



52J07SE0205 52J07SE0040 EVANS LAKE

010

Westmin Resources Limited  
Jutten Project  
Report on Geophysics, Geochemistry and Geological  
Mapping completed in 1985

N.T.S. 52 J/7 SE (113)  
Latitude 50° 22'N  
Longitude 90° 32'W

February 1986

Paul R. J. Nicholls, P.Eng.

RECEIVED <sup>LS</sup>

FEB 19 1986

MINING LANDS SECTION



Table of Contents

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	Page
Introduction	3
Location, Access and Topography	3
Regional Geology	7
Previous Work	7
1985 Geophysics	7
1985 Soil Geochemistry	11
1985 Property Geology	13
Appendix 1 - List of Personnel	15
Appendix 2 - Specifications for Geophysical Equipment	16
Appendix 3 - Soil Geochemical Results	17
Certification	

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List of Figures

Figure 1 - Location Map	4
Figure 2 - Claim Map	6
Figure 3 - Regional Geology Map	8

List of Tables

Table 1 - Land Status	5
Table 2 - Statistical Summary	12

Maps

VLF-EM Survey,	1:2000	in pocket
Max-Min Survey, 444 Hz,	1:2000	"
Max-Min Survey, 1777Hz,	1:2000	"
Soil Geochemistry, Ag, Au, Mo, As,	1:2000	"
Soil Geochemistry, Cu, Zn, Pb,	1:2000	"
Geological Survey,	1:2000	"
Magnetometer Survey	1:2000	"

## Introduction :

Westmin Resources Limited acquired the Jutten property by staking 9 claims in January and February 1985. Interest in the area was prompted by the results of previous exploration (trenching and diamond drilling) on the property. Ground geophysical surveys (magnetometer, VLF-EM, and Max-Min II) were undertaken in 1985 in the winter (February-March) and followed up by soil geochemistry and geological mapping in August.

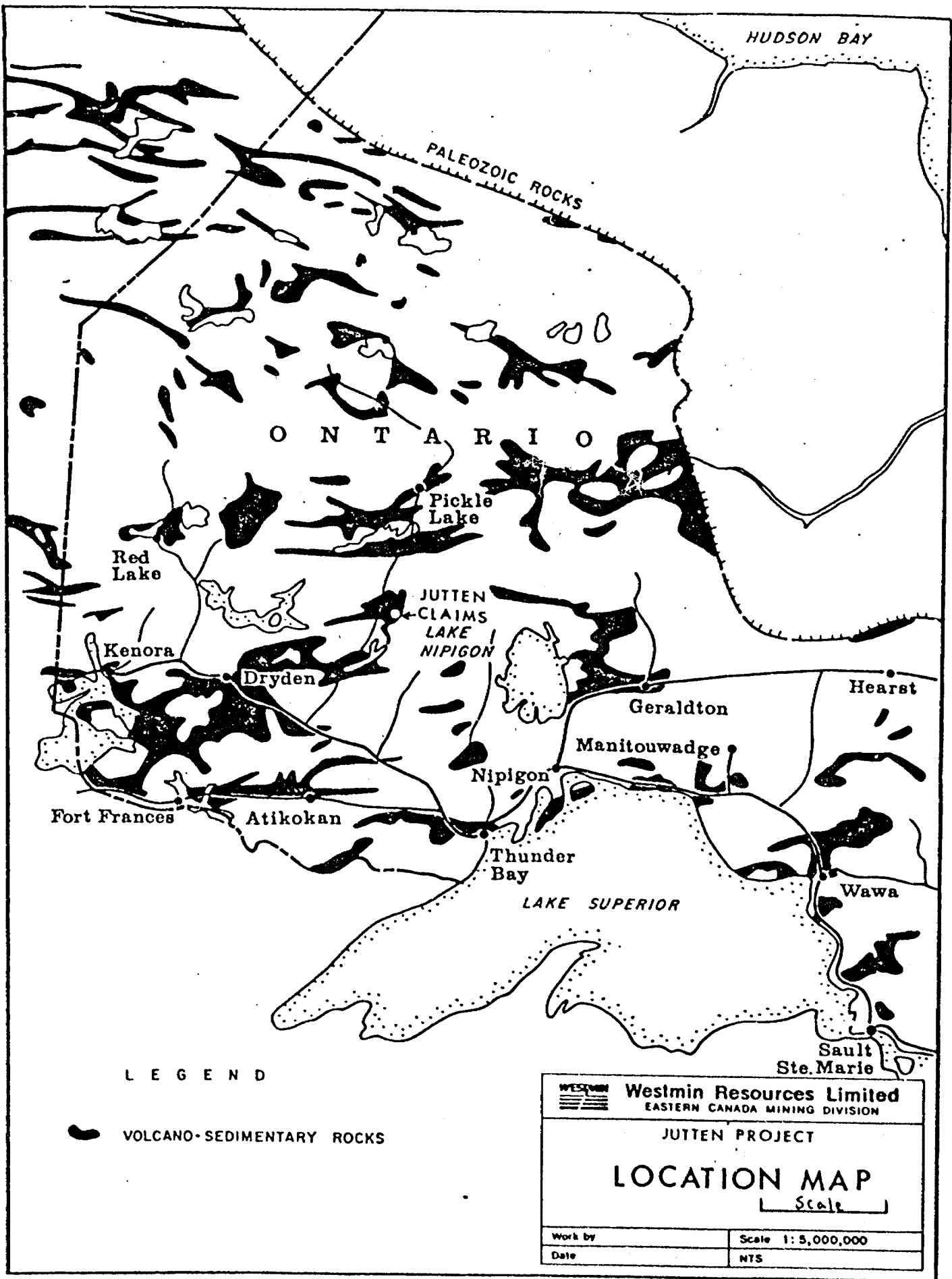
## Location, Access and Topography :

