



32L04SE9429 2.7474 SUNDAY LAKE

010

Westmin Resources Limited
Horizontal Loop Electromagnetic Survey
Sunday Lake Claims
Sunday Lake Area (N3003)
Porcupine Mining District

N.T.S. 32 E-13, L-4

Latitude 50 00'N

Longitude 79 31'W

RECEIVED

NOV 27 1984

MINING LANDS SECTION

November 14, 1984.

P.R.J. Nicholls, B.Sc., P.Eng.
Project Geologist.



Introduction:

The following report pertains to Max-Min II (H.L.E.M.) survey data collected by Phantom Exploration on behalf of Westmin Resources Limited in 1982. The claims are located in the Porcupine Mining District, Sunday Lake Area (M3003). The survey was carried out on picket lines cut in 1982.

Property, Location and Access:

The Sunday Lake claim block is located in the Detour Lake area of the Abitibi greenstone belt on the Ontario-Quebec boundary at latitude 50 00'N, approximately 135 km NNE of Cochrane, Ontario and a similar distance NNW of La Sarre, Quebec. 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: Sunday Lake Claims

Latitude: 50 00'N

Longitude: 79 31'W

N.T.S.: 32 L-4

This report pertains to work on the following 18 claims:

P.553745

P.553746

P.553747

P.553748

P.553749

P.553750

P.553751

P.553752

P.553753

P.553754

P.553755

P.553756

P.553757

P.553758

P.553759

P.553667

P.553668

P.553669

Grid Details, Instrument and Specifications:

In order to facilitate the geophysical surveys picket lines were established with an east-west baseline and north-south grid lines every 100 m and pickets at 25 m intervals along the grid lines. The total length of grid lines surveyed was 29.2 km (1031 stations).

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 888 Hz.

Results and Interpretation:

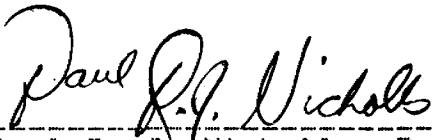
The results of the 1982 survey were interpreted by J. Betz who interpreted 3 weak to moderate (A,B,C up to 15 mhos) conductors with a steep northerly dip. These conductors were subsequently drill-tested (Holes SL-82-1, 2 and 3) and found to be graphitic and sulphidic horizons within the metasedimentary and felsic metavolcanic rock. Several other weak conductors were also located and these are interpreted to represent similar horizons because of the low magnetic gradient as determined from ground magnetometer surveys (filed earlier) and their position in the regional stratigraphy.

Broad zones of weak conductivity were also noted and these may represent basement troughs caused by differential erosion. The most northerly of the troughs may have some significance as it is in an area of higher magnetics and may represent an altered or ultramafic horizon within the mafic volcanics (interpretation based on higher magnetic gradient and regional geology). This area should be tested.

Certification

I, Paul R. J. Nicholls, of 40 Albert Street, South, Box 1605, Stouffville, Ontario, L0H 1L0, certify the following:

- 1) I have practised my profession for seven and one-half years.
- 2) I hold an Honours B.Sc., in Geological Engineering obtained from Queen's University, Kingston, Ontario, in 1976.
- 3) I am a Registered Professional Engineer in the Province of Ontario.
- 4) I am a member of the Canadian Institute of Mining and Metallurgy and Geological Association of Canada.
- 5) I have conducted work and reviewed all data presented.
- 6) I have no financial interests in the property covered by this report.



