



32E13NE0138 2.6992 LOWER DETOUR LAKE

010

WESTMIN RESOURCES LIMITED
ELECTROMAGNETIC AND MAGNETIC SURVEY
LOWER DETOUR LAKE CLAIMS
LOWER DETOUR LAKE AREA, M2603
PORCUPINE MINING DISTRICT
N.T.S. 32E-13

LATITUDE 49° 57'N
LONGITUDE 79° 37'30"W

BY

C. J. ROCKINGHAM, B.Sc., M.Sc.
PROJECT GEOLOGIST

JULY 4, 1984

RECEIVED
JUL 27 1984
MINING LANDS SECTION

Introduction:

The following report pertains to ground magnetic data collected by Westmin Resources Limited on the Lower Detour Lake claims, Lower Detour Lake Area (M2603) in the Porcupine Mining District. A picket line grid was cut on the property in January-February 1984. The electromagnetic and magnetometer surveys were carried out within one to two weeks after the lines were cut.

Property, Location and Access:

The Detour-Lower Detour Lake property of Westmin Resources consists of 24 contiguous mining claims which constitute approximately 384 hectares. The property is located 130 km NNE of Cochrane, Ontario and 5 km south of the Detour Lake gold mine. Access is available all year by fixed wing aircraft or by all terrain vehicles from the mine site along the winter road.

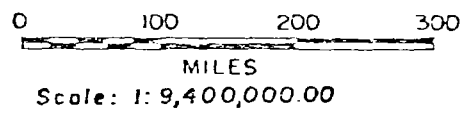
Property Status:

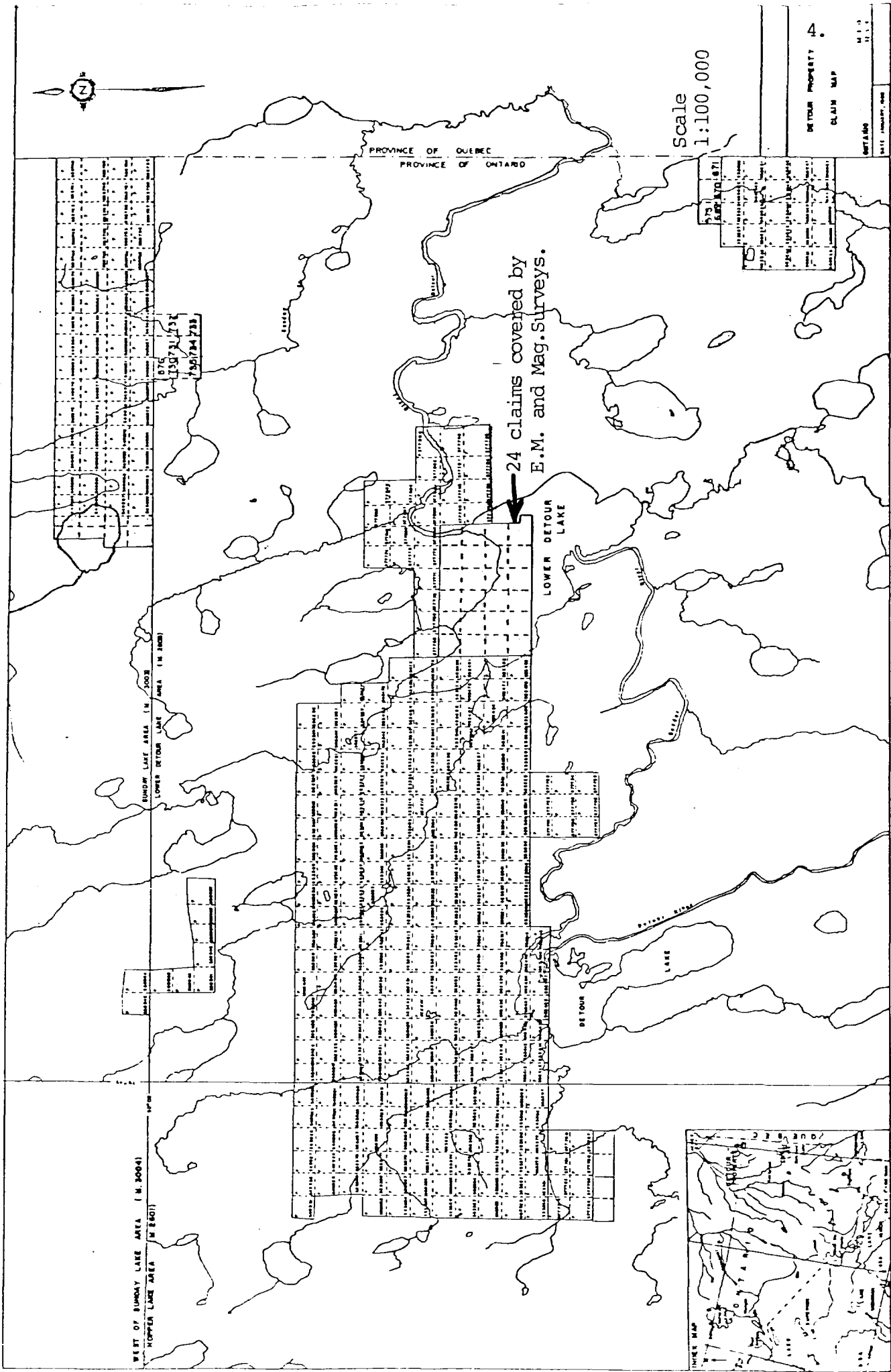
<u>Claims</u>	<u>Assessment Work Due</u>	<u>Apply to each claim (days)</u>	
		<u>Mag</u>	<u>E.M.</u>
P.779415	25 November 1984	20	40
P.779416	"	20	40
P.779417	"	20	40
P.779418	"	20	40
P.779419	"	20	40
P.779420	"	20	40
P.779421	"	20	40
P.780735	"	20	40
P.780736	"	20	40
P.780737	"	20	40
P.780738	"	20	40
P.780739	"	20	40
P.780740	"	20	40
P.780741	"	20	40
P.780742	"	20	40
P.780743	"	20	40
P.780744	"	20	40
P.780745	"	20	40
P.780746	"	20	40
P.780752	"	20	40
P.780753	"	20	40
P.780754	"	20	40
P.780755	"	20	40
P.780756	"	20	40



