated in bottom of containment area.

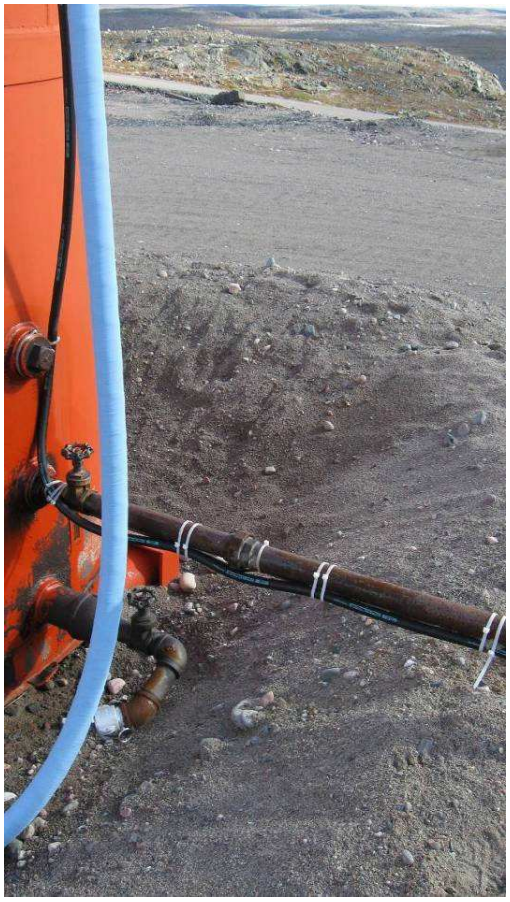
MAINTENANCE/MONTORING RECOMMENDATIONS: Repair and cover exposed section of separated liner.

CONCLUSIONS: The berm appears in generally satisfactory condition. Area of exposed and separated liner to be repaired.

Day Tank Berm – 2010



Day Tank Berm – 2011



Inside of Berm West Side – 2010

Inside of Berm, West Side with Exposed and Separated Liner – 2011

Inside of Berm Dry – 2010

Inside of Berm, Up To 50 mm of Water – 2011

CAMP 3 TANK FARM CONTAINMENT BERM

LOCATION: Far southern end of the esker, west of Reno Lake North.

FUNCTION: Provides secondary containment for two large fuel tanks and six smaller skid-mounted tanks.

SIZE: ~30 m wide by ~60 m long.

BERM HEIGHT: ~1.5 to 2 m above adjacent grade on one side and ~1 to 1.2 m on the other.

CREST ELEVATION: No survey information available

BERM CONDITION: Berm is constructed from esker sand and gravel and appears in good condition. Some new areas of liner are exposed, but no holes were observed at the interior locations. Several animal burrows were noted along the exterior of the berm. Some of the smaller tanks have broken timber foundation supports causing the tanks to lean. This should be repaired.

SEEPAGE: No evidence of seepage observes at the berm toe. Some water retained within containment area.

MAINTENANCE/MONTORING RECOMMENDATIONS: Areas of exposed liner should be covered with granular fill.

CONCLUSIONS: The berm appears in generally satisfactory condition. See above maintenance items. The leaning tanks should be assessed/repaired

Camp 3 Tank Farm – 2010

Camp 3 Tank Farm – 2011

Area of Exposed Liner Covered in 2010 – 2010

Area of Exposed Liner Covered in 2010 – 2011

Exposed Liner Between Tanks – 2010

Exposed Liner Between Tanks – 2011

New Area of Exposed Liner – 2011

New Area of Exposed Liner – 2011

Liner Uncovered At One Location of Containment Area Floor – Appears in Good Shape – 2011

