



32E13NE0046 2.6787 LOWER DETOUR LAKE

010

Westmin Resources Limited  
Horizontal Loop Electromagnetic Survey  
Nash Creek Claims  
Lower Detour Lake Area (M2603)  
Porcupine Mining District

N.T.S.      32E-13  
Latitude    49°54'N  
Longitude   79°31'W

C. J. Rockingham, B.Sc., M.Sc.  
Project Geologist.

May 16, 1984.

Introduction:

The following report pertains to Max-Min II (H.L.E.M.) survey data collected by Guy Thibault on behalf of Westmin Resources Limited. The claims are located in the Porcupine Mining District, Lower Detour Lake area (M2603). The survey was carried out on picket lines cut in March of 1984.

Property, Location and Access:

The Nash Creek claim block is located in the Detour Lake area of the Abitibi greenstone belt on the Ontario-Quebec boundary at latitude  $49^{\circ}54'$ . This is approximately 135 km NNE of Cochrane and a similar distance NNW of La Sarre. Access is available all year round by fixed wing or helicopter from either town. In the winter the property is also accessible from either town. In the winter the property is also accessible via diamond drill roads from the winter road to the Detour Lake gold mine a distance of approximately 20 km.

Property Status:

Equity: Westmin Resources Limited 100%  
Location: Lower Detour Lake M2603  
Latitude: 49°54'N  
Longitude: 79°31'W  
N.T.S. 32 E13

Ontario (27 claims)

Claims	Due Date
P.575669-575671 ( 3)	July 21, 1986
P.553627-553635 ( 9)	Jan. 4, 1985
P.553642-553651 (10)	Jan. 4, 1985
P.553658-553662 ( 5)	Jan. 4, 1985

This report pertains to work on the following claims:

P.553632	days	3
P.553633		3
P.553644		3
P.553645		3
P.553648		3
P.553649		3
P.553660		3
P.553661		3

## Grid Details, Instrument and Survey Specifications:

In order to facilitate the geophysical surveys picket lines were established with an east-west baseline and north-south grid lines every 120 m and pickets at 25 m intervals along the grid lines. The total length of grid lines surveyed was 7.37 km.

An Apex Parametrics Max-Min II survey (Horizontal Loop Electromagnetic Survey) was carried out to measure the in-phase and out-of-phase components of the vertical magnetic field as a percentage of the horizontal primary field. The resolution of these components was  $\pm 1/2\%$ . All readings were taken with a 150 m coil separation and stations at 25 m intervals using two frequencies namely 222 Hz and 3555 Hz. For clarity only one frequency is presented on the plan map although the interpretation of the data is based on both frequencies.

## Results and Interpretation:

The 1982 Max-Min II survey (Assessment Report dated January 5, 1984 by C. Rockingham) had indicated the possibility of short discontinuous conductors located between the lines. The 1984 survey was designed to test this possibility by surveying lines half way between the 1982 lines. The 1984 lines correspond to lines 5+40W, 6+60W, 7+80W, 9+00W and 10+20W and were cut from the 1982 baseline to the southern claim boundary at approximately 14+00S. Two zones of very weak in phase anomalies were detected.

At 222 Hz they are typically one to three degrees less than the background readings. The northern zone occurs at 10+20W, 6+75S and trends southeast to 5+40W, 9+30S. The southern zone is parallel to this at 10+20W, 10+25S and 5+40W, 12+25S. It is not clear whether these weak in phase effects represent true bedrock conductivity or overburden effects. This could quite readily be determined from two or three induced polarization profiles.

Summary of Expenditures:

Max-Min II Survey	\$2,219.00
Report writing, drafting, etc.	<u>\$1,000.00</u>
	\$3,219.00

Certification

I, Christopher J. Rockingham, of 261 Booth Avenue, 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 10 years, working in Canada, Australia and Southern Africa.
- 4) I have supervised the work and interpreted the results mentioned in the foregoing report.
- 5) I have no financial interest in this property.

May 16, 1984.

