



010

GEOPHYSICAL

REPORT

2.17076

MADSEN RUSSET PROJECT

NTS 52-K-13

7/10/97
JAN 20 1997
BY [Signature]

RECEIVED
FEB 24 1997
MINING LANDS BRANCH

BY: PHANTOM EXPLORATION SERVICES LTD.
103-79 NORTH COURT STREET
THUNDER BAY, ONTARIO
P7A 4T7
SEPT, 1996

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MAPS INCLUDED IN THIS REPORT

MAGNETOMETER SURVEY1 IN = 200 FT
VLF EM-16 SURVEY PROFILES.....1 IN = 200 FT



52K13NW0034 2,17076 BAIRD

INTRODUCTION

During the summer of 1996, Phantom Exploration Services Ltd. of Thunder Bay, Ontario was contracted by Madsen Gold Corp. of Toronto, Ontario to conduct magnetic and electromagnetic (VLF) surveys on their Madsen Russet project.

While the whole property consists of a large number of patented, leased and unpatented mining claims, the newly cut grid covers all or part of 12 patented claims numbered KRL 11506, KRL 11509, KRL 12522-3, KRL 12601, KRL 12821-4, KRL 12929, KRL 12964 and KRL 19182 located in Baird Township (G-3739) in the Red Lake Mining Division.

GRIDING, LOCATION AND ACCESS

Approximately 16 miles of line were cut, chained and picketed at 100 foot intervals on the grid. The baseline was orientated at an azimuth of 30 degrees magnetic, which is mine grid east, and the grid lines were established perpendicular to it at 200 foot intervals. The gridding was done by Madsen Gold Corp., while the geophysical surveys were completed by Phantom Exploration Services Ltd. under the supervision of R.D. Middaugh.

The property is located approximately 10 kilometres southwest of Red Lake, Ontario at Madsen, Ontario. Access is provided to the general area by highways #105 and #618. Highway #618 cuts the southern part of the grid while the

Flat Lake Road and the Madsen town site roads provide access to the central portion of the grid.

PROPERTY GEOLOGY

The Madsen Gold Corp. property lies within the southern part of the Red Lake greenstone belt which is part of the Uchi subprovince of the Archean Superior Province. The belt consists of two sequences of metavolcanic and minor metasedimentary rocks. The lower sequence, the Balmer assemblage which ranges in age from 2992 to 2925 Ma, is composed mainly of mafic tholeiitic and ultramafic komatiitic volcanic rocks and subvolcanic intrusions, with minor intercalated clastic and chemical sedimentary rocks as well as minor felsic flows and intrusions. The upper sequence, the Confederation assemblage which ranges in age from 2750 to 2730 Ma, is an accumulation of calc-alkalic mafic to felsic volcanic rocks and abundant clastic and chemical sedimentary rocks. The older sequence underlies the western portion of the survey area, while the younger sequence underlies the eastern part of the survey area. Both volcanic sequences have been intruded by the 2704 Ma Killala Baird batholith of granodiorite composition located in the extreme southwestern portion of the survey area.

THEORY OF OPERATION

The Proton Magnetometer

The proton precession magnetometer is so named because it utilizes the precession of spinning protons or nuclei of the hydrogen atom in a sample of hydrocarbon fluid (kerosene) to measure the total magnetic field intensity.

The spinning protons behave as small, spinning magnetic dipoles. These magnets are temporarily polarized by application of a uniform magnetic field generated by a current in a coil of wire. When the current is removed, the spin of the protons causes them to precess about the direction of the earth's ambient magnetic field. The precessing protons then generate a small magnetic signal whose frequency is precisely proportional to the total magnetic field intensity and independent of the orientation of the coil (sensor). The proportionality which relates frequency to the field intensity is called the gyromagnetic ratio of the proton. The precession frequency, typically 2000 Hz, is measured as the absolute value of the total magnetic field intensity with an accuracy of 0.1 gamma.

The total magnetic intensity, as measured by the proton magnetometer is the magnitude of the earth's field vector which is independent of its direction. The measurement can be expressed as a length (50,000 gammas) of the earth's field vector. A local disturbance, say 10 gammas, would add or subtract to the undisturbed field of 50,000 gammas in the

usual manner of vector addition. Since the proton magnetometer measures only the magnitude of the resultant vector, (whose direction is almost parallel to the undisturbed total field vector) that which is measured is very nearly the component of the disturbance vector. Thus the change in the total field intensity is called the anomaly.

The VLF EM

The VLF transmitting stations located at various locations of the world have a vertical antenna. Because of this, the antenna current is vertical and creates a concentric horizontal magnetic field around it. When these magnetic fields meet with conductive bodies in the ground, there will be secondary fields radiating from them. The VLF measures the vertical components of these secondary fields.

