

**TOTAL FIELD MAGNETOMETER**

**SURVEY**

**ON THE**

**PARISIEN LAKE PGE PROPERTY**

**PHASE 2**

**DISTRICT OF ALGOMA**

**SUDBURY**

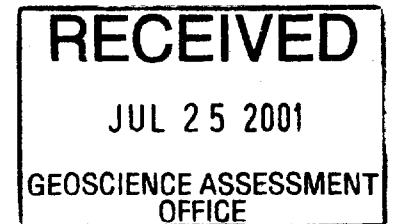
**MINING DIVISION**

**FOR**

**MUSTANG MINERALS CORP.**

**BY**

**Dan Patrie**



Dan Patrie  
June, 2001



41J08NE2016 2.21852 BOON

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## TABLE OF CONTENTS

	PAGE
INTRODUCTION	1
SUMMARY AND RECOMMENDATIONS	1
LOCATION AND ACCESS	3
GEOLOGY	3
TOPOGRAPHY AND VEGETATION	4
CLAIM DESCRIPTION	4
INSTRUMENTATION AND WORK DONE	5
MAGNETOMETER SURVEY	5
INTERPRETATION	6
CONCLUSIONS	7
RECOMMENDED EXPLORATION PROGRAM	7
PERSONNEL	
REFERENCES	
CERTIFICATE OF QUALIFICATION	
LETTER OF CONSENT	
MAGNETIC MAPS	
BASE MAP	

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## **INTRODUCTION**

Mustang Minerals Corp., acquired a group of unpatented mining claims comprising of 6,500 acres which hosts 90 percent of the East Bull Lake Intrusion. In the District of Algoma Ontario in the Sudbury Mining Division.

As per request of the property owners a follow up phase 2 geophysics program consisting of line cutting and magnetometer survey was done during the month of February was carried out by Dan Patrie Exploration Ltd.

## **SUMMARY AND RECOMMENDATIONS**

The East Bull Lake Parisien Lake PGE Property is located in Northeastern Ontario , District of Algoma, Ontario, Sudbury Mining Division.

Further exploration of the East Bull Lake Parisien Lake PGE Property is warranted in proving its considerable merit in hosting economic PGE mineralization.

A program of 19 kilometers of line cutting and magnetic survey was done on lines between the old lines cut and read in the year 2000 to explore the East Bull Lake Parisien Lake PGE property for its PGE potential.

Due to the lack of geological information the following programs are recommended to complete the evaluation.

1. Completion of the grid lines over entire property.
2. Humus sampling over anomalous areas to better define drill targets.
3. Induced Polarization over all of property.

Following completion of this work and contingent upon the results then additional work should be considered to further evaluate the economic potential of the property for PGE mineralization.

The following report summarizes the results obtained from the work carried out during the current program and the interpretation is speculative.