  
Christopher J. Rockingham





Ministry of Natural Resources Ontario

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

W.R. # 206/84

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.

July 14/84

The Mining Act

2.6787

Form header containing: Type of Survey(s) Geophysical (Max-Min II.), Claim Holder(s) Westmin Resources Limited, Address 25 Adelaide Street East, Suite 1400, Toronto, Ontario M5C 1Y2, Survey Company G. Thibault, P.O. Box 1670, Timmins, Ontario P4N 7W8, Date of Survey (from 8 to 15 3 84), Total Miles of line Cut 1.4 km, Name and Address of Author (of Geo-Technical report) C.J. Rockingham, 25 Adelaide Street East, Toronto, Ontario M5C 1Y2

Credits Requested per Each Claim in Columns at right

Table with 3 columns: Special Provisions, Geophysical, Days per Claim. Includes rows for Man Days (3) and Airborne Credits.

Mining Claims Traversed (List in numerical sequence)

Table with 3 columns: Mining Claim Prefix, Mining Claim Number, Expend. Days Cr. Contains entries for claims 553632, 553645, 553648, 553661.

Expenditures (excludes power stripping)

Form for Expenditures with fields for Type of Work Performed, Performed on Claim(s), and Calculation of Expenditure Days Credits.

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.

Date May 7, 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 (Manager Exploration) R.H. McMillan, 25 Adelaide St. East, Suite 1400, Toronto, Ontario M5C 1Y2. Date Certified May 9, 1984. Certified by (Signature) [Signature]

RECORDED MAY 15 1984 Receipt No. 30

RECEIVED MAY 14 1984 P.M. 7:30

Total number of mining claims covered by this report of work. 4

For Office Use Only: Total Days Cr. Recorded 12, Date Recorded May 15, 1984, Date Approved as Recorded 84.7.27





Assessment Work Breakdown

Man Days are based on eight (8) hour Technical or Line-cutting days. Technical days include work performed by consultants, draftsmen, etc..

Type of Survey <i>geophysical ; Electromagnetic</i>							
Technical Days		Technical Days Credits		Line-cutting Days	Total Credits	No. of Claims	Days per Claim
2	X	7	=	14	+	Nil	=
				14	÷	4	=
						3	

Type of Survey							
Technical Days		Technical Days Credits		Line-cutting Days	Total Credits	No. of Claims	Days per Claim
[ ]	X	7	=	[ ]	+	[ ]	=
				[ ]	÷	[ ]	=
						[ ]	

Type of Survey							
Technical Days		Technical Days Credits		Line-cutting Days	Total Credits	No. of Claims	Days per Claim
[ ]	X	7	=	[ ]	+	[ ]	=
				[ ]	÷	[ ]	=
						[ ]	

Type of Survey							
Technical Days		Technical Days Credits		Line-cutting Days	Total Credits	No. of Claims	Days per Claim
[ ]	X	7	=	[ ]	+	[ ]	=
				[ ]	÷	[ ]	=
						[ ]	



# Assessment Work Breakdown

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Type of Survey <span style="float: right; font-family: cursive;">Geophysical ; Electromagnetic</span>												
Technical Days	X	7	=	Technical Days Credits	+	Line-cutting Days	=	Total Credits	÷	No. of Claims	=	Days per Claim
2		7		14		Nil		14		4		3

Type of Survey												
Technical Days	X	7	=	Technical Days Credits	+	Line-cutting Days	=	Total Credits	÷	No. of Claims	=	Days per Claim
		7										

Type of Survey												
Technical Days	X	7	=	Technical Days Credits	+	Line-cutting Days	=	Total Credits	÷	No. of Claims	=	Days per Claim
		7										

Type of Survey												
Technical Days	X	7	=	Technical Days Credits	+	Line-cutting Days	=	Total Credits	÷	No. of Claims	=	Days per Claim
		7										

1984 05 31

Our File: 2.6787

Mr. Bruce W. 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) Survey submitted under Special Provisions (credit for Performance and Coverage) on Mining Claims P 553632 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:mc

cc: Westmin Resources Limited  
25 Adelaide Street East  
Suite 1400  
Toronto, Ontario  
M5C 1Y2

Mining Lands Section

File No 2.6787

Control Sheet

TYPE OF SURVEY     GEOPHYSICAL  
                           GEOLOGICAL  
                           GEOCHEMICAL  
                           EXPENDITURE

MINING LANDS COMMENTS:

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L.D.