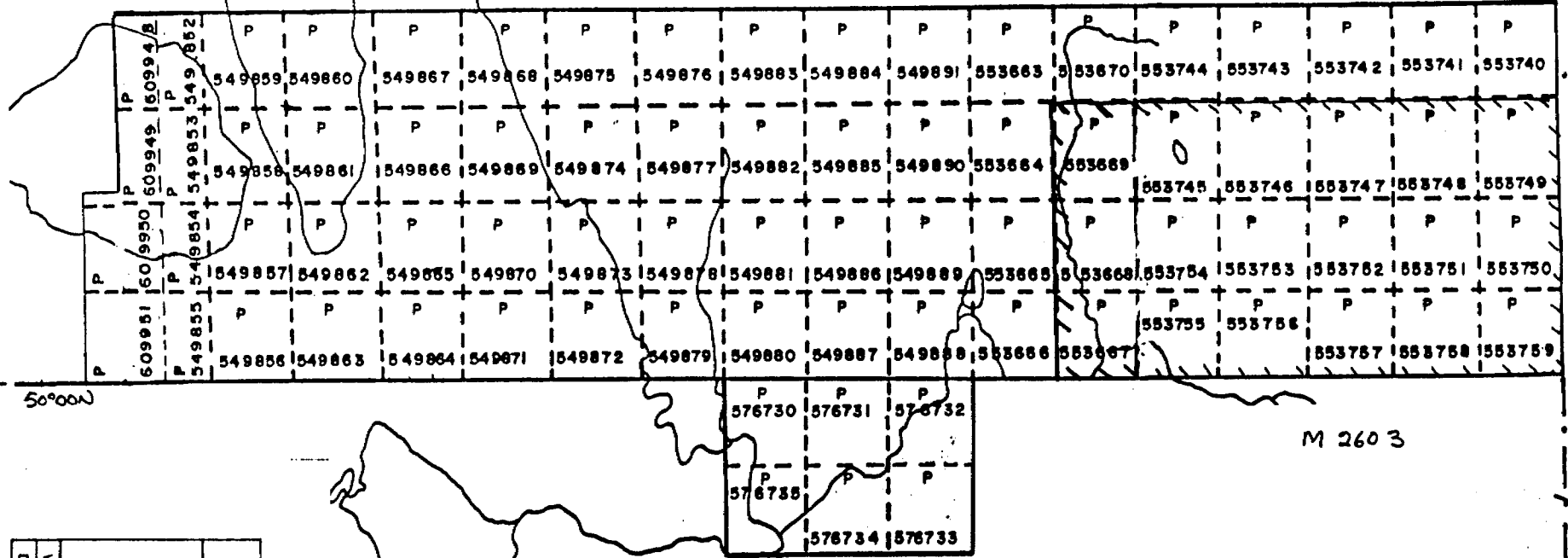
Paul R. J. Nicholls, B.Sc., P.Eng.

November 1984.



M 3003

SUNDAY LAKE



M 2603

Quebec
Ontario

WESTMIN
Westmin Resources Limited
 EASTERN CANADA MINING DIVISION

Sunday Lake Claims

Area Covered By 1982
Max Min II Survey

Work by	PRJN	Scale	1:51360
Date	Nov 84	NTS	32 1/4, E-13

50964



Type of Survey(s) Geophysical	Township or Area Sunday Lake Area
Claim Holder(s) Westmin Resources Limited	Prospector's Licence No. T-778
Address 25 Adelaide Street East, Suite 1400, Toronto, Ontario M5C 1Y2	
Survey Company Phanton Exploration	Date of Survey (from & to) 4 2 82 10 2 82 Day Mo. Yr. Day Mo. Yr.
Total Miles of line Cut 29.2 km	
Name and Address of Author (of Geo-Technical report) P.R.J.Nicholls, 25 Adelaide St.E., #1400, Toronto, Ontario M5C 1Y2	

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	20
	- Magnetometer	
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	Geophysical	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.	553745				
	553746				
	553747				
	553748				
	553749				
	553750				
	553751				
	553752				
	553753				
	553754				
	553755				
	553756				
	553757				
	553758				
	553759				
	553667				
	553668				
	553669				

RECEIVED
DEC 19 1984
MINING LANDS SECTION

FORCUNE MINING DIVISION
RECEIVED
NOV 23 1984
A.M.
7:89 10 11 12 1 2 3 4 5 6 7 8 9 10 11 12 P.M.

RECORDED
NOV 28 1984

Receipt No. Total number of mining claims covered by this report of work. **18**

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
360	Nov. 28/84	<i>[Signature]</i>
	Date Approved as Recorded	Branch Director
	11.1.23	<i>[Signature]</i>

Date 15 Nov. 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
P.R.J.Nicholls, 25 Adelaide Street East, Suite 1400, Toronto, Ontario M5C 1Y2

Date Certified 15 Nov. 1984
Certified by (Signature) *[Signature]*



**GEOPHYSICAL – GEOLOGICAL – GEOCHEMICAL
TECHNICAL DATA STATEMENT**

**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.**

Type of Survey(s) Geophysical
 Township or Area Sunday Lake Area
 Claim Holder(s) Westmin Resources Limited
25 Adelaide St.E., #1400, Toronto
 Survey Company Phanton Exploration
 Author of Report P.R.J. Nicholls
 Address of Author 25 Adelaide Street East, #1400
Toronto, Ontario M5C 1Y2
 Covering Dates of Survey 4 - 10 February 1982
 (linecutting to office)
 Total Miles of Line Cut 29.2 km