Respectfully submitted,

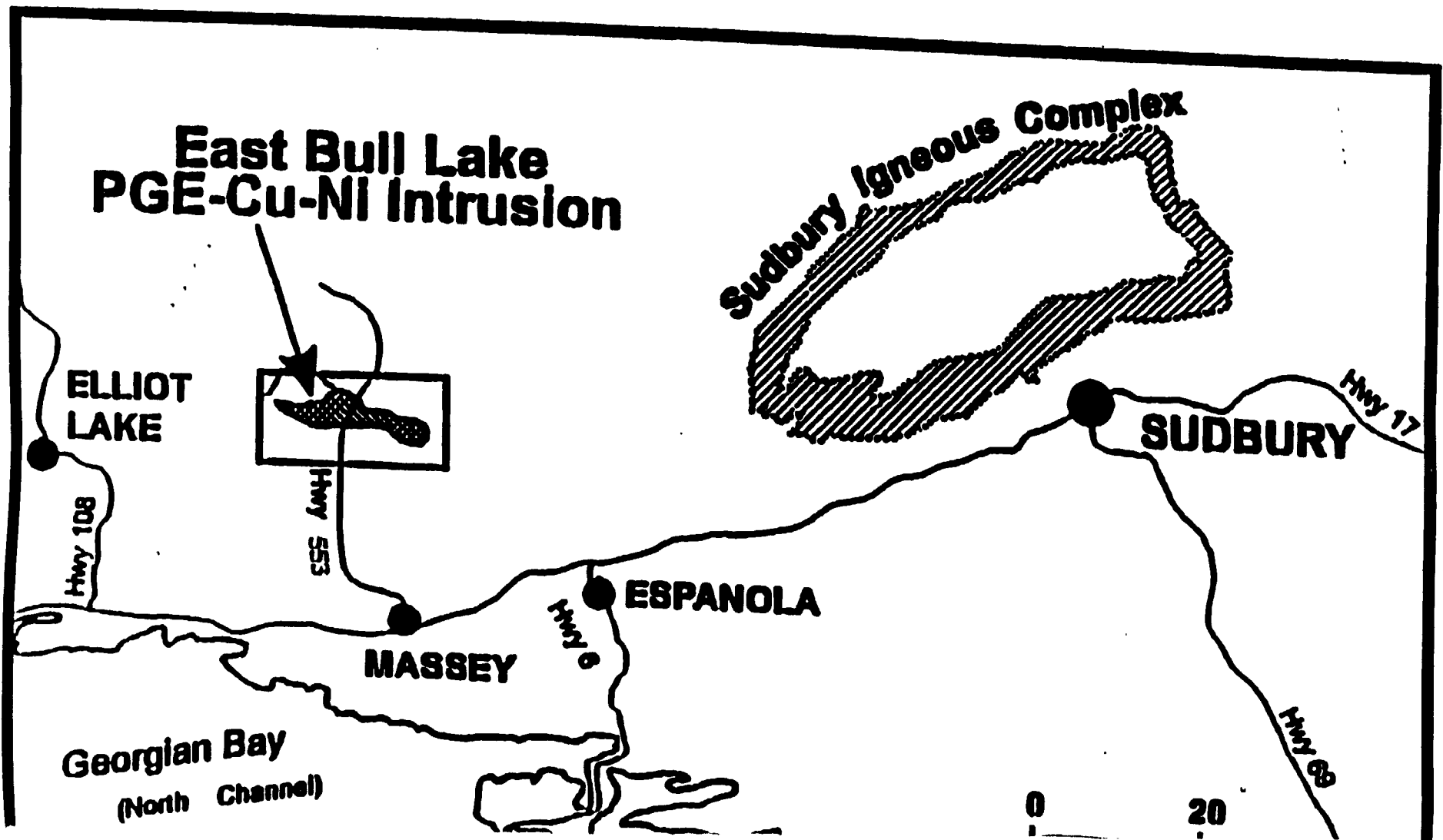
Daniel F. Patrie

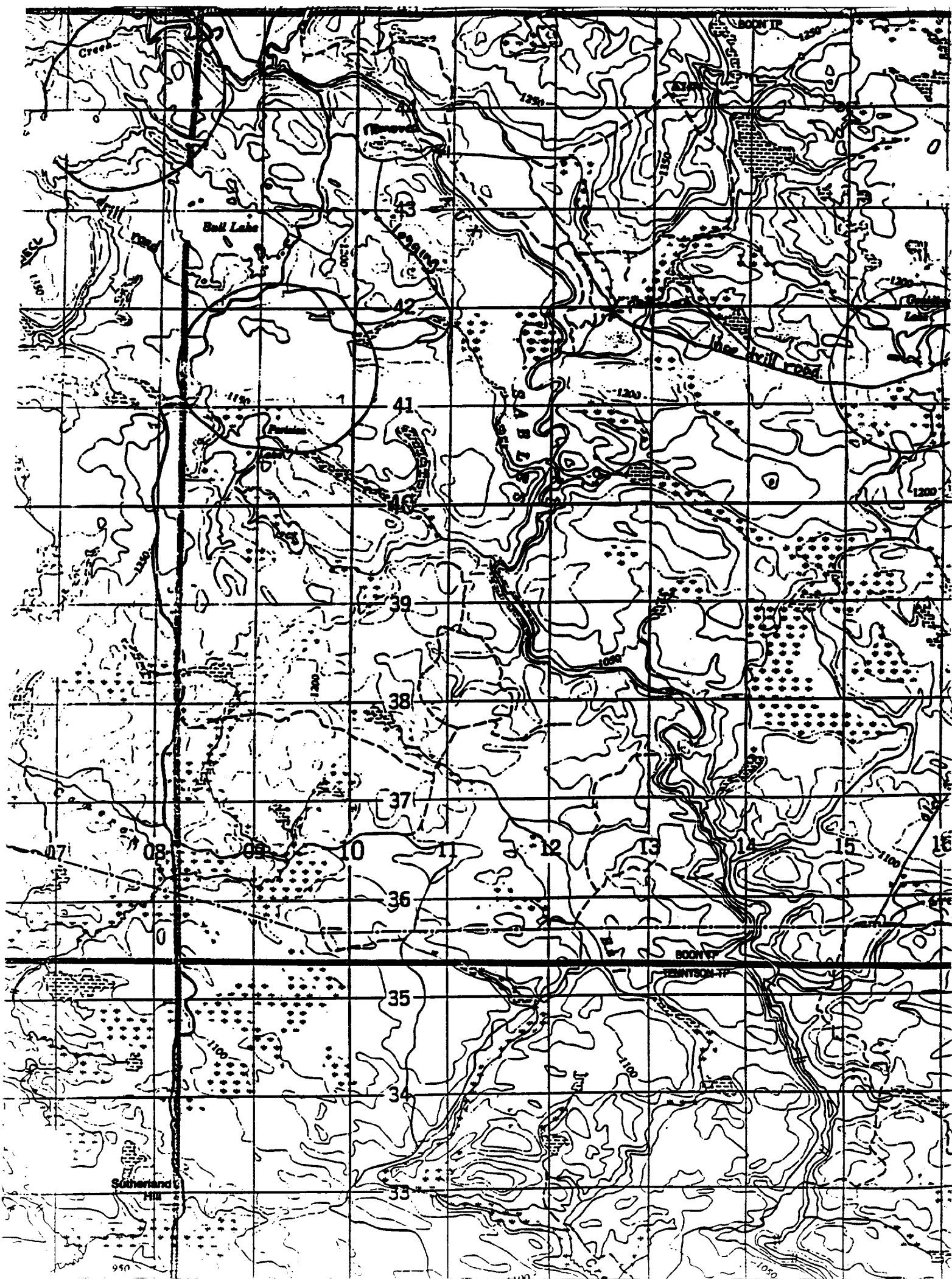
Geology and Geophysics Technologist

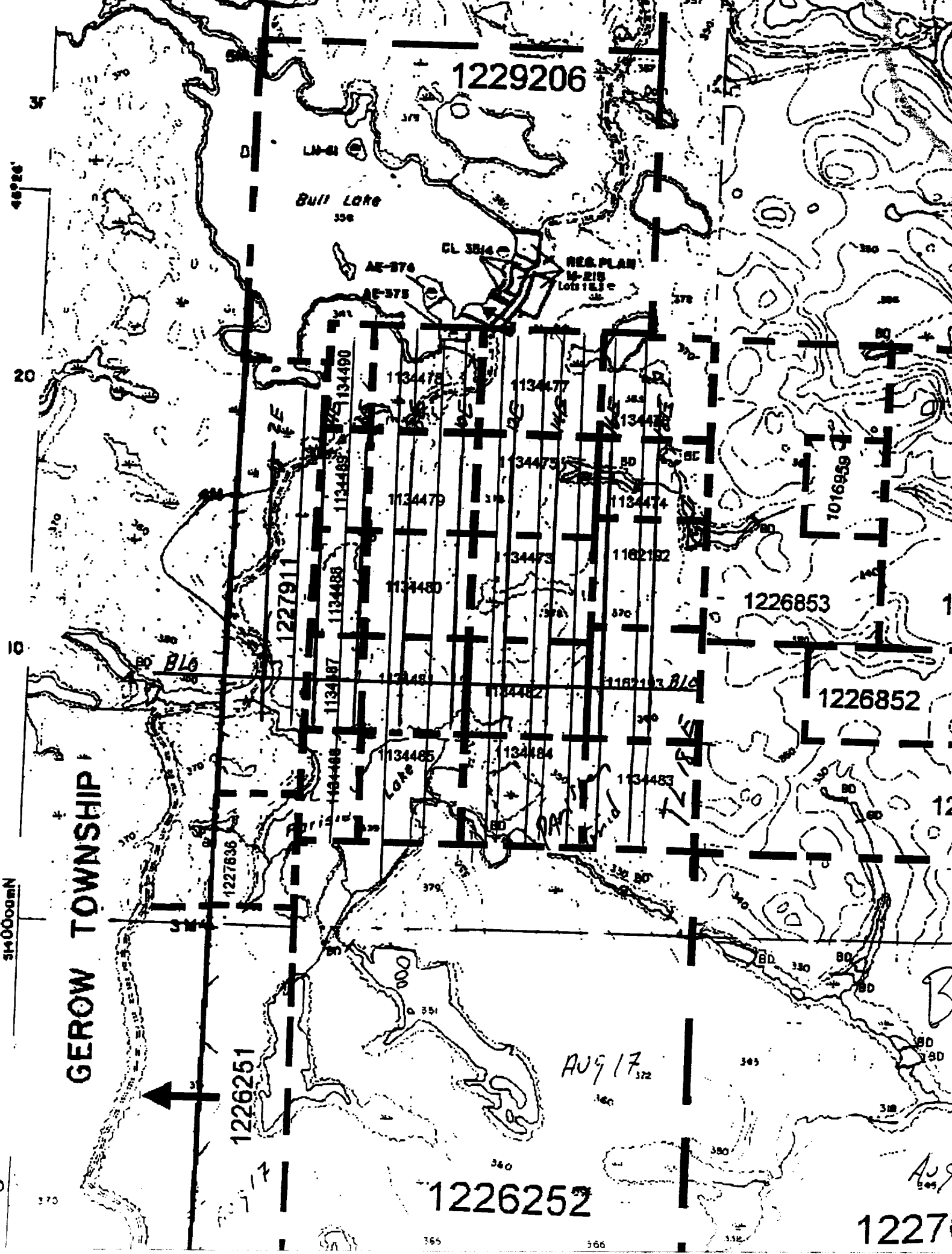
June, 2001

A handwritten signature in black ink, appearing to read 'Daniel F. Patrie', is written over the typed name and extends slightly to the right.

# EAST BULL LAKE PGE PROPERTY LOCATION MAP







GEROW TOWNSHIP

1229206

Bull Lake  
336

CL 3514

REG. PLAN  
M-218  
LOSS 18.1 c

AE-374  
AE-375

1016959

1226853

1226852

1226251

1226252

12271

Aug 17 372

Aug 3 372

514000mN

46926'

20

10

0

370

365

366

358

12

30

31

32

33

34

## **LOCATION AND ACCESS**

The East Bull Lake Parisien Lake property is located 80 kilometers west of Sudbury and accessed via highway 553 and approximately 34 kilometers north of the town of Massey. Access to the grid is by using an all terrain vehicle on a series of old logging roads off of highway 553 by turning east 2 kilometer south of the East Bull Lake Lodge and traveling east on a all terrain vehicle across the grid at approximately 400 north to 600 north giving access across all of the grid lines. The grid is situated on the north side of Parisien Lake and an extension and on strike of the Bullfrog zone located directly west.