Animal Burrows Exterior of Berm – 2011

One Area of Exposed Liner on Downstream Slope – 2010

One Area of Exposed Liner on Downstream Slope – 2011

Area of Cut Into Downstream Slope – 2010

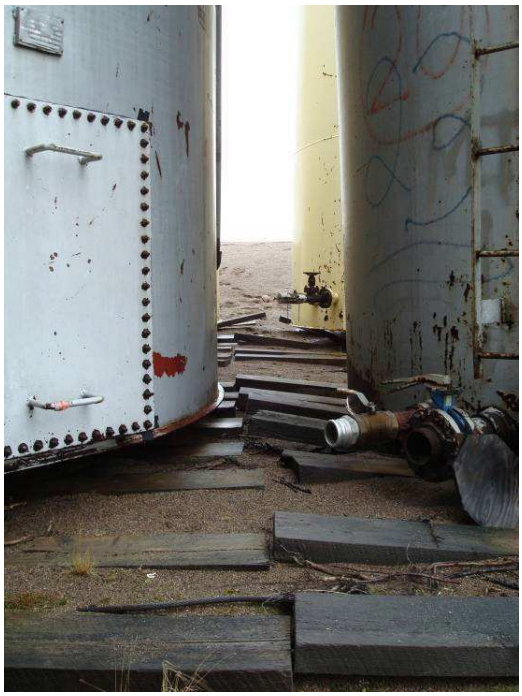
Area of Cut Into Downstream Slope – 2011

Leaning Tank – 2010

Leaning Tank – 2011

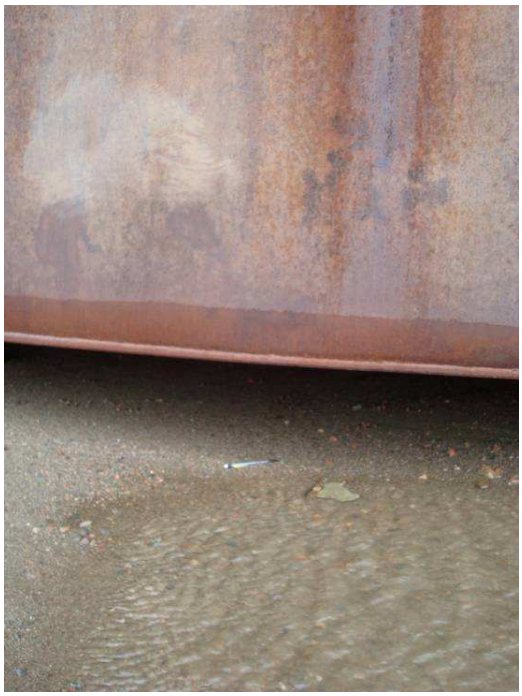
Broken Timber Support – 2010

Broken Timber Support – 2011
Another Leaning Tank – 2011



More Broken Timber Tank Supports – 2011

Gap below tank – 2010



Gap below tank (some contained water) – 2011

Erosion Gully Near Toe of Berm S/E Corner – 2010

Erosion Gully Near Toe of Berm S/E Corner – 2011

MINE SUMP

LOCATION: Directly outside the portal, uphill from both a local access road and the portal laydown pad.

FUNCTION: Provides containment for settling and sediment retention of mine water pumped from the decline ramp.

SIZE: ~20 m wide by ~30 m long.

BERM HEIGHT: ~1.5 to 2 m above adjacent grade.

CREST ELEVATION: No survey information available.

BERM CONDITION: Berm is constructed from rockfill (waste rock) and esker sand and gravel, The banks are over-steepened.

Geomembrane liner within berm is exposed at numerous locations along the north, east and west sides. The liner at north end of the pond is loose. Small tears are developing in the liner.

SEEPAGE: No evidence of seepage observed at the berm toe. Small amount of ponded water.

MAINTENANCE/MONTORING RECOMMENDATIONS: Before the sump is put back into service the liner and side slopes should be repaired/restored.

CONCLUSIONS: The berms are suitable for the interim. Before the sump is put back into use, the liner and slopes must be repaired.