The Jutten property (Figure 1) is located approximately 240 kilometres northwest of Thunder Bay and 10 kilometres northeast of the town of Savant Lake, Ontario (N.T.S. 52 J/7).

Access to the property is by boat from a tourist lodge 5 kilometres to the north. The lodge is linked to Highway 599 by a tractor road.

Topographic relief is generally low (5 metres) but may be steep (scarps up to 25 metres) in areas of outcrop.

Westmin Resources Limited has 100% interest in 9 claims staked within Jutten Township (Figure 2, Table 1).



L E G E N D

● VOLCANO-SEDIMENTARY ROCKS


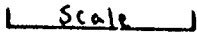
 <b>Westmin Resources Limited</b> EASTERN CANADA MINING DIVISION	
JUTTEN PROJECT <b>LOCATION MAP</b> Scale 	
Work by	Scale 1:5,000,000
Date	NTS

Figure 1

Table 1

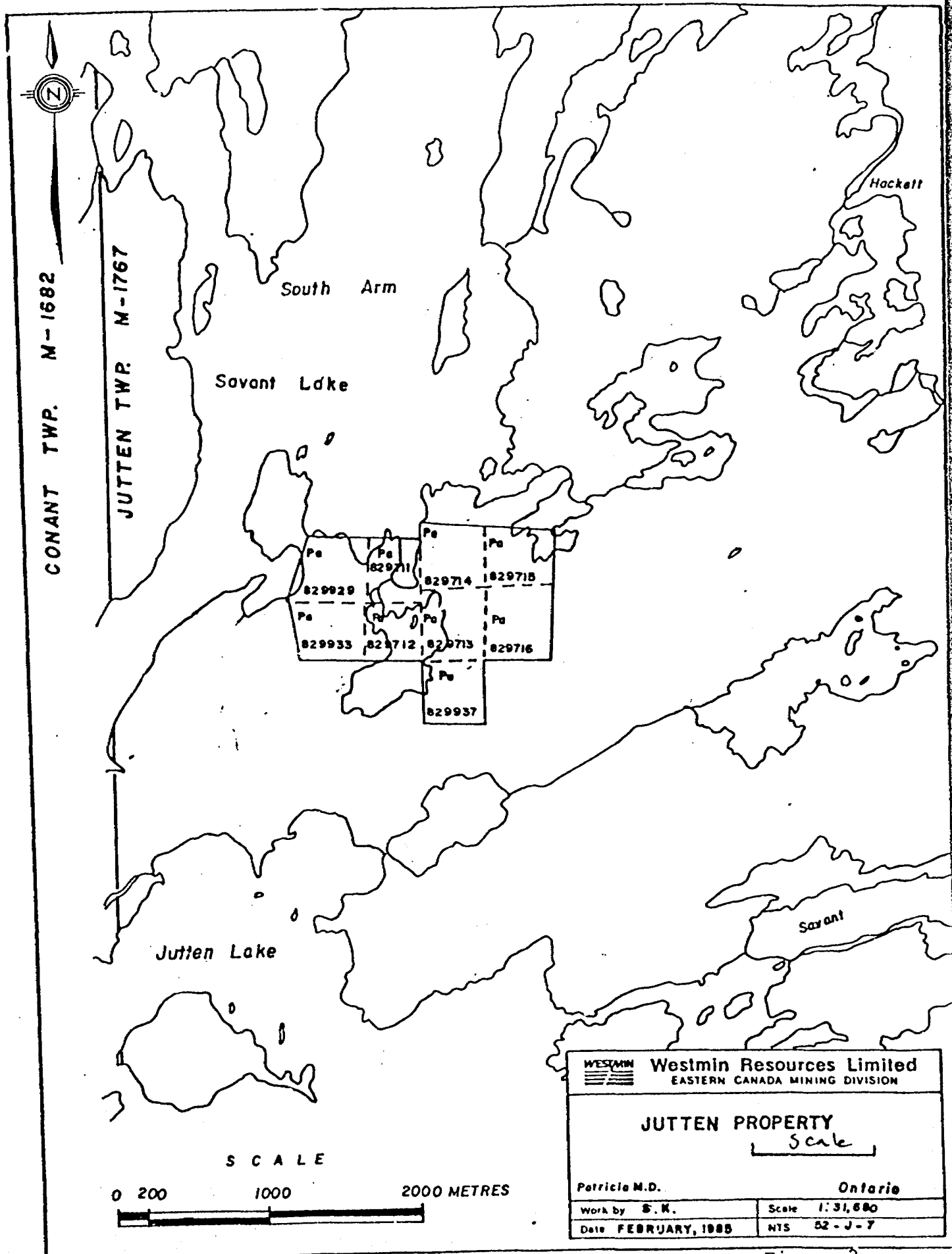
Land Status


Jutten Property

Commodity: Base Metals  
Equity: Westmin Resources Limited 100%  
Location: Jutten Township (M.1767)  
Patricia Mining District, Ontario  
N.T.S. 52 J/7

Claims	Area (ha)	Date Recorded	Anniversary Due Date	Lease Due
Pa.829711	16	12 Feb.1985	27 Feb.1986	27 Feb.1991
Pa.829712	16	12 Feb.1985	27 Feb.1986	27 Feb.1991
Pa.829713	16	26 Feb.1985	27 Feb.1986	27 Feb.1991
Pa.829714	16	26 Feb.1985	27 Feb.1986	27 Feb.1991
Pa.829715	16	26 Feb.1985	27 Feb.1986	27 Feb.1991
Pa.829716	16	26 Feb.1985	27 Feb.1986	27 Feb.1991
Pa.829929	16	12 Feb.1985	27 Feb.1986	27 Feb.1991
Pa.829933	16	12 Feb.1985	27 Feb.1986	27 Feb.1991
Pa.829937	16	12 Feb.1985	27 Feb.1986	27 Feb.1991

9 Claims 144 ha



 <b>Westmin Resources Limited</b> EASTERN CANADA MINING DIVISION	
<b>JUTTEN PROPERTY</b> Scale	
Patricia M.D. <span style="float: right;">Ontario</span>	
Work by S.W.	Scale 1:31,680
Date FEBRUARY, 1985	NTS 52-J-7

50° 19' 30" APPROX.

Figure 2