**MINING CLAIMS TRAVERSED
List numerically**

(prefix)	(number)
P.	553745
P.	553746
P.	553747
P.	553748
P.	553749
P.	553750
P.	553751
P.	553752
P.	553753
P.	553754
P.	553755
P.	553756
P.	553757
P.	553758
P.	553759
P.	553667
P.	553668
P.	553669

If space insufficient, attach list

<u>SPECIAL PROVISIONS CREDITS REQUESTED</u>		DAYS per claim
ENTER 40 days (includes line cutting) for first survey.	Geophysical	20
ENTER 20 days for each additional survey using same grid.	-Electromagnetic	_____
	-Magnetometer	_____
	-Radiometric	_____
	-Other	_____
	Geological	_____
	Geochemical	_____

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

Magnetometer _____ Electromagnetic _____ Radiometric _____
 (enter days per claim)

DATE: 23 Nov. 1984 SIGNATURE: Paul R.J. Nicholls
 Author of Report or Agent

Res. Geol. _____ Qualifications _____

Previous Surveys

File No.	Type	Date	Claim Holder

TOTAL CLAIMS 18

OFFICE USE ONLY

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations 1,031 Number of Readings 2,062
Station interval 25 m Line spacing 100 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
Coil separation 150 m
Accuracy +/- 1.2%
Method: [] Fixed transmitter [] Shoot back [x] In line [] Parallel line
Frequency 888Hz (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

INDUCED POLARIZATION 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) _____

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 _____

GEOCHEMICAL SURVEY – PROCEDURE RECORD



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 _____

1985 01 21

Your File: 509/84
Our File: 2.7474

Mining Recorder
Ministry of Natural Resources
60 Wilson Avenue
Timmins, Ontario
P4N 2S7

Dear Sir:

RE: Notice of Intent dated January 9, 1985
Geophysical (Electromagnetic) Survey on
Mining Claims P 553745, et al, in Sunday
Lake Area

Please disregard the above-mentioned Notice of Intent.
The file has been reassessed and full credits granted
as shown on the enclosed Report of Work.

Please inform the recorded holder of these mining
claims and so indicate on your records.

Yours sincerely,

S.E. Yundt
Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: (416) 965-4888

S. Hurst:mc

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

Encl.

Mining Lands Section

File No 2-7474

Control Sheet

TYPE OF SURVEY

- GEOPHYSICAL
 GEOLOGICAL
 GEOCHEMICAL
 EXPENDITURE

MINING LANDS COMMENTS:

lga L.D.

J. Hurst
Signature of Assessor

85/01-03.
Date



Ministry of
Natural
Resources

Jan 24/85

1985 01 09

Your File: 509/84
Our File: 2.7474

Mining Recorder
Ministry of Natural Resources
60 Wilson Avenue
Timmins, Ontario
P4N 2S7

Dear Sir:

Enclosed are two copies of a Notice of Intent with statements listing a reduced rate of assessment work credits to be allowed for a technical survey. Please forward one copy to the recorded holder of the claims and retain the other. In approximately fifteen days from the above date, a final letter of approval of these credits will be sent to you. On receipt of the approval letter, you may then change the work entries on the claim record sheets.

For further information, if required, please contact Mr. R.J. Pichette at 416/965-4888.

Yours sincerely,

S.E. Yundt
Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3

R.D. S. Hurst:mc

Encls.

cc: Westmin Resources Limited
25 Adelaide Street East
Suite 1400
Toronto, Ontario
M5C 1Y2
Attention: P.R.J. Nicholls

cc: Mr. G.H. Ferguson
Mining & Lands Commissioner
Toronto, Ontario



Ministry of
Natural
Resources

Ontario

Notice of Intent
for Technical Reports

1985 01 09

2.7474/509/84

An examination of your survey report indicates that the requirements of The Ontario Mining Act have not been fully met to warrant maximum assessment work credits. This notice is merely a warning that you will not be allowed the number of assessment work days credits that you expected and also that in approximately 15 days from the above date, the mining recorder will be authorized to change the entries on his record sheets to agree with the enclosed statement. Please note that until such time as the recorder actually changes the entry on the record sheet, the status of the claim remains unchanged.

If you are of the opinion that these changes by the mining recorder will jeopardize your claims, you may during the next fifteen days apply to the Mining and Lands Commissioner for an extension of time. Abstracts should be sent with your application.