The VLF-EM is a sensitive receiver covering the frequency bands of the transmitting stations with means of measuring the vertical field components. The receiver has two inputs with two receiving coils built into the instrument. One coil has a normally vertical axis and the other has a horizontal axis. The signal from one of the coils (vertical axis) is first minimized by tilting the instrument. The tilt angle on the VLF EM is calibrated as a percentage slope and not a true dip. (This is significant when calculating Fraser Filter values since the larger

numbers from the percentages will result in larger Fraser Filter anomalies.) The remaining signal in this coil is balanced out by a measured percentage of a signal from another coil after being shifted 90 degrees. The other coil is normally parallel to the primary field. Therefore if the secondary field signals are small compared to the primary horizontal field, the mechanical tilt angle is an accurate measurement of the vertical real component and the compensation 90 degree signal from the horizontal coil is a measure of the quadrature vertical signal.

SURVEY PROCEDURE

The Proton Magnetometer

The proton magnetometer survey was conducted using a Scintrex OMNI IV magnetometer. The total field was read with a resolution of one gamma and the data was corrected for diurnal variations using another OMNI IV magnetometer in the base station mode. Data was collected at 50 foot intervals along the grid lines.

The VLF EM-16

The Cutler, Maine transmitting station was chosen because of its favourable orientation to the geology of the area. Vlf readings were taken at 50 foot intervals over the grid using a Geonics EM-16 unit.

To take a reading, the operator always faced a

northerly direction, orientated the instrument with respect to the transmitting station used and then subsequently read and recorded both the dip angle and the quadrature readings at each station along the grid lines.

DISCUSSION OF RESULTS

The Magnetometer Survey

The survey area is presented in plan form at a scale of 1 inch = 200 feet. The corrected magnetic data is plotted on this map and contoured at 1000 gamma intervals where feasible.

The data indicates that the underlying rocks exhibit a moderately well developed northeast southwest regional trend. This trend becomes more north south across the survey area from east to west. The strongest developed trend which is orientated north south is located in the western portion of the grid and represents a magnetite rich iron formation. A well developed magnetic trend orientated at approximately north 40 degrees east and located in the eastern part of the grid seems to correlate with the south Austin ore horizon which does contains significant sulfides. Moderate to poorly developed trends located between these two horizons are not well understood but may be reflective of the rock types underlying these trends.

Intimately related magnetic highs and lows such as located on line 126+00 E at 130+50 N are considered to be

due to dipole effects.

The VLF EM-16 Survey

The survey area is presented in plan view at a scale of 1 inch = 200 feet with a vertical scale set at 1/4 inch = 50% for the EM profiles.

Many of the anomalous trends located in the survey area are characterized by short strike lengths, moderate to poor conductivity and are usually located in areas of low, wet ground. These trends which commonly cut across the magnetic fabric of the area, usually are not related to any significant magnetic features. For these reasons most of the anomalies are considered to be superficial in nature and are due to topographic features such as low wet swampy ground.

Anomalies E-E' and M-M', however, do seem to be related to magnetic features and may be caused, at least in part, by them.

Anomaly O-O', although related to low ground, is continuous across the survey area and may be related to a minor fault.

CONCLUSIONS AND RECOMMENDATIONS

The survey area is underlain by a sequence of metavolcanics and minor related metasediments that trend northeast southwest. This trend becomes more north south from east to west across the survey area.

A well developed magnetic trend located on the western portion of the grid is due to a magnetite rich iron formation. A somewhat less well developed magnetic trend located on the eastern part of the grid seems to be related to the south Austin ore zone which does contain significant sulfides. The remaining weakly developed trends are thought to be due to the higher magnetic signatures associated with such rocks as gabbros or ultramafics both of which are present in the underlying sequence of rocks located in the survey area.

Intimately related magnetic highs and lows such as located on line 126+00 E at 130+50 N are due to dipole effect.


Anomalies E-E' and M-M' seem to be associated with magnetic features and may, at least in part, be due to them.

Anomaly O-O' is thought to be due in part to a minor fault.

Detailed mapping and prospecting, particularly in anomalous areas, should be carried out to better understand and evaluate the geophysical results. Since the main economic interest in the property is gold mineralization, a

geochemical survey of a suitable nature may better outline gold bearing horizons not necessarily outlined by the geophysical methods used to date.

Subsequent to the above recommendations, a drill program should be considered to test any resulting target areas.

2635
Qual. #
Submitted by

R.D. Middaugh
Geologist

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RED LAKE MINING DIV.