WESTMIN RESOURCES LIMITED

LOCATION MAP
DETOUR PROJECT



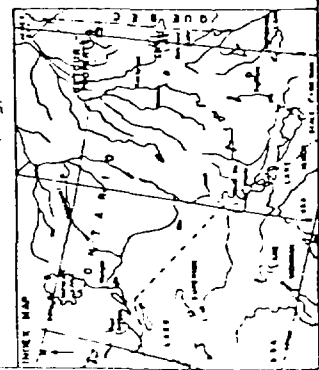


Scale
1:100,000

BEET OF SUNDAY LAKE AREA (M. 3004)
HOPPER LAKE AREA (M. 2401)

SUNDAY LAKE AREA (M. 3003)
LOWER DETOUR LAKE AREA (M. 2003)

24 claims covered by
E.M. and Mag. Surveys.



Grid Details, Instrument and Survey Specifications:

In order to facilitate geological mapping and geophysical surveys a picket line grid was established with lines spaced every 100 m along an east-west baseline, and pickets every 25 m along the north-south cross lines.

An EDA PPM 300 total field magnetometer was used in conjunction with an EDA PPM 400 base station magnetometer in order to collect the field data and remove the effect of diurnal variation as well as monitor for magnetic storm activity. Accuracy of the survey data is ± 5 nT.

The electromagnetic survey used a horizontal loop manufactured by Apex Parametrics, (Max-Min II). The coil separation was 150 m with readings taken every 25 m using two frequencies, 222 Hz and 3555 Hz, although for clarity only one frequency is presented in Appendix A. The total mileage covered on the magnetometer and electromagnetic surveys was approximately 41.0 km with approximately 1,632 stations.

Results and Interpretation:

The magnetic data is displayed on the enclosed map (Appendix B). The magnetic contours indicate four magnetic highs of 200 - 300 gammas that are 100 - 200 m wide and strike northwest - southeast. This is conformable with the volcanic stratigraphy as shown on Glen Johns' O.G.S. map and suggests that there are mafic volcanic flows or sills with a slightly higher than average magnetite content. The Max Min II data has been reviewed by J. Betz, consulting geophysicist and no bedrock conductors were noted.