If the reduced rate of credits does not jeopardize the status of the claims then you need not seek relief from the Mining and Lands Commissioner and this Notice of Intent may be disregarded.

If your survey was submitted and assessed under the "Special Provision-Performance and Coverage" method and you are of the opinion that a re-appraisal under the "Man-days" method would result in the approval of a greater number of days credit per claim, you may, within the said fifteen day period, submit assessment work breakdowns listing the employees names, addresses and the dates and hours they worked. The new work breakdowns should be submitted direct to the Land Management Branch, Toronto. The report will be re-assessed and a new statement of credits based on actual days worked will be issued.

Recorded Holder	WESTMIN RESOURCES LIMITED
Township or Area	SUNDAY LAKE AREA

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical Electromagnetic _____ 17 _____ days Magnetometer _____ days Radiometric _____ days Induced polarization _____ days Other _____ days Section 77 (19) See "Mining Claims Assessed" column Geological _____ days Geochemical _____ days Man days <input type="checkbox"/> Airborne <input type="checkbox"/> Special provision <input checked="" type="checkbox"/> Ground <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Credits have been reduced because of partial coverage of claims. <input type="checkbox"/> Credits have been reduced because of corrections to work dates and figures of applicant.	P 553745 to 759 inclusive 553667-68-69

Special credits under section 77 (16) for the following mining claims

No credits have been allowed for the following mining claims

not sufficiently covered by the survey Insufficient technical data filed

1984 12 04

Your File:
Our File: 2.7474

Mining Recorder
Ministry of Natural Resources
60 Wilson Avenue
Timmins, Ontario
P4N 2S7

Dear Sir:

We received reports and maps on November 27, 1984 for a Geophysical (Electromagnetic) Survey submitted under Special Provisions (credit for Performance and Coverage) on Mining Claims P 553745 et al in the Area of Sunday 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)965-4888

A. Barr:sc

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



Westmin Resources Limited
Suite 1400, 25 Adelaide Street East
Toronto, Ontario, Canada
M5C 1Y2
416 364-8116 Telex: 06-22072

Registered Mail

November 23, 1984.

Ministry of Natural Resources,
Land Management Branch,
Mining Land Section,
Whitney Block, Room 6643,
Queen's Park,
Toronto, Ontario.
M7A 1W3.

Dear Sirs:

Re: Assessment Report - EM Survey,
Sunday Lake Area

Please find enclosed in duplicate the Electromagnetic Survey Report in the Sunday Lake Area, by P. R. J. Nicholls, as well as the Technical Data Statement. The Report of Work (copy enclosed) has been forwarded to the Mining Recorder Office in Timmins.

I hope you will find everything in order.

Yours truly,

WESTMIN RESOURCES LIMITED

Skuprejanov

(Mrs.) S. Kuprejanov,
Administrative Geologist.

SK/hmc
Encls.

RECEIVED
NOV 27 1984
MINING LANDS SECTION

COPY
The Mining Act

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.

Type of Survey(s) Geophysical		Township or Area Sunday Lake Area	
Claim Holder(s) Westmin Resources Limited		Prospector's Licence No. T-778	
Address 25 Adelaide Street East, Suite 1400, Toronto, Ontario M5C 1Y2			
Survey Company Phanton Exploration		Date of Survey (from & to) 4 2 82 10 2 82 Day Mo. Yr. Day Mo. Yr.	Total Miles of line Cut 29.2 km
Name and Address of Author (of Geo-Technical report) P.R.J.Nicholls, 25 Adelaide St.E., #1400, Toronto, Ontario M5C 1Y2			

Credits Requested per Each Claim in Columns at right

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

Mining Claims Traversed (List in numerical sequence)

Mining Claim		Expend. Days Cr.	Mining Claim		Expend. Days Cr.
Prefix	Number		Prefix	Number	
P.	553745	1/4			
	553746	1/4			
	553747	1/4			
	553748	1/4			
	553749	1/4			
	553750	✓			
	553751	✓			
	553752	✓			
	553753	✓			
	553754	✓			
	553755	1/4			
	553756	1/4			
	553757	1/4			
	553758	1/4			
	553759	1/4			
	553667	1/4			
	553668	✓			
	553669	1/4			
		3/4			
		18 x 20 = 360			
		360 ÷ 21 = 17			

Expenditures (excludes power stripping)