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AM 7,8,9,10,11,12,1,2,3,4,5,6 PM

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Heyson Twp.





Ministry of Northern Development and Mines

Declaration of Assessment Work Performed on Mining Land

Transaction Number (if any) 119720-0004
Assessment Type Research Imaging
4 10 2000



52K13NW0034 2.17076 BAIRD

900

(the Mining Act, Under section 8 of the correspond with the mining land holder, n Development and Mines, 6th Floor,

Personal information collected under the Access to Information Act, the information is Questions about this collection contact the collector at 933 Ramsey Lake Road, Sudbury, Ontario, Canada S2P 3S6

Lands

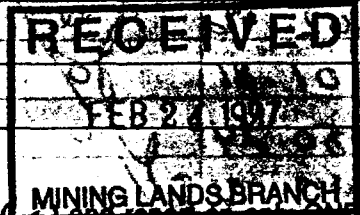
2.17076

Instructions: - For work performed on Crown Lands before recording a claim, use form 0240.
- Please type or print in ink.

1. Recorded holder(s) (Attach a list if necessary)

MARCO S. ...
907 ...
ONT ...

Name, Address, Telephone Number, Fax Number fields with handwritten entries.



2. Type of work performed: Check () and report on only ONE of the following groups for this declaration.

Geotechnical: prospecting, surveys, assays and work under section 18 (regs) Physical: drilling, stripping, trenching and associated assays Rehabilitation

Work Type: LINE CUTTING, MAG - SURVEY, VLF - EM SURVEY
Office Use: ES 851 224
Total \$ Value of Work Claimed: 13,932.00
Dates Work Performed: From 21 5 96 To 4 10 96
NTS Reference: 52K-13
Township/Area: BAIRD
M or G-Plan Number: G-3739
Mining Division: Red Lake
Resident Geologist District: Red Lake

Please remember to: - obtain a work permit from the Ministry of Natural Resources as required; - provide proper notice to surface rights holders before starting work; - complete and attach a Statement of Costs, form 0212; - provide a map showing contiguous mining lands that are linked for assigning work; - include two copies of your technical report.

3. Person or companies who prepared the technical report (Attach a list if necessary)

Name: RICK MIDDAUGH PHANTOM EXP.
Address: 103-79N COURT ST.
Name: THUNDER BAY ONT.
Name: ...
Address: ...

4. Certification by Recorded Holder or Agent

I, GERY STRILCHUK (Print Name), do hereby certify that I have personal knowledge of the facts set forth in this Declaration of Assessment Work having caused the work to be performed or witnessed the same during or after its completion and, to the best of my knowledge, the annexed report is true.

Signature of Recorded Holder or Agent: Gery Strilchuk
Agent's Address: Red Lake Ont P.O. Box 218
Telephone Number: 727-2859
Date: 29/97

0241 (02/96) Doomed - April, 1997

FEB. -05' 97(WED) 09:20 MINING-RECORDER--RL

W9720.00004
TEL: 807 727 3553 P. 003

6. Work to be recorded and distributed. Work can only be assigned to claims that are contiguous (adjoining) to the mining land where work was performed, at the time work was performed. A map showing the contiguous link must accompany this form.

Mining Claim Number. Or if work was done on other eligible mining land, show in this column the location number indicated on the claim title.	Number of Claim Units. For other mining land, list hectares.	Value of work performed on this claim or other mining land.	Value of work applied to this claim.	Value of work assigned to other mining claims.	Bank Value of work to be distributed at a future date.
09 TB 7827	16 ha	\$25,825	N/A	\$24,000	\$2,825
09 1234587	12	0	\$24,000	0	0
09 1234588	2	\$8,802	\$4,000	0	\$4,802
1 KRL 1184229	1	0	2000.00		
2 KRL 1184231	2	0	4000.00		
3 KRL 12523	1	221.00		95.00	126.00
4 KRL 11506	1	1415.00		609.00	806.00
5 KRL 11509	2	3851.00		1659.00	2192.00
6 KRL 12601	1	217.00		98.00	124.00
7 KRL 12964	1	1392.00		600.00	792.00
8 KRL 12821	1	1338.00		576.00	762.00
9 KRL 12522	1	522.00		225.00	297.00
10 KRL 12820	1	70.00		30.00	40.00
11 KRL 12822	1	247.00		106.00	141.00
12 KRL 12823	1	1607.00		692.00	915.00
13 KRL 12824	1	1820.00		784.00	1036.00
14 KRL 19182	1	1232.00		531.00	701.00
15 12/13					
Column Totals		\$13932.00	\$6000.00	\$6000.00	\$7932.00

I, GERRY STACHEL do hereby certify that the above work credits are eligible under subsection 7 (1) of the Assessment Work Regulation 898 for assignment to contiguous claims or for application to the claim where the work was done.