Qualifications of the Author

Education:

B.Sc., 1972 University of Toronto (Biology and Chemistry)

M.Sc., 1979 University of Western Ontario (Geology)

Memberships:

Fellow Geological Association of Canada

Member Canadian Institute of Mining and Metallurgy

Associate Member Society of Economic Geologists

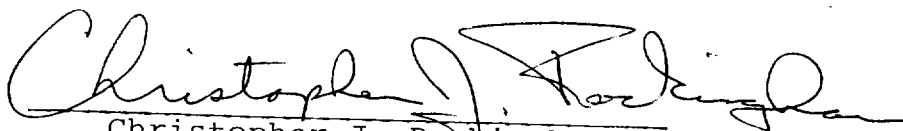
Occupation:

Project Geologist - Westmin Resources Limited

Certification

I, Christopher J. Rockingham, of 765 Millwood Road
Toronto, Ontario, certify the following facts:

- 1) I am a Fellow of the Geological Association
of Canada.
- 2) I hold a B.Sc., in Chemistry and Biology
obtained from the University of Toronto in
1972 and a M.Sc., in geology obtained from
the University of Western Ontario in 1979.
- 3) I have practised my profession for 9 years
working in Canada, Australia and Southern
Africa.
- 4) I have supervised the work and interpreted
the results mentioned in the foregoing
report.


Christopher J. Rockingham

July 4, 1984



Mining Lands Section

File No 2.6992

Control Sheet

TYPE OF SURVEY GEOPHYSICAL
 GEOLOGICAL
 GEOCHEMICAL
 EXPENDITURE

MINING LANDS COMMENTS:

Sept 41

S. Hurst
 Signature of Assessor

Aug 16/84
 Date



Ministry of
Natural
Resources

Report of Work
(Geophysical, Geological,
Geochemical and Expenditures)

W.K.
271/84

Instructions: - Please type or print.
- If number of mining claims traversed exceeds space on this form, attach a list.
Note: - Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns.
- Do not use shaded areas below.

The Mining Act

Type of Survey(s) Geophysical	Township or Area Lower Detour Lake Area	
Claim Holder(s) Westmin Resources Limited	Prospector's License No. T 778	
Address 25 Adelaide St. East, Suite 1400, Toronto, Ont. M5C 1Y2		
Survey Company G.Thibault, P.O.Box 1670, Timmins, Ont. P4N 7W8	Date of Survey (from & to) 20 July 84 to 16 Aug 84	Total Miles of line Cut 40.95
Name and Address of Author (of Geo-Technical report) C.J.Rockingham		

Credits Requested per Each Claim in Columns at right

Special Provisions	Geophysical	Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	- Electromagnetic	40
	- Magnetometer	20
For each additional survey: using the same grid: Enter 20 days (for each)	- Radiometric	
	- Other	
	Geological	
	Geochemical	
Man Days	Geophysical	Days per Claim
Complete reverse side and enter total(s) here	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	
	Geochemical	
Airborne Credits		Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	
	Magnetometer	
	Radiometric	

Mining Claims Traversed (List in numerical sequence)

Mining Claim		Expend. Days Cr.	Mining Claim		Expend. Days Cr.
Prefix	Number		Prefix	Number	
P.	779415		P.	780752	
	779416			780753	
	779417			780754	
	779418			780755	
	779419			780756	
	779420				
	779421				
	780735				
	780736				
	780737				
	780738				
	780739				
	780740				
	780741				
	780742				
	780743				
	780744				
	780745				
	780746				

RECORDED
JUL 20 1984
Receipt No. 341

PORCUPINE MINING DIVISION
RECEIVED
JUL 20 1984
A.M. 7-8 | 9-10 | 11-12 | 1-2 | 3-4 | 5-6 P.M.

Total number of mining claims covered by this report of work. **24**

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

Calculation of Expenditure Days Credits

Total Expenditures \$ ÷ 15 = Total Days Credits

Instructions
Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
1440	July 20, 1984	<i>[Signature]</i>
	Date Approved as Recorded	Branch Recorder
	July 17, 1984	<i>[Signature]</i>

Date **July 17, 1984** Recorded Holder or Agent (Signature) *[Signature]*

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying
C.J.Rockingham, 25 Adelaide St. East, Suite 1400, Toronto, Ont. M5C 1Y2

Date Certified **July 17, 1984** Certified by (Signature) *[Signature]*

1984 08 03

Your File:
Our File: 2.6992

Mr. Bruce Hanley
Mining Recorder
Ministry of Natural Resources
60 Wilson Avenue
Timmins, Ontario
P4N 2S7

Dear Sir:

We have received reports and maps for a Geophysical (Electromagnetic & Magnetometer) Survey submitted under Special Provisions (credit for Performance and Coverage) on Mining Claims P 779415 et al in the Area of Lower Detour Lake.