## **GEOLOGY**

The East Bull Lake Parisien Lake PGE Property of Mustang Minerals Corp., is part of and is located within the East Bull Lake layered Gabbro-Anorthosite Intrusion which is approximately 22 kilometers long and up to 3.5 kilometers wide and averages greater than one kilometer thick.

It is a gabbroic-anorthosite lopolith consisting of three complex, but distinct, cumulate units each of which contains two or more sub-zones. Minerals found are pyrrhotite, chalcopyrite, pyrite and minor pentlandite enriched in, or proximal to palladium-bismuth tellurium compounds and sperylite which occurs predominantly in the feeder and basal cumulate unit, both of which outcrop along the northern and southern margins of the intrusion.

The intrusion is strategically located within the Huronian-Nipissing Magmatic Belt; an arcuate belt of rocks 200 kilometers long originating west of Elliot Lake and continuing to the east of Sudbury.



**TOPOGRAPHY AND VEGETATION**

The East Bull Lake property is a mixture alders and maple trees with black spruce swamps running between the many outcrops on the property. The outcrops are very rugged and high making the area very difficult to get around.

**CLAIM DESCRIPTION**

Consisting of 115 unpatented mining claims, the East Bull Lake PGE property, located in the District of Algoma, Sudbury Mining Division.

**TABLE 1**

**EAST BULL LAKE PGE PROPERTY**

**DISTRICT OF ALGOMA**

**SUDBURY MINING DIVISION**

**CLAIM DESCRIPTION**

997236 to 997249, 997253 to 997258, 997261 to 997266, 997268 to 997279, 997281 to 997283, 1016959, 1134473 to 1134490, 1136189 to 1136190, 1136197, 1162192 to 1162192 to 1162193, 1198295, 1227911, 1229201 to 1229207, 1229454 to 1229455, 1214935, 1226700, 1227909 to 1227910, 1229208 to 1229213, 1231026 to 1231027, 1231030, 1214935, 1231030, 1229207, 997301 to 997305, 997307 to 997309, 997311 to 997317, 997319 to 997321, 997323, 1136194 to 1136196, 1165378 to 1165379.

## **INSTRUMENTATION AND WORK DONE**

### **MAGNETOMETER SURVEY**

The magnetometer survey was carried out using an Envi Magnetometer made by Scintrex Ltd. The Envi Mag has the capability to measure the total field and using an Envi Magnetometer as a station for correcting magnetic drift. These are total field magnetometers which measure the magnetic field through the use of proton precessional effects caused by the interaction of a magnetic field with a spin aligned, proton rich fluid. An instrument accuracy precision and resolution of 0.1 nt may be obtained with these instruments under ideal conditions. While in gradient mode the unit has the accurate means of measuring both the total field and the gradient of the total field and measuring both sensors simultaneously to calculate the true gradient. In gradient mode the instrument sharply defines the magnetic responses determined by the total field. It individually delineates closely spaced anomalies rather than collectively identifying them under one broad magnetic response. In gradient mode the instrument enables you to conduct a gradient survey during a magnetic storm because of the technique of simultaneously measuring the two sensors cancels out the effects of diurnal magnetic variations. The VLF allow you to read the vertical in-phase, vertical quadrature, total field strength, dip angle and the ability to obtain as many as 3 VLF stations , but at the time the VLF was not read. Microprocessors contained in these instruments allow for the collection of the readings along with the time and its position in digital form suitable for downloading to a computer for data processing.

A total of 19 kilometers of magnetic readings were taken and readings were taken along the lines 200 meters apart on all between lines that were already read and also the magnetometer was extended to the south across Parisien Lake and some add on to the ends of the lines at the

north with 25 meter station intervals. The field measurements were corrected for diurnal variations of the earth's magnetic field by direct subtraction of the base station readings from the reading taken at the same moment in the field units. The corrected data was then downloaded to a computer and plotted on the total field magnetic map.

### **INTERPRETATION**

The second phase magnetic survey was successful in delineated a large magnetic anomaly along the north and the south ends of the grid running in an east west direction across the property and also in the south east corner a magnetic anomaly from 400 north to 600 south and open to the east. Overall the readings were relatively quiet background of 56,500 nT being interrupted with a higher amplitude anomaly in the order of 200-800 nT above background.

Also, there is a large low area running in an east west direction from line 0 to line 1200 east at approximately 100 south to 800 north covering mostly the west side of the grid. The mag anomalies run along the margin of the East Bull Lake Intrusion and open in all directions. These anomalies could be caused by sulphide with a magnetic signature.

Although the total field magnetic survey detected anomalies on the property and is a very good tool to distinguish rock types and contacts using magnetic content of the rocks, although it will not pick up disseminated sulphide. To properly locate areas of disseminated sulphide especially at depth is by doing an induced polarization survey and this survey has proved to be very effective in the past.

## **CONCLUSIONS**

With the presence of a favorable geological environment for the localization of PGE mineralization of economic importance to further evaluate the property's potential the writer recommends an on going work program over the remaining claims and areas not already covered on the property, consisting of line cutting, magnetometer and induced polarization surveys to locate areas of disseminated sulphide.