Signature of Recorded Holder or Agent Authorized in Writing: Gerry Stachel Date: Dec 20/97

8. Instructions for cutting back credits that are not approved.

Some of the credits claimed in this declaration may be cut back. Please check (✓) in the boxes below to show how you wish to prioritize the deletion of credits:

- 1. Credits are to be cut back from the Bank first, followed by option 2 or 3 or 4 as indicated.
- 2. Credits are to be cut back starting with the claims listed last, working backwards; or
- 3. Credits are to be cut back equally over all claims listed in this declaration; or
- 4. Credits are to be cut back as prioritized on the attached appendix or as follows (describe):

2.17076

Note: If you have not indicated how your credits are to be deleted, credits will be cut back from the Bank first, followed by option number 2 if necessary.

For Office Use Only:
RECEIVED
FEB LAKE MINING LTD.
FEB 04 1997
AM 8:01 AM (11) 2123456

Deemed Approved Date <u>April 20, 1997</u>	Date Modification Began
Date Approved	Total Value of Credit Approved
Approved/Recording by Mining Recorder (Signature) <u>[Signature]</u>	

Personal information collected on this form is obtained under the authority of subsection 8(1) of the Assessment Work Regulation 6/96. Under section 8 of the Mining Act, the information is a public record. This information will be used to review the assessment work and correspond with the mining land holder. Questions about this collection should be directed to the Chief Mining Recorder, Ministry of Northern Development and Mines, 6th Floor, 933 Ramsey Lake Road, Sudbury, Ontario, P3E 6B5.

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Work Type	Units of Work <small>Depending on the type of work, list the number of hours/days worked, metres of drilling, kilometres of grid line, number of samples, etc.</small>	Cost Per Unit of work	Total Cost
LINE CUTTING	24.08 KILOMETRES	325.00 KM	7826.00
MAG. SURVEY	20.78 KILOMETRES	125.00 KM	2597.50
VLF-EM SURVEY	20.78 KILOMETRES	125.00 KM	2597.50
		O.S.T.	911.47

Associated Costs (e.g. supplies, mobilization and demobilization).

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Transportation Costs

JAN 20 1997

AM 7,8,9,10,11,12,1,2,3,4,5,6 PM

Food and Lodging Costs

RECEIVED

Total Value of Assessment Work

FEB 24 1997

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\$ 13021.00 (88)
\$ 13932.00

Calculations of Filing Discounts:

1. Work filed within two years of performance is claimed at 100% of the above Total Value of Assessment Work.
2. If work is filed after two years and up to five years after performance, it can only be claimed at 50% of the Total Value of Assessment Work. If this situation applies to your claims, use the calculation below:

TOTAL VALUE OF ASSESSMENT WORK $\times 0.50 =$ Total \$ value of worked claimed.

Note:

- Work older than 5 years is not eligible for credit.
- A recorded holder may be required to verify expenditures claimed in this statement of costs within 45 days of a request for verification and/or correction/clarification. If verification and/or correction/clarification is not made, the Minister may reject all or part of the assessment work submitted.

Certification verifying costs:

I, GERRY STALCHUK (please print full name), do hereby certify, that the amounts shown are as accurate as may reasonably be determined and the costs were incurred while conducting assessment work on the lands indicated on the accompanying Declaration of Work form as Gerry Stalchuk (recorded holder, agent, or state company position with signing authority) I am authorized to make this certification. EXPLORATION MANAGER.

Signature: Gerry Stalchuk Date: Jan 20/97



April 3, 1997

Scott A. Rivett
Mining Recorder
Ontario Government Building
227 Howey Street, Box 324
Red Lake, ON
P0V 2M0

Geoscience Assessment Office
933 Ramsey Lake Road
6th Floor
Sudbury, Ontario
P3E 6B5

Telephone: (705) 670-5853
Fax: (705) 670-5863

Dear Sir or Madam:

Submission Number: 2.17076

Status

Subject: Transaction Number(s): W9720.00004 Deemed Approval

We have reviewed your Assessment Work submission with the above noted Transaction Number(s). The attached summary page(s) indicate the results of the review. WE RECOMMEND YOU READ THIS SUMMARY FOR THE DETAILS PERTAINING TO YOUR ASSESSMENT WORK.

If the status for a transaction is a 45 Day Notice, the summary will outline the reasons for the notice, and any steps you can take to remedy deficiencies. The 90-day deemed approval provision, subsection 6(7) of the Assessment Work Regulation, will no longer be in effect for assessment work which has received a 45 Day Notice.