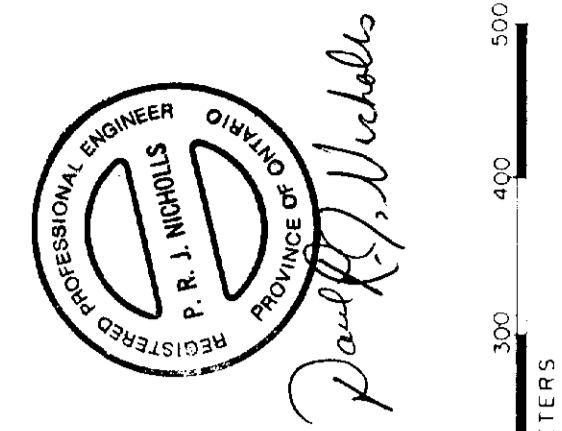
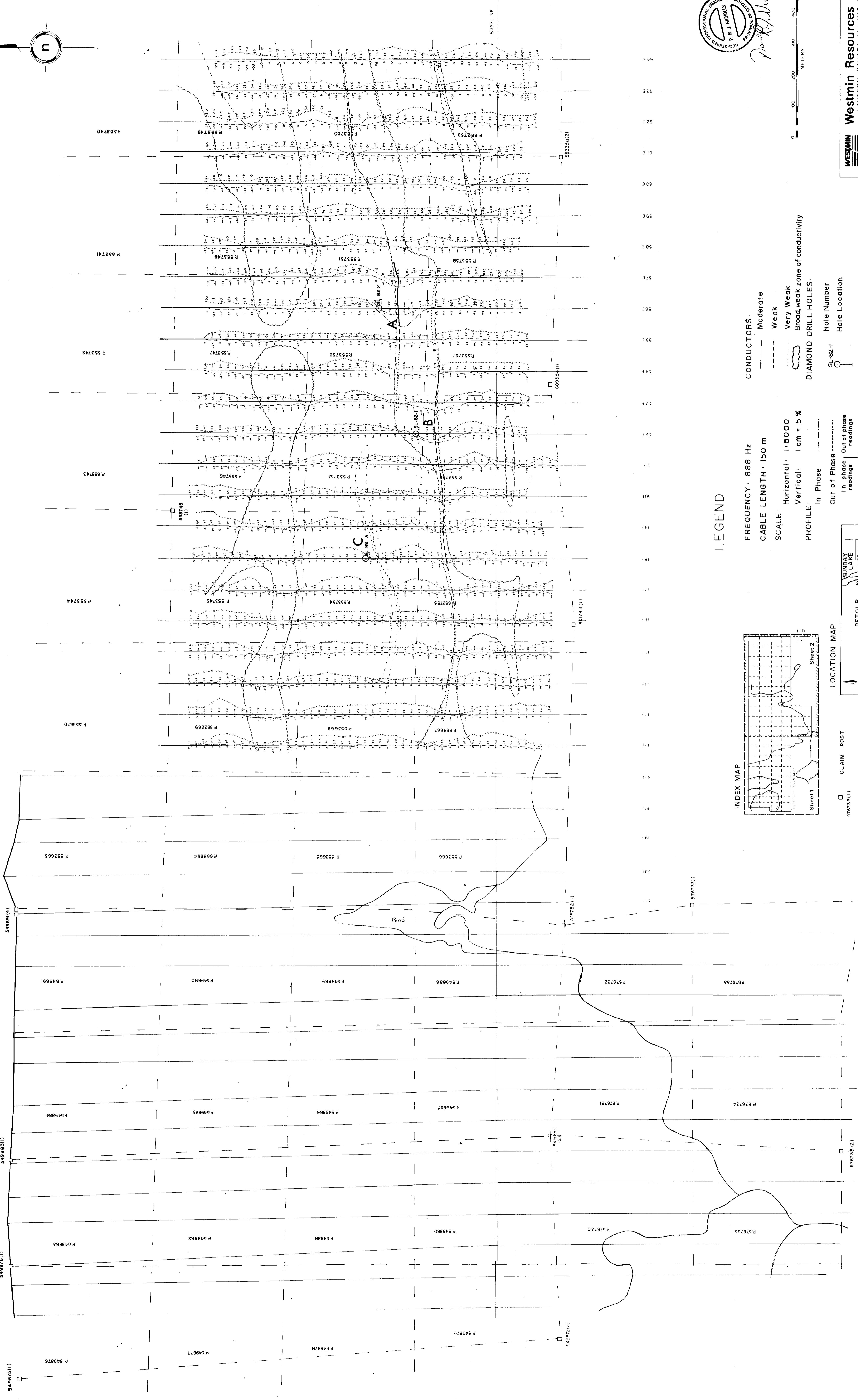
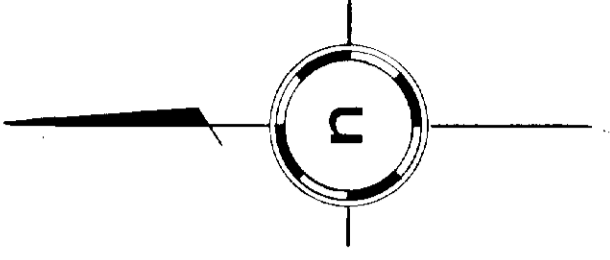
Type of Work Performed	
Performed on Claim(s)	
Calculation of Expenditure Days Credits	
Total Expenditures	Total Days Credits
\$ <input type="text"/> ÷ 15 = <input type="text"/>	
Instructions Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.	