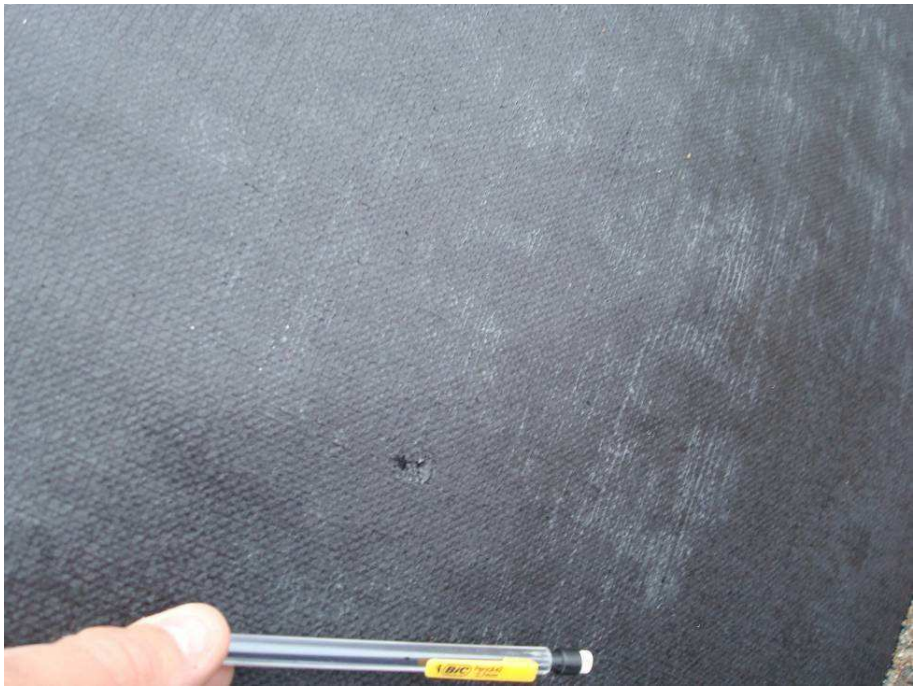
Mine Sump Pit – Exposed Liner – 2010

Mine Sump Pit – Exposed Liner – 2011

Exposed and Loose End of Liner – 2010

Exposed and Loose End of Liner – 2011

Typical Small Tear in Liner – 2010



Typical Small Tear in Liner – 2011

Small Amout of Ponded Water – 2011

PORTAL LAYDOWN (WASTE ROCK) PAD

LOCATION: Pad is located just downhill from the portal and local access road, approximately 150 m from East Lake.

FUNCTION: Initially constructed from waste rock from the decline ramp development. Mine muck material was placed on the pad covers a portion of the silt control fence.

SIZE: ~50 m wide by ~200 m long.

PAD THICKNESS: Ranges from 1 to 5 m above original topography.

CREST ELEVATION: No survey information available.

PAD CONDITION: Pad is constructed from rockfill (waste rock). Toe of the pad sits at the angle of repose for rockfill. Scarps and cracks have developed on downhill toe due to sloughing and erosion of loose fill.

TOE DISCHARGE: Near the uphill portion of the pad (on top of the pad), surfacewater was observed flowing in a small drainage channel which flows towards the waste rock pile (on the pad). The source of this surfacewater is unknown, but appeared to be groundwater entering the small channel. At one location at the toe of the pad, seepage outflow was observed (estimated at 1L/min). It is likely the the source of the toe seepage is the observed surface water observed near the uphill side of the pad A sample of the toe seepage was collected by a representavtive for Elgin Mining.
Any potential pad drainage leads downhill into East Lake.

MAINTENANCE/MONTORING RECOMMENDATIONS: Existing downstream stream silt fencing is in need of repair.