Please note any revisions must be submitted in DUPLICATE to the Geoscience Assessment Office, by the response date on the summary.

NOTE: This correspondence may affect the status of your mining lands. Please contact the Mining Recorder to determine the available options and the status of your claims.

If you have any questions regarding this correspondence, please contact Bruce Gates by e-mail at gates_b@torv05.ndm.gov.on.ca or by telephone at (705) 670-5856.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Ron C. Gashinski".

ORIGINAL SIGNED BY
Ron C. Gashinski
Senior Manager, Mining Lands Section
Mines and Minerals Division

Work Report Assessment Results

Submission Number: 2.17076

Date Correspondence Sent: April 03, 1997

Assessor: Bruce Gates

Transaction Number	First Claim Number	Township(s) / Area(s)	Status	Approval Date
W9720.00004	12523	BAIRD	Deemed Approval	April 02, 1997

Section:

14 Geophysical MAG

14 Geophysical VLF

Correspondence to:

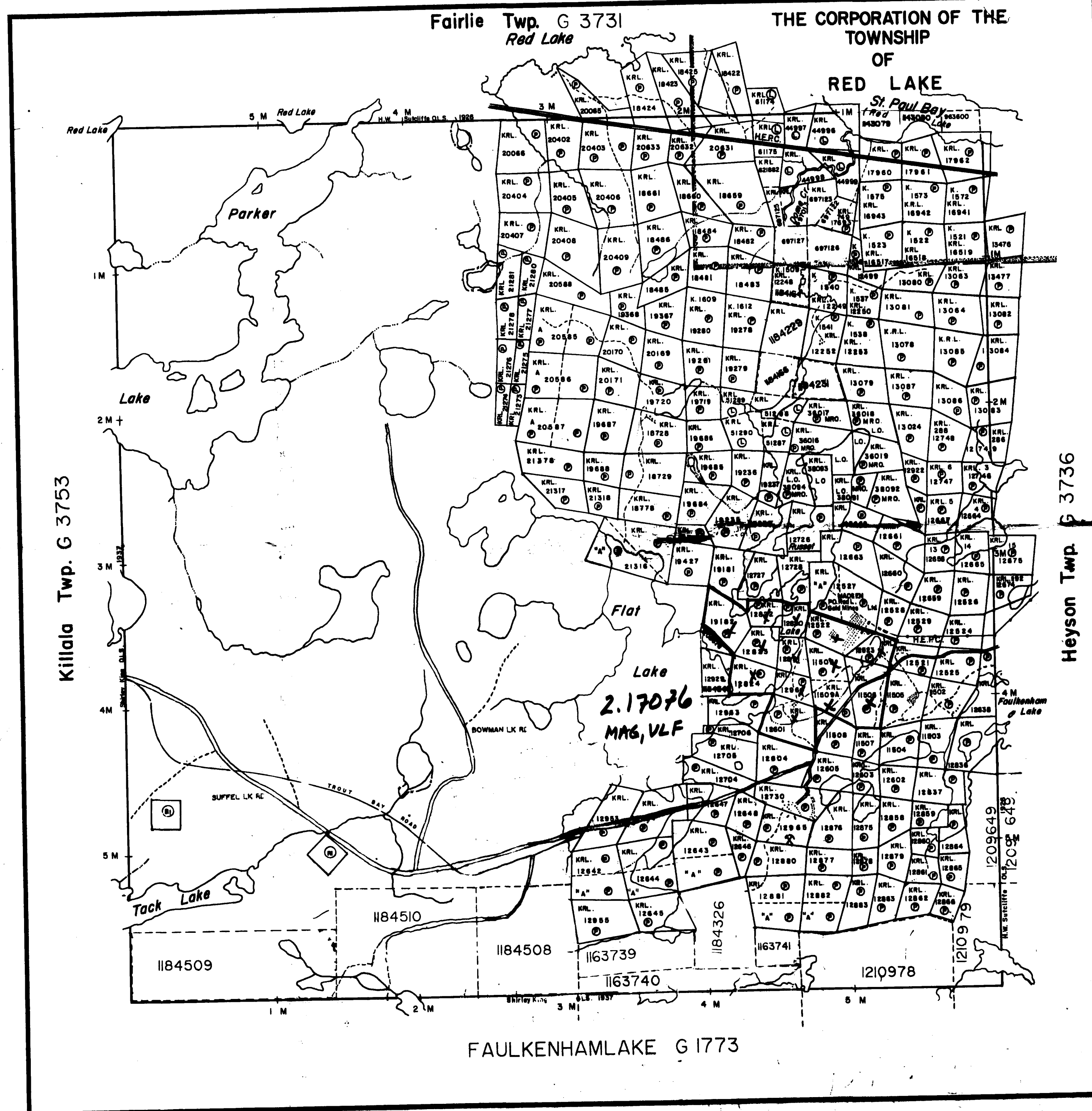
Mining Recorder
Red Lake, ON

Resident Geologist
Red Lake, ON

Assessment Files Library
Sudbury, ON

Recorded Holder(s) and/or Agent(s):