This material will be examined and assessed and a statement of assessment work credits will be issued.

We do not have a copy of the report of work which is normally filed with you prior to the submission of this technical data. Please forward a copy as soon as possible.

Yours sincerely,

S.E. Yundt
Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: (416)965-6918

A. Barr:sc

cc: Westmin Resources Limited
Suite 1400
25 Adelaide Street E
Toronto, Ontario
M5C 1Y2
Attn: C.J. Rockingham.

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS - If more than one survey, specify data for each type of survey

Number of Stations 1,632 Number of Readings 4,896
 Station interval 25 metres Line spacing 100 metres
 Profile scale 1 cm = 5%
 Contour interval 57,400 μ 100 μ , 58,000-59,000 μ 500 μ , 59,000 μ 1000 μ

MAGNETIC

Instrument EDA PPM 300 Total Field Magnetometer
 Accuracy - Scale constant ± 5 nT
 Diurnal correction method Linear interpretation algorithm
 Base Station check-in interval (hours) 20"
 Base Station location and value Core shack, 100m west of Lower Detour Lake, Claim: P.553472, Value 58,150 μ

ELECTROMAGNETIC

Instrument Appex Parametrics Max-Min II.
 Coil configuration Horizontal Loop
 Coil separation 150 m
 Accuracy $\pm \frac{1}{2}$ %
 Method: Fixed transmitter Shoot back In line Parallel line
 Frequency 222 Hz, 3555 Hz
(specify V.L.F. station)
 Parameters measured In phase, Out of phase

GRAVITY

Instrument _____
 Scale constant _____
 Corrections made _____
 Base station value and location _____
 Elevation accuracy _____

RESISTIVITY

Instrument _____
 Method Time Domain Frequency Domain
 Parameters - On time _____ Frequency _____
 - Off time _____ Range _____
 - Delay time _____
 - Integration time _____
 Power _____
 Electrode array _____
 Electrode spacing _____
 Type of electrode _____

SELF POTENTIAL

Instrument _____ Range _____
 Survey Method _____

Corrections made _____

RADIOMETRIC

Instrument _____
 Values measured _____
 Energy windows (levels) _____
 Height of instrument _____ Background Count _____
 Size of detector _____
 Overburden _____
(type, depth - include outcrop map)

OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

Type of survey _____
 Instrument _____
 Accuracy _____
 Parameters measured _____
 Additional information (for understanding results) _____

AIRBORNE SURVEYS

Type of survey(s) _____
(specify for each type of survey)
 Instrument(s) _____
(specify for each type of survey)
 Accuracy _____
(specify for each type of survey)
 Aircraft used _____
 Sensor altitude _____
 Navigation and flight path recovery method _____
 Aircraft altitude _____ Line Spacing _____
 Miles flown over total area _____ Over claims only _____

Type of Survey(s) Geophysical	Vnship or Area Lower Detour Lake Area
Claim Holder Westmin Resources Limited	Prospector's Licence No. T 778
Address 25 Adelaide St. East, Suite 1400, Toronto, Ont. M5C 1Y2	
Survey Company G.Thibault, P.O.Box 1670, Timmins, Ont. P4N 7W8	Date of Survey (from & to) 30 Day 1 Mo. 84 16 Day 2 Mo. 84
Name and Address of Author (of Geo-Technical report) C.J. Rockingham	
Total Miles of line Cut 40.95	

COPY

Credits Requested per Each Claim in Columns at right

Special Provisions	Geophysical	Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	- Electromagnetic	40
	- Magnetometer	20
	- Radiometric	
	- Other	
	Geological	
For each additional survey: using the same grid: Enter 20 days (for each)	Geochemical	
	Geophysical	
	- Electromagnetic	
Man Days Complete reverse side and enter total(s) here	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	
	Geochemical	
Airborne Credits Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	
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	Radiometric	

Mining Claims Traversed (List in numerical sequence)

M	Mining Claim	EM	Expend. Days Cr.	M	Mining Claim	EM	Expend. Days Cr.
Prefix	Number			Prefix	Number		
P. ✓	779415		✓	P. ✓	780752		✓
✓	779416		✓	✓	780753		✓
✓	779417		✓	✓	780754		✓
✓	779418		✓	✓	780755		✓
✓	779419		✓	✓	780756		✓
✓	779420		✓				
✓	779421		✓				
✓	780735		✓				
✓	780736		✓				
✓	780737		✓				
✓	780738		✓				
✓	780739		✓				
✓	780740		✓				
✓	780741		✓				
✓	780742		✓				
✓	780743		✓				
✓	780744		✓				
✓	780745		✓				
✓	780746		✓				