## **RECOMMENDED EXPLORATION PROGRAM**

The following program is recommended to evaluate the property for its potential to host a PGE deposit.

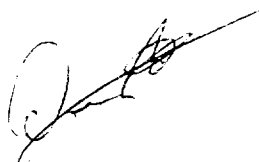
1. Complete the line cutting as required to provide a control for geological, geochemical and geophysical work.
2. Geochemical sampling over target areas.
3. Magnetometer survey over areas not covered.
4. Detailed Induced Polarization survey.
5. Geological mapping and sampling.
6. Stripping, trenching over anomalous areas.

As a result of encouraging data obtained from the recently completed geophysics survey additional exploration on the property is recommended.

Daniel F. Patrie

Geology and Geophysical Technologist

June, 2001



**PERSONNEL**

Dan Patrie

Massey, Ontario

Bryan Patrie

Massey, Ontario

Claude Dubreuil

Spanish, Ontario

Brent Patrie

Elliot Lake, Ontario

Claude Grimmard

Spanish, Ontario

Ron Bilton

Massey, Ontario

Bruce Pigeon

Espanola, Ontario

Arron Andress

Massey, Ontario

## CERTIFICATE OF QUALIFICATION

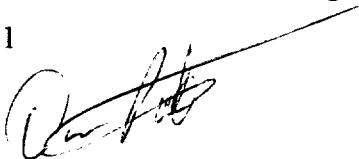
I, Daniel Patrie do hereby certify:

1. That I am a Geology and Geophysics Technologist and I reside at Hwy. 17 West, P.O. Box 45, Massey, Ont., Canada, P0P 1P0,
2. I graduated from Cambrian College Of Applied Arts and Technology, Sudbury, Ontario, in 1987 with a diploma in Geological Technology with a one year certificate in Geophysics,
3. And I have practiced my profession continuously since graduation, as well as being an active prospector since 1972.
4. That my report on the East Bull Lake Parisien Lake PGE Property, Sudbury Mining Division, Ontario, is based on my personal knowledge of the geology of the area, and on a review of published and unpublished information on the property and surrounding area.

Daniel F. Patrie

Geology and Geophysics Technologist (Dipl. T)

June, 2001



**LETTER OF CONSENT**

I, Daniel F. Patrie, of the Town of Massey, Ontario, do hereby consent to Mustang Minerals Corp., using in whole or in part my Geophysics report on the East Bull Lake Parisien Lake PGE Property situated the District of Algoma, Sudbury Mining Division in a prospectus of statement of material facts or for filing with government regulatory bodies as deemed necessary.

Dated at Massey, Ontario, this 1st day of June, 2001, in the District of Sudbury.

Daniel F. Patrie

Geology and Geophysics Technologist

A handwritten signature in black ink, appearing to read 'D. Patrie', with a long horizontal stroke extending to the right.

## **REFERENCES**

1. D. C. Peck and R. S. James, 1991,  
Open File Report 5813, Geology and Platinum Group Element Sulphide Mineralization,  
East Bull Lake.
2. Ken J. Lapiere, Vice President, Exploration, Personal Communication.
3. Northern Miner and Press Releases etc.





Date: 2001-SEP-18

GEOSCIENCE ASSESSMENT OFFICE  
933 RAMSEY LAKE ROAD, 6th FLOOR  
SUDBURY, ONTARIO  
P3E 6B5

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MUSTANG MINERALS CORP.  
1351 E. KELLY LAKE RD. UNIT 8  
SUDBURY, ONTARIO  
P3E 5P5 CANADA

Tel: (888) 415-9845  
Fax: (877) 670-1555

**Submission Number:** 2.21852  
**Transaction Number(s):** W0170.30521

Dear Sir or Madam

**Subject: Approval of Assessment Work**

We have approved your Assessment Work Submission with the above noted Transaction Number(s). The attached Work Report Summary indicates the results of the approval.

At the discretion of the Ministry, the assessment work performed on the mining lands noted in this work report may be subject to inspection and/or investigation at any time.

If you have any question regarding this correspondence, please contact JIM MCAULEY by email at james.mcauley@ndm.gov.on.ca or by phone at (705) 670-5855.

Yours Sincerely,



Ron Gashinski  
Supervisor, Geoscience Assessment Office

**Cc:** Resident Geologist  
Mustang Minerals Corp.  
(Claim Holder)

Assessment File Library  
Mustang Minerals Corp.  
(Assessment Office)

Date / Time of Issue May 14 2001 10:10h Eastern  
 TOWNSHIP / AREA PLAN  
 BOON G-3180

ADMINISTRATIVE DISTRICTS / DIVISIONS  
 Mining Division Sudbury  
 Land Titles/Registry Division ALGOMA  
 Ministry of Natural Resources District SUDBURY

**TOPOGRAPHIC**

- Administrative Boundary
- Contour
- Concession Line
- Province Post
- Water Feature
- DM, PD, and FS
- Center
- Contour - Approx. Aerial Photo Position
- Shed
- Mine Tailings
- Road
- Trail
- Municipal or Public
- Water Line
- Commuter Line
- Water Area
- Monument - Aerial Photo Position