Gerry Strilchuk
MADSEN GOLD CORP.
RED LAKE, ONTARIO



THE TOWNSHIP OF BAIRD

DISTRICT OF KENORA PATRICIA PORTION

RED LAKE MINING DIVISION

SCALE: 1-INCH = 40 CHAINS

LEGEND 2.17076

- Patented Land, Crown Land Sale, Leases, Located Land, License of Occupation, Mining Rights Only, Surface Rights Only, Roads, Improved Roads, King's Highways, Railways, Power Lines, Mines, Cancelled

NOTES

400' surface rights reservation along the shores of all lakes and rivers.

Areas withdrawn from staking under Section 43 of the Mining Act

Table with columns: Order No., File, Date, Disposition

RED LAKE REIMAN FEB 18 1997 RED LAKE, ONTARIO

THE INFORMATION THAT APPEARS ON THIS MAP HAS BEEN COMPILED FROM VARIOUS SOURCES, AND ACCURACY IS NOT GUARANTEED...

FOREST ACTIVITY INFORMATION

THIS TOWNSHIP/AREA FALLS WITHIN THE AND MAY BE SUBJECT TO FORESTRY OPERATIONS. THE M.N.R. UNIT FORESTER FOR THIS AREA CAN BE CONTACTED AT:

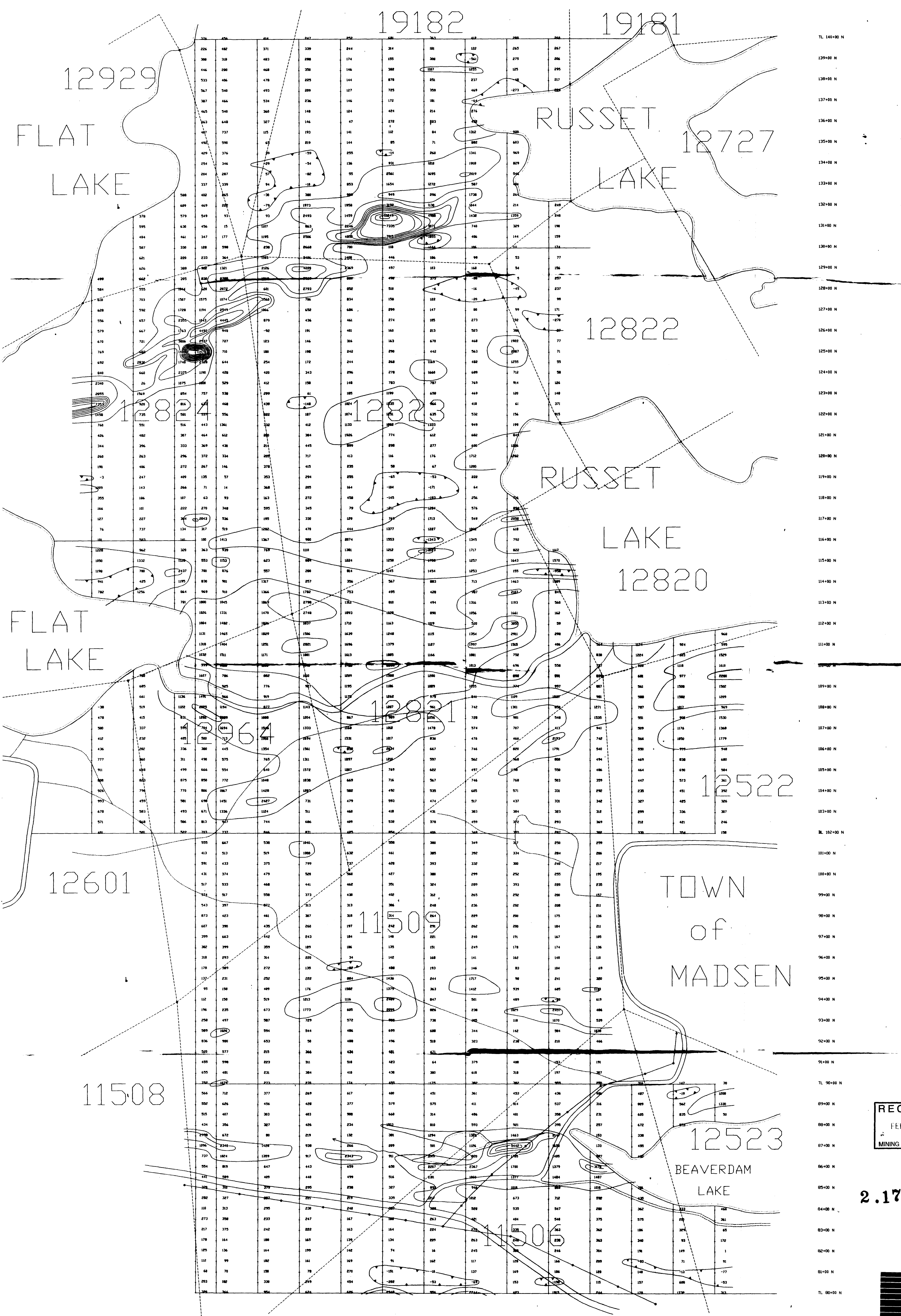
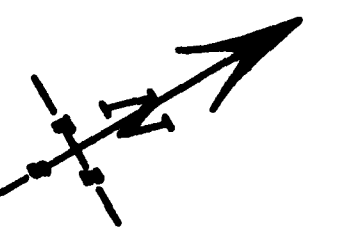
PLAN NO. G-3739