Expenditures (excludes power stripping)

Type of Work Performed
Performed on Claim(s)

Calculation of Expenditure Days Credits	Total Days Credits
Total Expenditures	
\$ <input style="width: 100px;" type="text"/>	÷ 15 = <input style="width: 50px;" type="text"/>

Instructions
Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

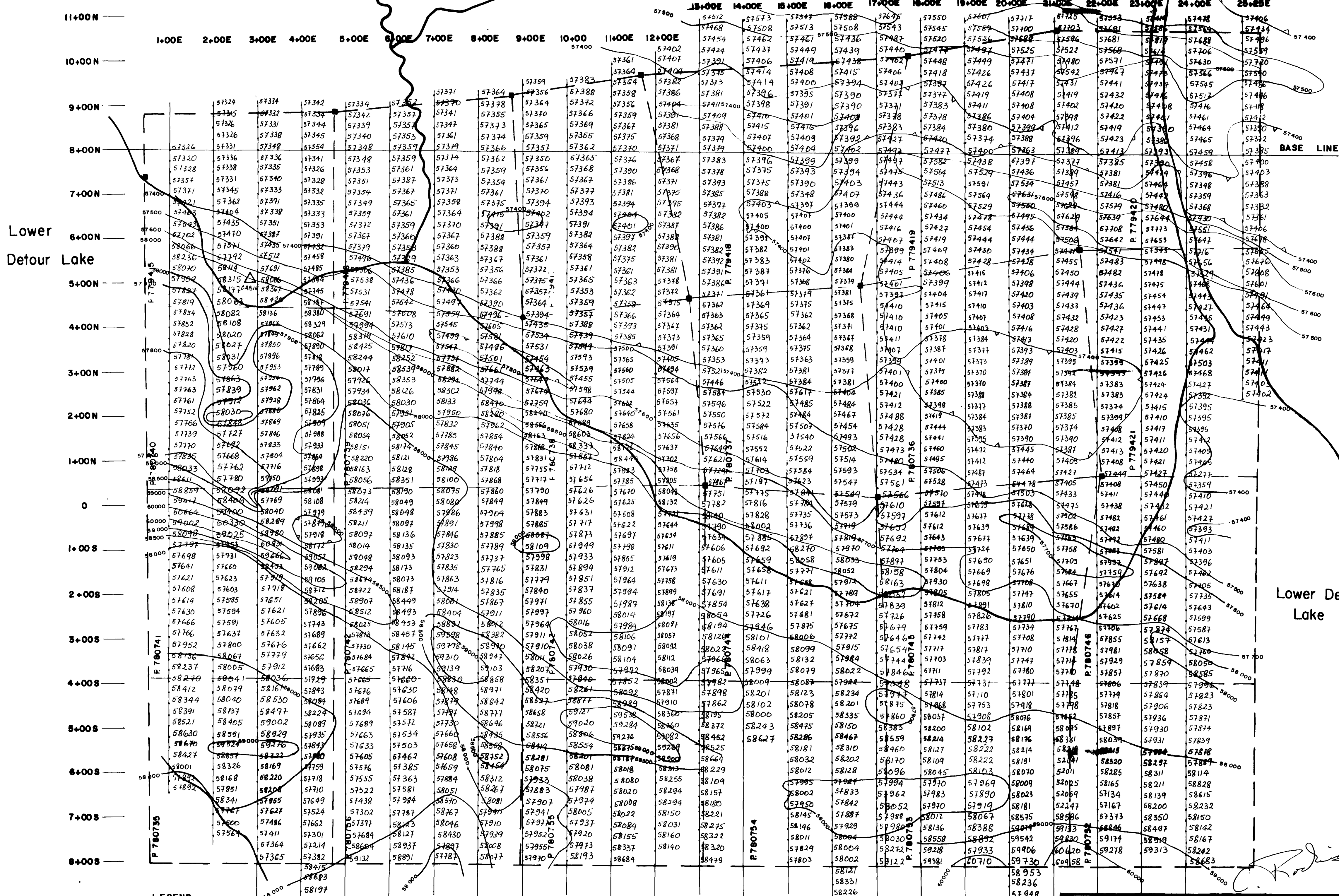
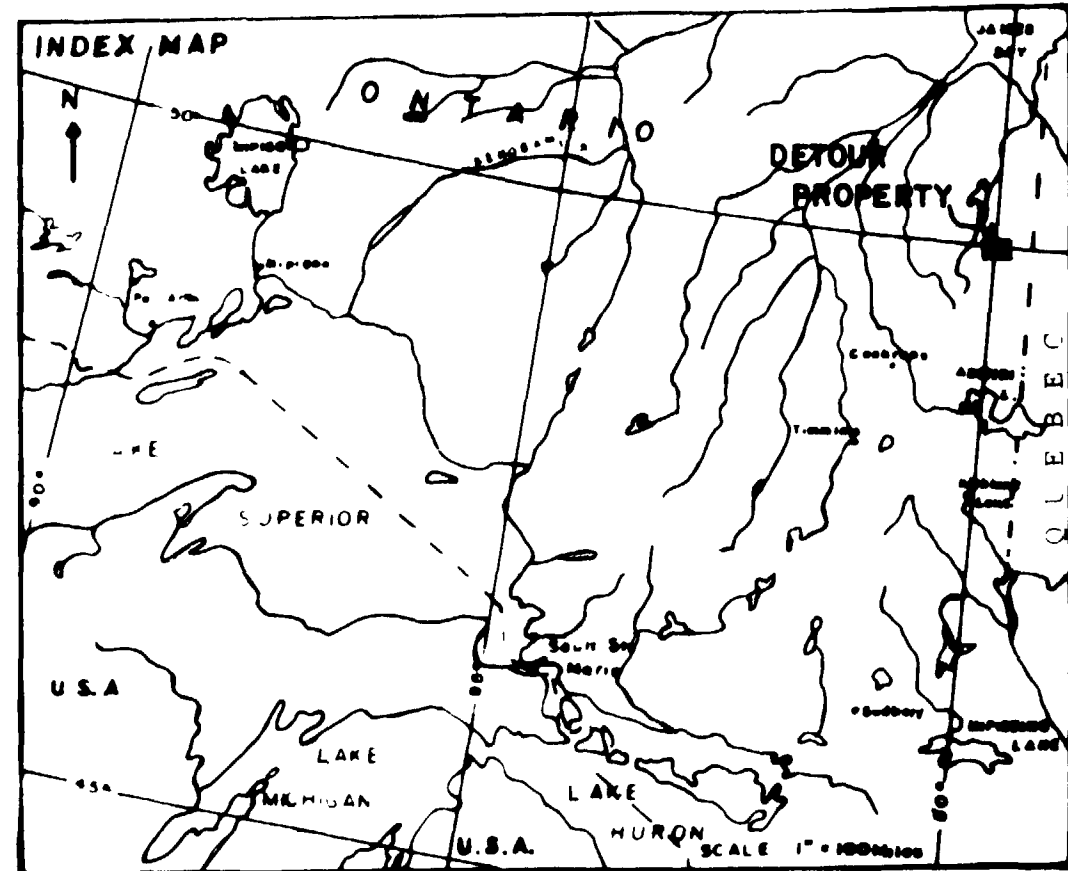
Date July 17, 1984	Recorded Holder or Agent (Signature) <i>[Signature]</i>
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Total number of mining claims covered by this report of work. 24

For Office Use Only		
Total Days Cr. Recorded	Date Recorded	Mining Recorder
	Date Approved as Recorded	Branch Director

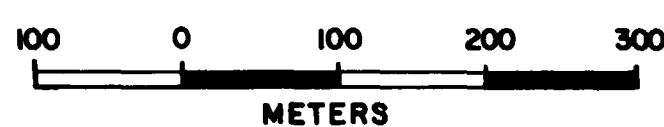
Certification Verifying Report of Work
I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying C.J. Rockingham, 25 Adelaide St. East, Suite 1400, Toronto, Ont. M5C 1Y2	
Date Certified July 17, 1984	Certified by (Signature) <i>[Signature]</i>



LEGEND

- Colour Code
- Magnetic (gammas)
- 57438 MAGNETOMETER READING GAMMAS
- 58500 ISOMAGNETIC CONTOUR GAMMAS
- MAGNETIC DEPRESSION



Westmin Resources Limited
EASTERN CANADA MINING DIVISION

DETOUR PROJECT
MAGNETOMETER SURVEY

Work by C.J.R. Scale 1:5000
Date MAY 1984 NTS 32-E-13