**LAND TENURE**

**Feehold Patent**

- Surface and Mining Rights
- Surface Rights Only
- Mining Rights Only

**Leasehold Patent**

- Surface and Mining Rights
- Surface Rights Only
- Mining Rights Only

**License of Occupation**

- Uses not Specified
- Surface and Mining Rights
- Surface Rights Only
- Mining Rights Only

**LAND TENURE WITHDRAWALS**

- Area Withdrawn from Operation
- Mining Act Withdrawal Types
- Surface and Mining Rights Withdrawal
- Mining Rights Only Withdrawal
- Order by Council Withdrawal Types
- Surface and Mining Rights Withdrawal
- Surface Rights Only Withdrawal
- Mining Rights Only Withdrawal

**IMPORTANT NOTICES**

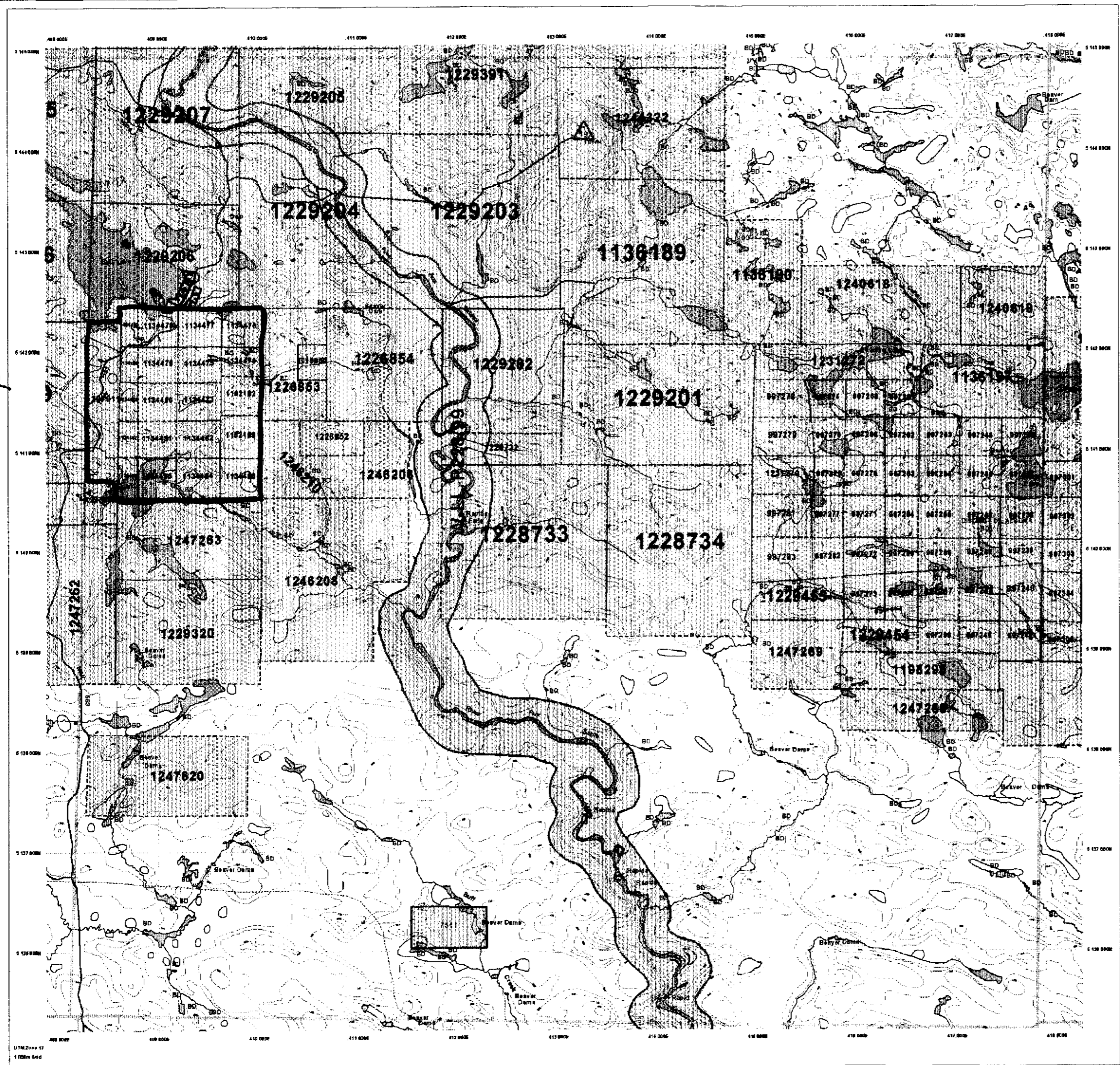
Scale: 0 to 1000 meters

**LAND TENURE WITHDRAWAL DESCRIPTIONS**

Identification	Type	Date	Description
7192	Withdrawal	Apr 1 2001	SEC. 36(8) W.A. 210 AND S.A.D. 77064
7591	Withdrawal	Apr 1 2001	SEC. 3(8)
WAL-22870	Withdrawal	May 17 1999	SEC. 26(1) L.P. 22870 OR: MAY 17/1999