Total number of mining claims covered by this report of work. 18

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

Date 15 Nov. 1984	Recorded Holder or Agent (Signature) <i>P.R.J. Nicholls</i>
-----------------------------	--

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 P.R.J.Nicholls, 25 Adelaide Street East, Suite 1400,		
Toronto, Ontario M5C 1Y2		Date Certified 15 Nov. 1984
		Certified by (Signature) <i>P.R.J. Nicholls</i>



CONDUCTORS:
 Moderate (solid line)
 Weak (dashed line)
 Very Weak (dotted line)
 Broad, weak zone of conductivity (wavy line)

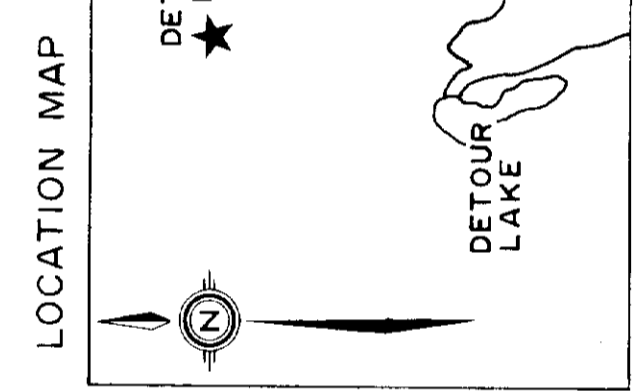
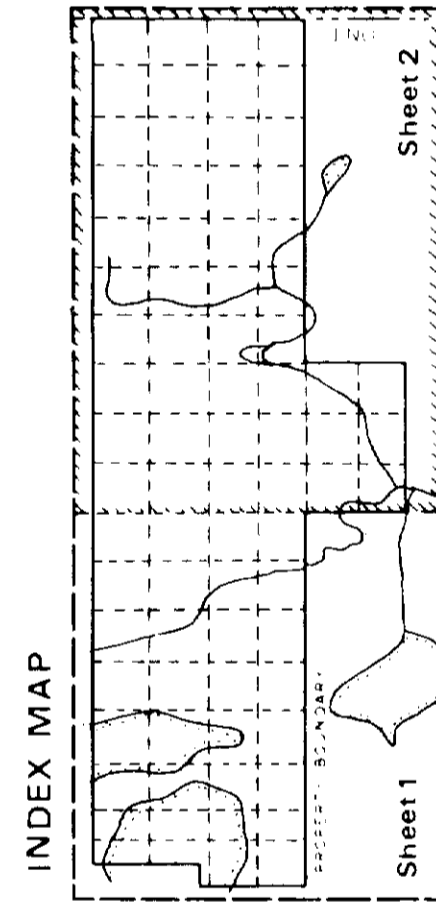
DIAMOND DRILL HOLES:
 SL-82-1 (circle with cross)
 Hole Location (circle with dot)

LEGEND

FREQUENCY: 888 Hz
CABLE LENGTH: 150 m
SCALE: Horizontal: 1:5000 Vertical: 1 cm = 5 %

PROFILE: In Phase (solid line), Out of Phase (dashed line)

In phase readings (solid line), Out of phase readings (dashed line), positive (upward arrow), negative (downward arrow)



WESTMIN Resources Limited
 EASTERN CANADA MINING DIVISION
DETOUR PROJECT
 SUNDAY LAKE CLAIMS
 MAX - MIN II SURVEY

Work by: P.F.J.N.	Scale: 1:5000
Date: 1982	NTS: 32-L4

Assessment Report 1984



32580002 31701 SUNDAY LAKE