CONCLUSIONS: The pad appears to shows signs of instability and erosion on the downstream side. Re-grading and shaping will be required before the pad is put into use. A sample of seepage identified at the toe of the pad was collected. Pending the results of analytical testing, additional measures to address the seepage may be required. Runoff from the pad is collected within East Lake that passes through a wetland before entering Ulu Lake. The existing down slope silt curtain is in need of repair and has been covered by the toe of the pad at some locations. The silt curtain should be restored.

Portal Laydown Pad – 2010

Portal Laydown Pad – 2011

Downhill Face of Pad – 2010

Downhill Face of Pad – 2011

Silt Fence – 2010

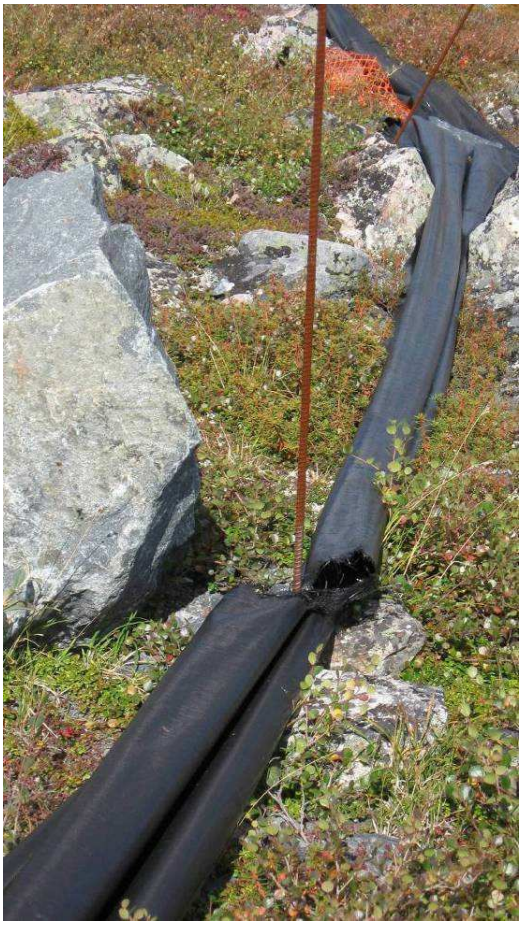
Silt Fence – 2011

Silt Fence – 2010

Silt Fence – 2011

Silt Fence – 2010

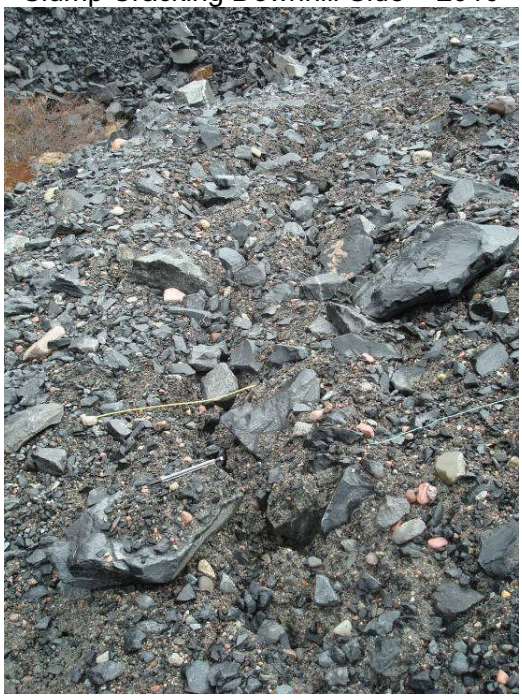
Silt Fence – 2011



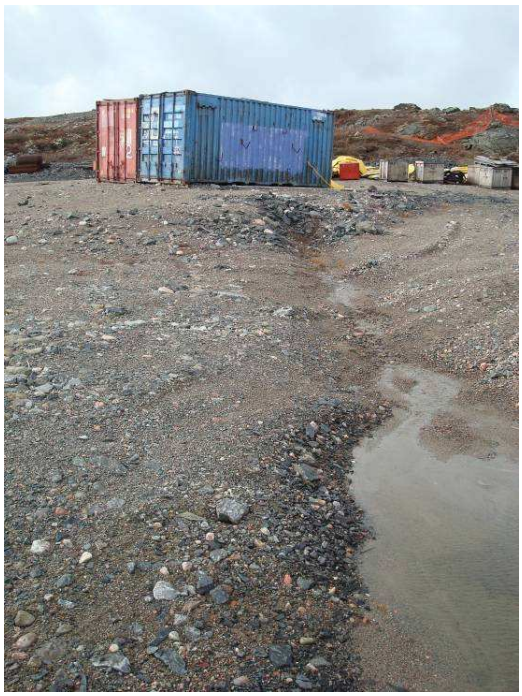
Silt Fence – 2010

Silt Fence – 2011

Slump Cracking Downhill Side – 2010



Slump Cracking Downhill Side – 2011



Flowing Surface Water in Small Channel Near Uphill Side of Pad (source of water uknown) – 2011

Seepage Noted At One Location, Toe of Pad (est. 1 l/min.) – 2011

ORE STORAGE PAD

LOCATION: Pad is located southwest of the Portal Laydown Pad, approximately 325 m from East Lake.

FUNCTION: Constructed from waste rock and then partially covered with esker sand and gravel. The pad was originally constructed for temporary storage of ore before its proposed shipment. Two small ore stockpiles are currently located on the pad.

SIZE: ~100 m wide by ~200 m long.

PAD THICKNESS: Ranges from 1 to 3 m above original topography.

CREST ELEVATION: No survey information available.

PAD CONDITION: Pad is constructed from rockfill (waste rock) and esker sand and gravel. Two ore stockpiles located on the east corner of the pad. The side slopes of the pad site are at the angle of repose for rockfill.

TOE DISCHARGE: No seepage was observed along the toe of the pad. However an area of seepage located to the south of the pad (approximately 15 m from the toe of pad) was observed and sampled by a representative of Elgin Mining Inc. The seepage was reported to be at an estimated rate of 1 L/min.

MAINTENANCE/MONTORING RECOMMENDATIONS: No current concerns.

CONCLUSIONS: The pad appears stable with no signs of erosion or instability. A sample of seepage identified outside the toe of the pad was collected. Pending the results of analytical testing, additional measures to address the seepage may be required.