**IMPORTANT NOTICES**

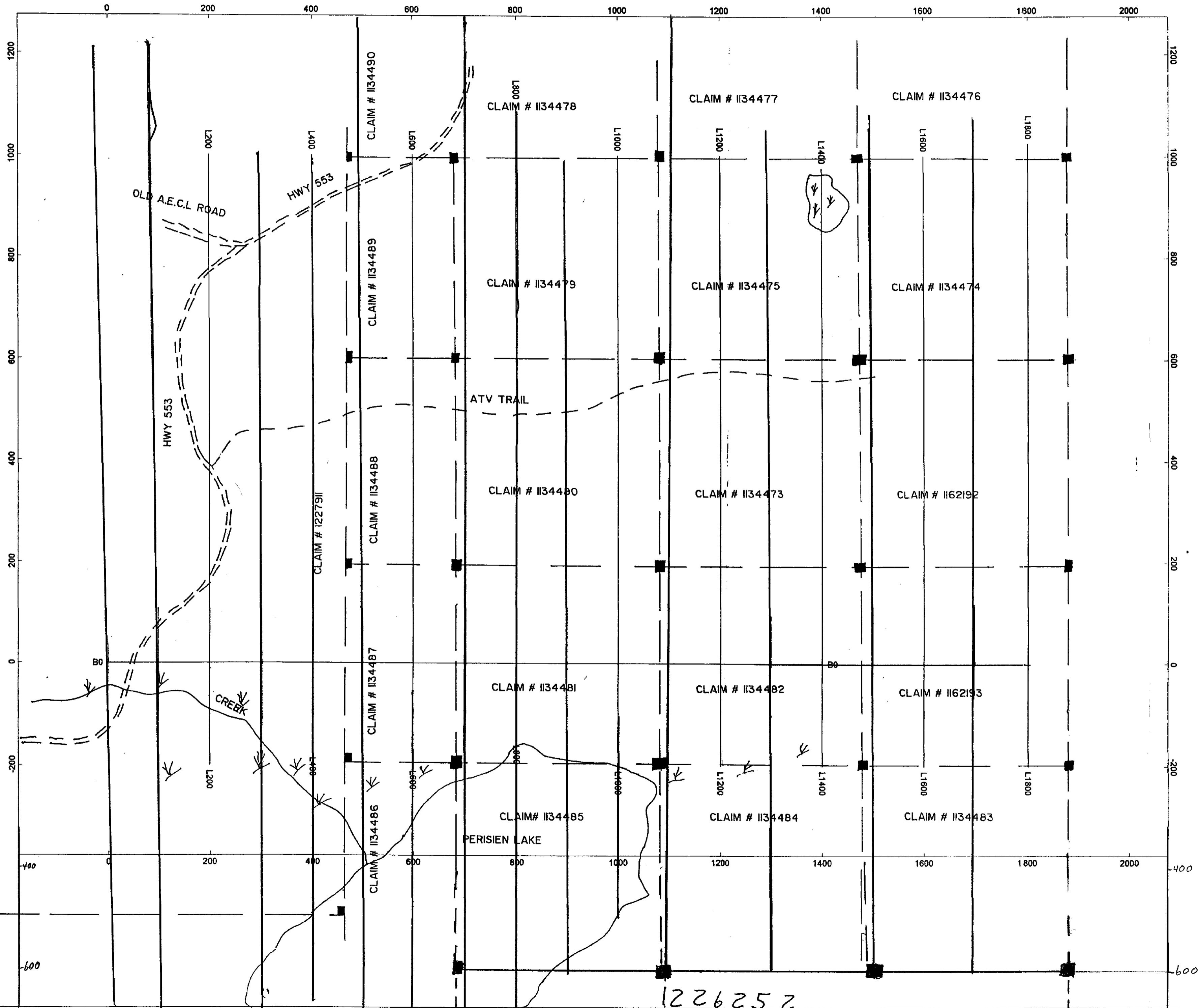
Areas in the table above are subject to the provisions of the Mining Act and the Mining Regulations. It is the responsibility of the user to verify the accuracy of the information shown on this map by consulting the relevant records and documents.