Dennis King  
Signature of Assessor

July 16/84  
Date



GEOCHEMICAL SURVEY - PROCEDURE RECORD



Ontario

Ministry of Natural Resources  
 GEOPHYSICAL - GEOLOGICAL - GEOCHEMICAL  
 TECHNICAL DATA STATEMENT

File \_\_\_\_\_

TO BE ATTACHED AS AN APPENDIX TO TECHNICAL REPORT  
 FACTS SHOWN HERE NEED NOT BE REPEATED IN REPORT  
 TECHNICAL REPORT MUST CONTAIN INTERPRETATION, CONCLUSIONS ETC.

Numbers of claims from which samples taken \_\_\_\_\_

Total Number of Samples \_\_\_\_\_

Type of Sample \_\_\_\_\_  
(Nature of Material)

Average Sample Weight \_\_\_\_\_

Method of Collection \_\_\_\_\_

Soil Horizon Sampled \_\_\_\_\_

Horizon Development \_\_\_\_\_

Sample Depth \_\_\_\_\_

Terrain \_\_\_\_\_

Drainage Development \_\_\_\_\_

Estimated Range of Overburden Thickness \_\_\_\_\_

**SAMPLE PREPARATION**

(Includes drying, screening, crushing, ashing)

Mesh size of fraction used for analysis \_\_\_\_\_

General \_\_\_\_\_

**ANALYTICAL METHODS**

Values expressed in:

per cent   
 p. p. m.   
 p. p. b.

Cu, Pb, Zn, Ni, Co, Ag, Mo, As, (circle)

Others \_\_\_\_\_

Field Analysis (\_\_\_\_\_ tests)

Extraction Method \_\_\_\_\_

Analytical Method \_\_\_\_\_

Reagents Used \_\_\_\_\_

Field Laboratory Analysis

No. (\_\_\_\_\_ tests)

Extraction Method \_\_\_\_\_

Analytical Method \_\_\_\_\_

Reagents Used \_\_\_\_\_

Commercial Laboratory (\_\_\_\_\_ tests)

Name of Laboratory \_\_\_\_\_

Extraction Method \_\_\_\_\_

Analytical Method \_\_\_\_\_

Reagents Used \_\_\_\_\_

General \_\_\_\_\_

**OFFICE USE ONLY**

Type of Survey(s) \_\_\_\_\_ Geophysical (Max-Min II.)

Township or Area \_\_\_\_\_ Lower Detour Lake Area

Claim Holder(s) \_\_\_\_\_ Westmin Resources Limited

Survey Company \_\_\_\_\_ G. Thibault, P.O. Box 1670, Timmins

Author of Report \_\_\_\_\_ C. J. Rockingham

Address of Author \_\_\_\_\_ 25 Adelaide St. E., #1400, Toronto, Ont.

Covering Dates of Survey \_\_\_\_\_ March 9-15, 1984 May 16-17, 1984

Total Miles of Line Cut \_\_\_\_\_ 7.37 km  
(linecutting to office)

**SPECIAL PROVISIONS**

**CREDITS REQUESTED**

Geophysical \_\_\_\_\_ DAYS per claim

ENTER 40 days (includes line cutting) for first survey.

ENTER 20 days for each additional survey using same grid.