ONTARIO MINISTRY OF NATURAL RESOURCES SURVEYS AND MAPPING BRANCH

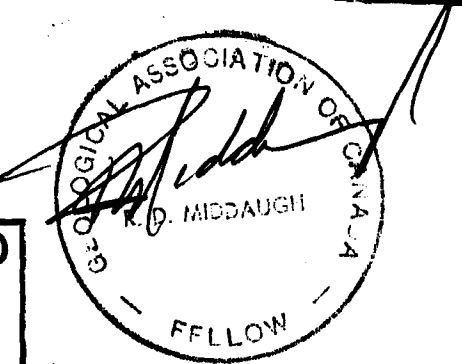
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BAIRD TWP.

G-3739



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GEOPHYSICAL LEGEND
MAGNETIC ANOMALY
MAGNETIC ANOMALY
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MAGNETIC ANOMALY

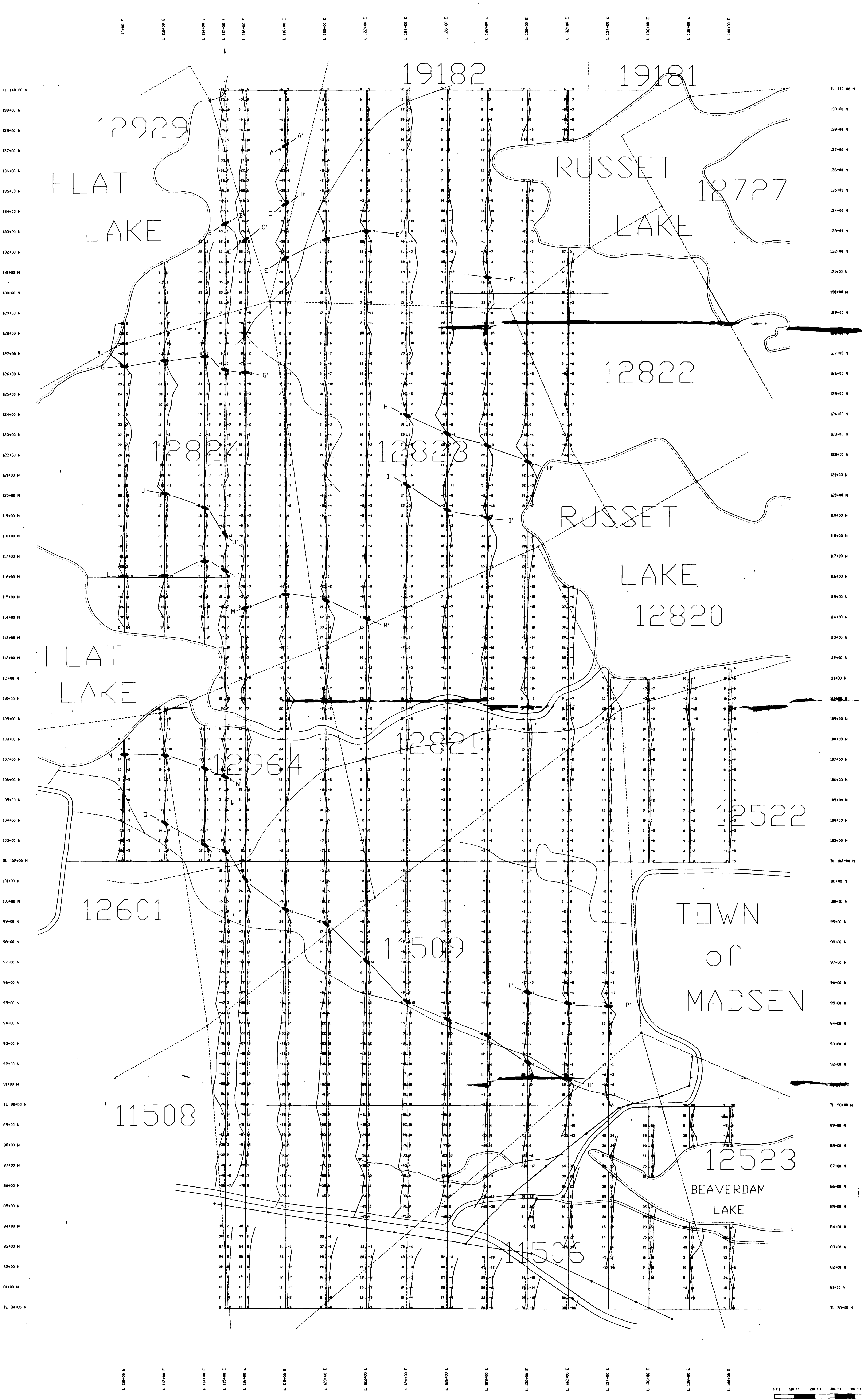
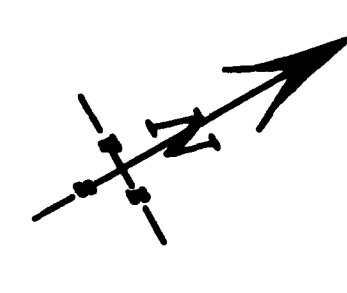
TOPOGRAPHIC LEGEND
CLAY POND
LAKE
RIVER
ROAD
RAIL
POWERLINE