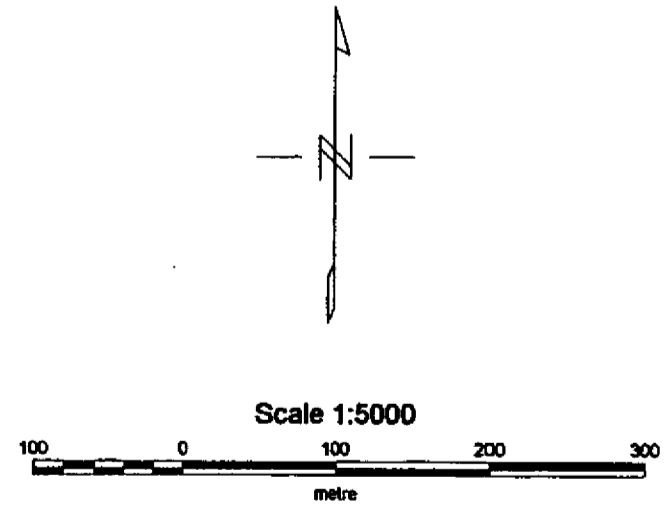
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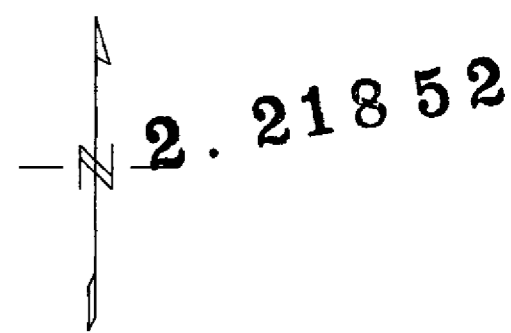
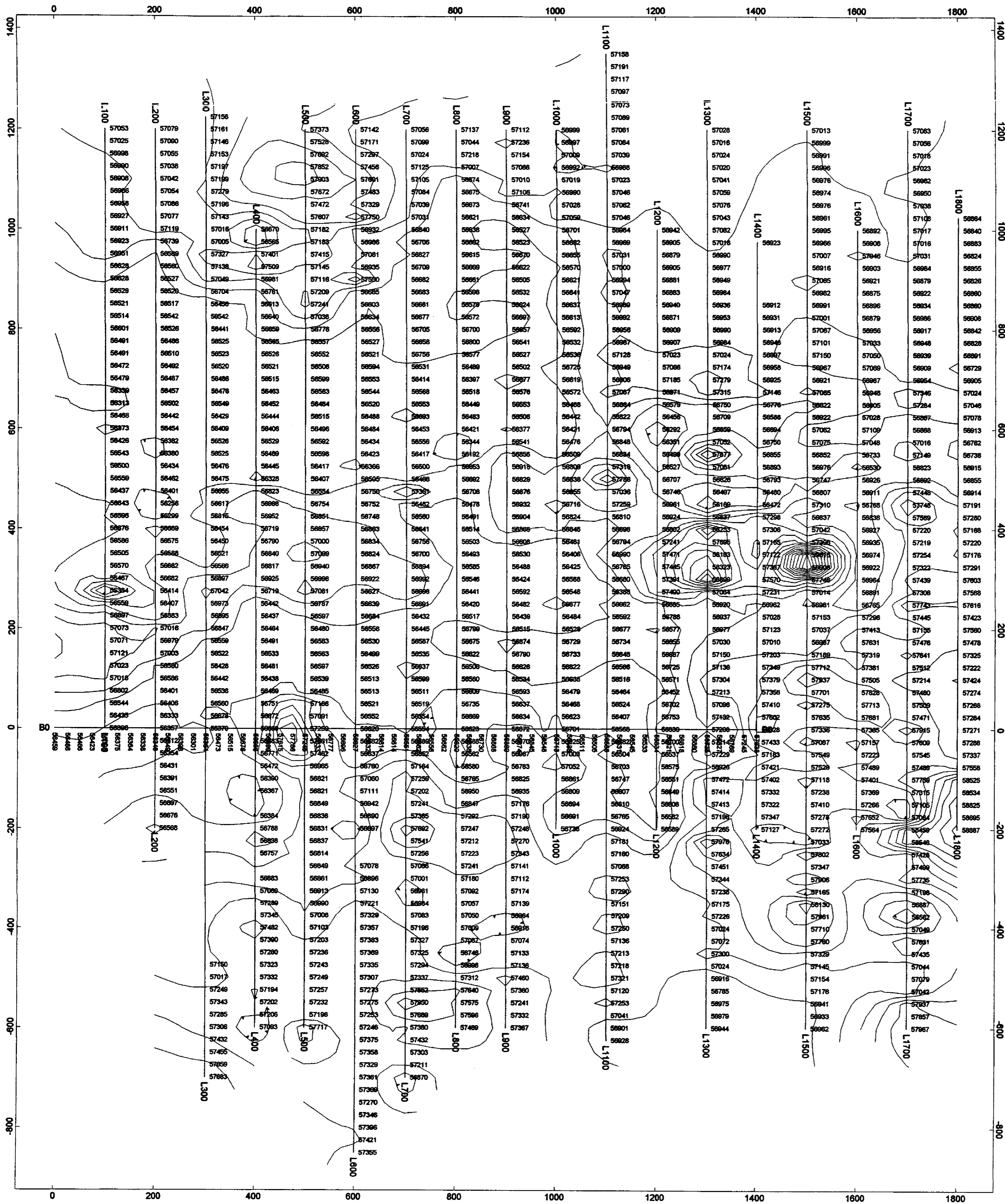
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MUSTANG MINERALS CORP.  
 BASE MAP  
 PERISIEN GRID  
 EAST BULL PROJECT  
 CLAIM LINE ---  
 CLAIM POST ■  
 DRAWN BY; DAN PATRIE EXPLORATION LTD.

1226252





Scale 1:5000  
100 0 100 200 300  
metre

MUSTANG MINERALS CORP.

TOTAL FIELD MAGNETICS SURVEY  
PARISIEN GRID  
EAST BULL PROJECT

BASE STATION CORRECTED  
DATUM SUBTRACTED AT  
REFERENCE FIELD 5mT  
INSTRUMENT USED: SCIENTREX ENM SYSTEMS

DRAWN BY: DAN PATRIE EXPLORATION LTD.



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