Storage Pad Outside Edge – 2010

Storage Pad Outside Edge – 2011

Storage Pad Area – 2010

Storage Pad Area – 2011

Seepage Sampling - South of Pad - 2011

ENCLOSURES

CLIENT: **Elgin Mining Inc.**
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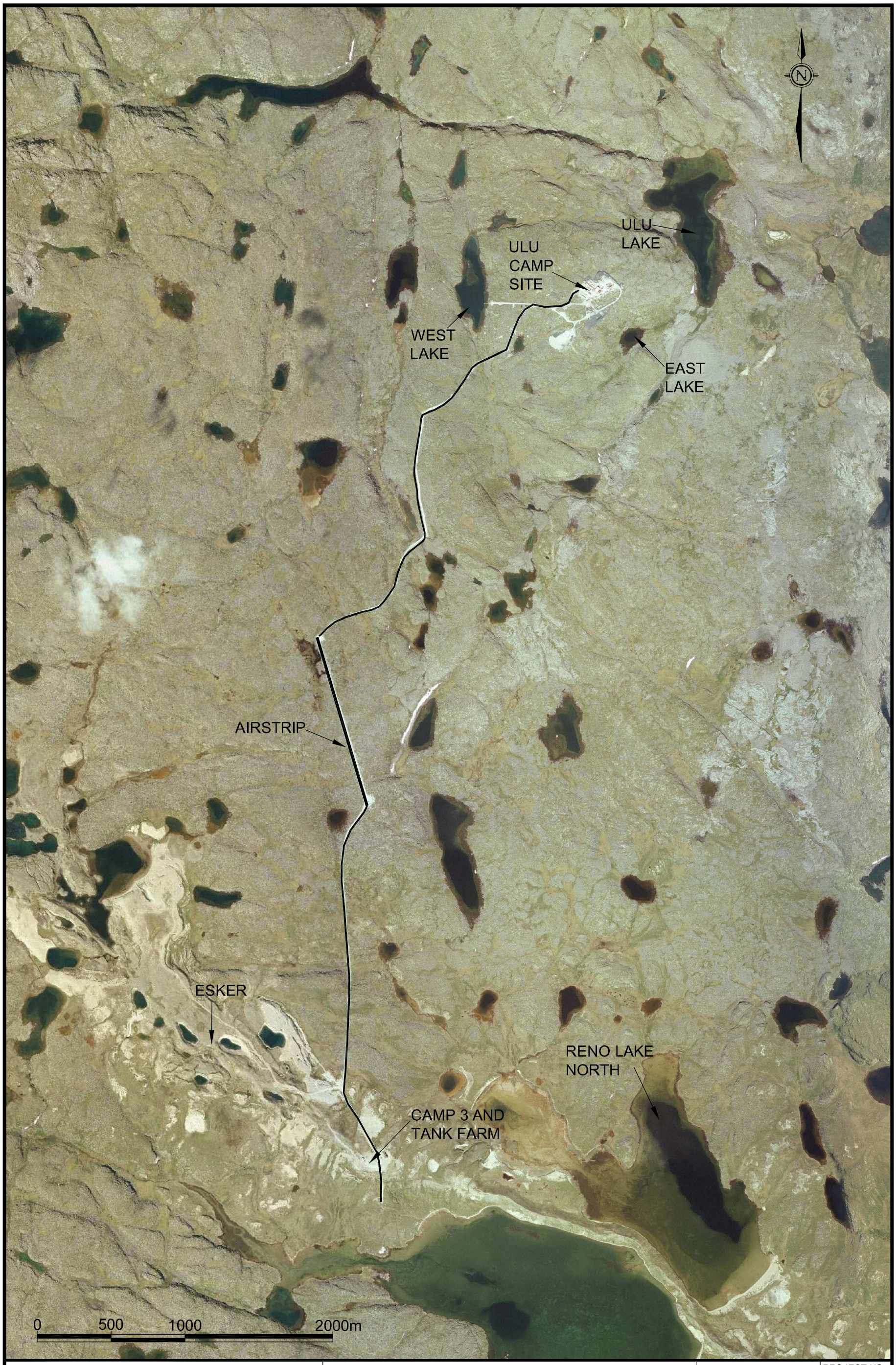
TBT ENGINEERING
CONSULTING GROUP

DWG. TITLE:	SCALE:	PROJECT NO.
OVERVIEW MAP	1 : 7 500	11-293

PROJECT:
ANNUAL INSPECTION
ULU GOLD PROJECT, NUNAVUT

DATE: **NOV 2011**

ENCLOSURE
1



CLIENT: **Elgin Mining Inc.** 83 Yonge Street, Suite 200 Toronto, ON M5C 1S8	DWG. TITLE: AREA PLAN	SCALE: 1 : 25 000	PROJECT NO. 11-293
TBT ENGINEERING CONSULTING GROUP	PROJECT: ANNUAL INSPECTION ULU GOLD PROJECT, NUNAVUT		DATE: **NOV 2011** ENCLOSURE 2

CLIENT:

Elgin Mining Inc.
83 Yonge Street, Suite 200
Toronto, ON
M5C 1S8

TBT ENGINEERING
CONSULTING GROUP

DWG. TITLE: FACILITY PLAN

SCALE: 1 : 3000

PROJECT NO.: 11-293

PROJECT:

ANNUAL INSPECTION
ULU GOLD PROJECT, NUNAVUT

DATE: **NOV 2011**

ENCLOSURE: 3