MADSEN GOLD CORP.
MADSEN RUSSET PROJECT
RED LAKE MINING DIVISION
BLAND MINING

MAGNETOMETER SURVEY
SCALE: 1"=200' DATE: JULY 1993 N.T.S. 68-2-10
PHANTOM EXPLORATION SERVICES LTD.

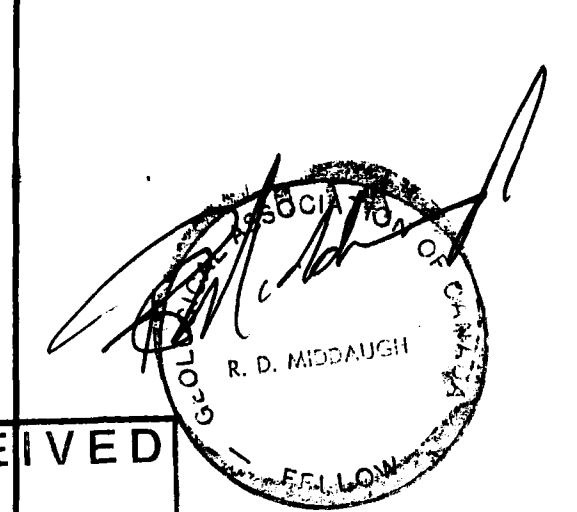
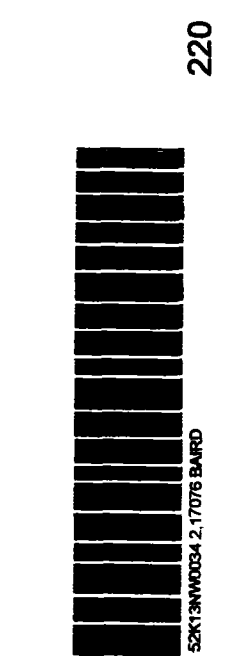
6 FT 100 FT 200 FT 300 FT 400 FT 500 FT

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TOPOGRAPHIC LEGEND
 CONTOUR: 20-50
 PROFILE SCALE: 1/4" = 50'
 POSITIVE RELATIVE TO THE MEAN OF LAKE
 TRANSMITTED REFLECTOR: OTHER: MISSING

TOPOGRAPHIC LEGEND
 CLEAR FOOT: +
 LAKE SHORE: —
 STREAM: —
 FENCE: —
 ROAD: —
 POWERLINE: —

MADSEN GOLD CORP.
MADSEN RUSSET PROJECT
 RED LAKE MINING DIVISION
 BLAIR TYPING
 VLF EM-16 PROFILES
 SCALE: 1" = 200' DATE: JULY 1993 N.Y.E. 82-E-13
 PHANTOM EXPLORATION SERVICES LTD.