Other \_\_\_\_\_

Geological \_\_\_\_\_

Geochemical \_\_\_\_\_

**AIRBORNE CREDITS** (special provision credits do not apply to airborne surveys)

Magnetometer \_\_\_\_\_ Electromagnetic \_\_\_\_\_ Radiometric \_\_\_\_\_  
(enter days per claim)

DATE: May 17, 1984 SIGNATURE: *[Signature]*  
Author of Report or Agent

Res. Geol. \_\_\_\_\_ Qualifications *[Signature]*

Previous Surveys  
 File No. \_\_\_\_\_ Type \_\_\_\_\_ Date \_\_\_\_\_ Claim Holder \_\_\_\_\_

**MINING CLAIMS TRAVERSED**  
 List numerically

P. 553632 ✓  
(petin) (number)

P. 553633 ✓

P. 553644 ✓

P. 553645 ✓

P. 553648 ✓

P. 553649 ✓

P. 553660 ✓

P. 553661 ✓

TOTAL CLAIMS 8



**GEOPHYSICAL TECHNICAL DATA**

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

Number of Stations 269 Number of Readings 538  
Station interval 25 m Line spacing 120 m  
Profile scale 1 cm = 5%  
Contour interval N/A

MAGNETIC

Instrument \_\_\_\_\_  
Accuracy - Scale constant \_\_\_\_\_  
Diurnal correction method \_\_\_\_\_  
Base Station check-in interval (hours) \_\_\_\_\_  
Base Station location and value \_\_\_\_\_

ELECTROMAGNETIC

Instrument Apex Parametrics Max-Min II.  
Coil configuration Horizontal Loop  
Coil separation 150 m  
Accuracy ± 1/2 %  
Method:  Fixed transmitter  Shoot back  In line  Parallel line  
Frequency 222 Hz  
Parameters measured In phase, out of phase (specify V.L.F. station)

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.)

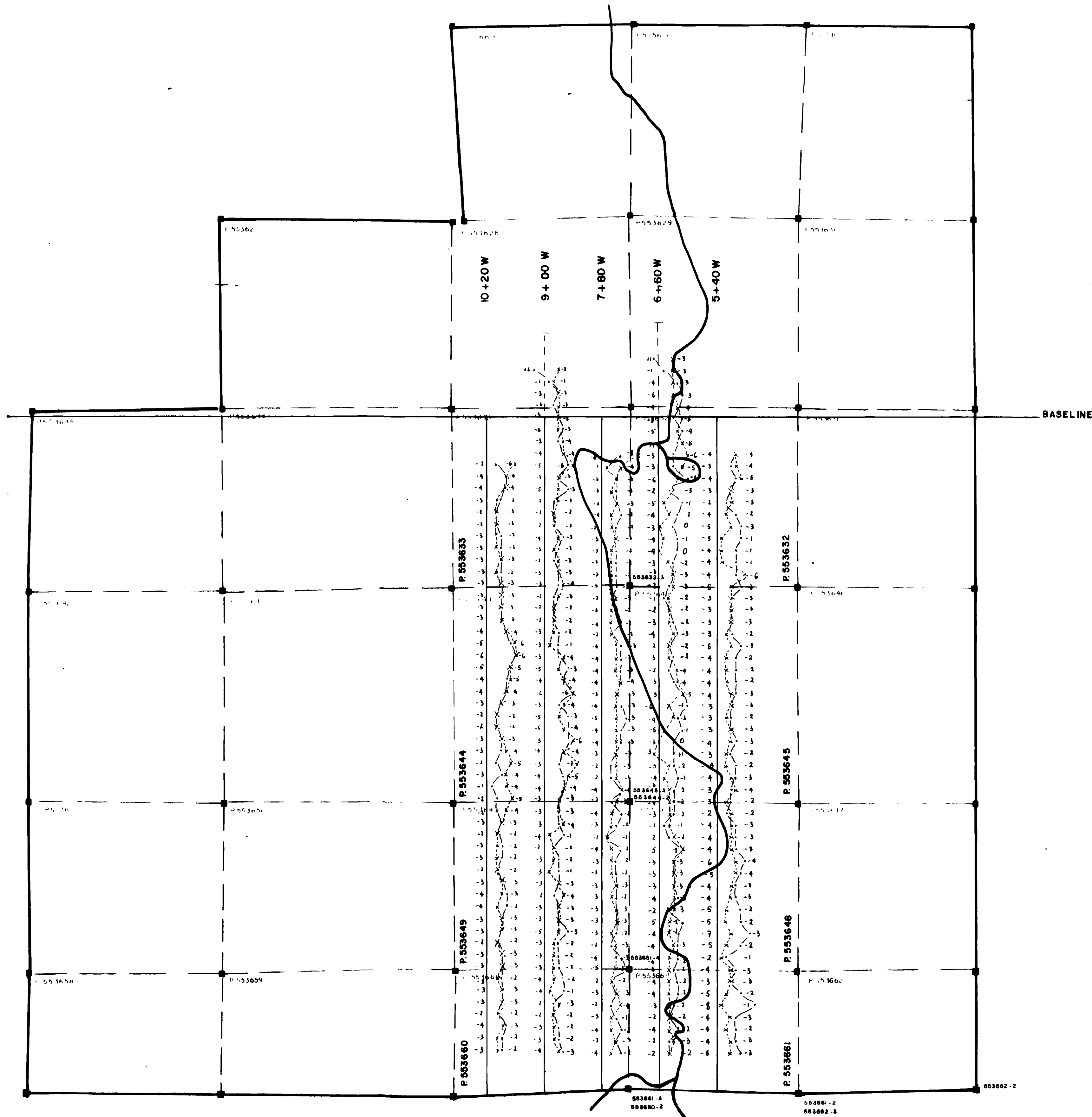
Type of survey \_\_\_\_\_  
Instrument \_\_\_\_\_  
Accuracy \_\_\_\_\_  
Parameters measured \_\_\_\_\_  
Additional information (for understanding results) \_\_\_\_\_

AIRBORNE SURVEYS

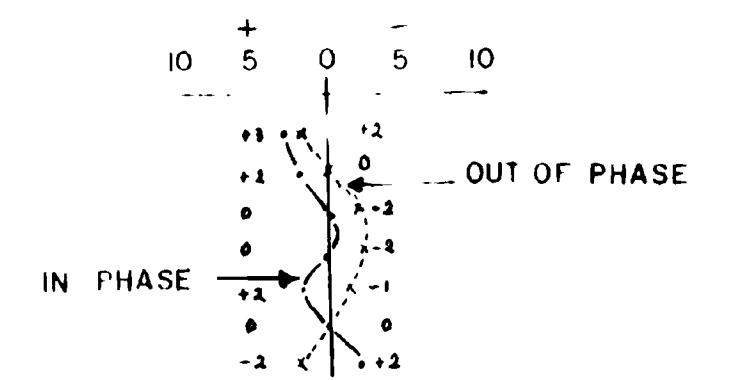
Type of survey(s) \_\_\_\_\_ (specify for each type of survey)  
Instrument(s) \_\_\_\_\_ (specify for each type of survey)  
Accuracy \_\_\_\_\_ (specify for each type of survey)  
Aircraft used \_\_\_\_\_  
Sensor altitude \_\_\_\_\_  
Navigation and flight path recovery method \_\_\_\_\_  
Aircraft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



LOCATION MAP

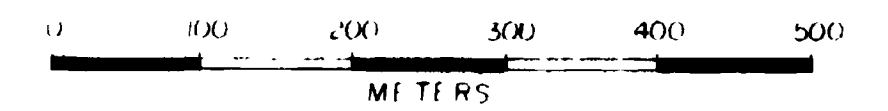


LEGEND



COIL SEPARATION 150 m

SCALE:  
Horizontal 1:5,000  
Vertical 1 cm = 5%



	<b>Westmin Resources Limited</b> EASTERN CANADA MINING DIVISION
<b>NASH CREEK CLAIMS</b> <b>MAX-MIN II. SURVEY</b> <b>222 Hz</b>	
Work by: G.T., C.R.	Scale: 1:5000
Date: March 1984	NTS. 32-E-13