### Regional Geology:

The property (Figure 3) is underlain by a north facing mafic volcanic sequence composed of massive to pillowed flows which are unconformably overlain by volcanic conglomerates, clastic sedimentary rocks and iron formations to the north. Granitic rocks have intruded the volcanic sequence on the southern portion of the property (Bond, 1979).

### Previous Work:

Work on the property prior to 1985 consisted of trenching (1958) and sampling (1958), ground geophysics (1970 - 1972; VLF-EM, DPM-1 long wire electromagnetic, limited magnetometer survey), diamond drilling (1972) geochemistry. Work was completed by J. Donner and reported by Bond (1979).

The work had located a small lense of sulphide mineralization which returned significant Pb-Zn and Ag values.

### 1985 Geophysics:

In February 1985, a total of 18.81 kilometres of line-cutting was completed on the Jutten claims to provide control for geophysical, geochemical and geological mapping surveys. An east-west baseline was established with north-south cross-lines spaced at 100 metre intervals. Stations were chained in at 25 metre intervals along the cross-lines.

Survey methods (see Appendix 2 for Instrument Specifications).

#### Magnetometer Survey (See map, back pocket)

Total coverage of the grid (16.91 km) was completed using the EDA PPM 300 field magnetometer and readings were taken at 25 metre intervals along the lines. The data was corrected by a EDA PPM 400 base station magnetometer and plotted at a scale of 1:2,000.

The results are contoured at 100 gamma intervals.

#### Max-Min II - Horizontal Loop Electromagnetics (See maps, back pocket)

A Horizontal loop electromagnetic survey was completed over the property using an APEX Parametrics Max-Min II instruments with a coil spacing of 100 metres. Readings taken at 25 metres were recorded for two frequencies (444 Hz, 1777 Hz) and each frequency was plotted at a scale of 1:2000.

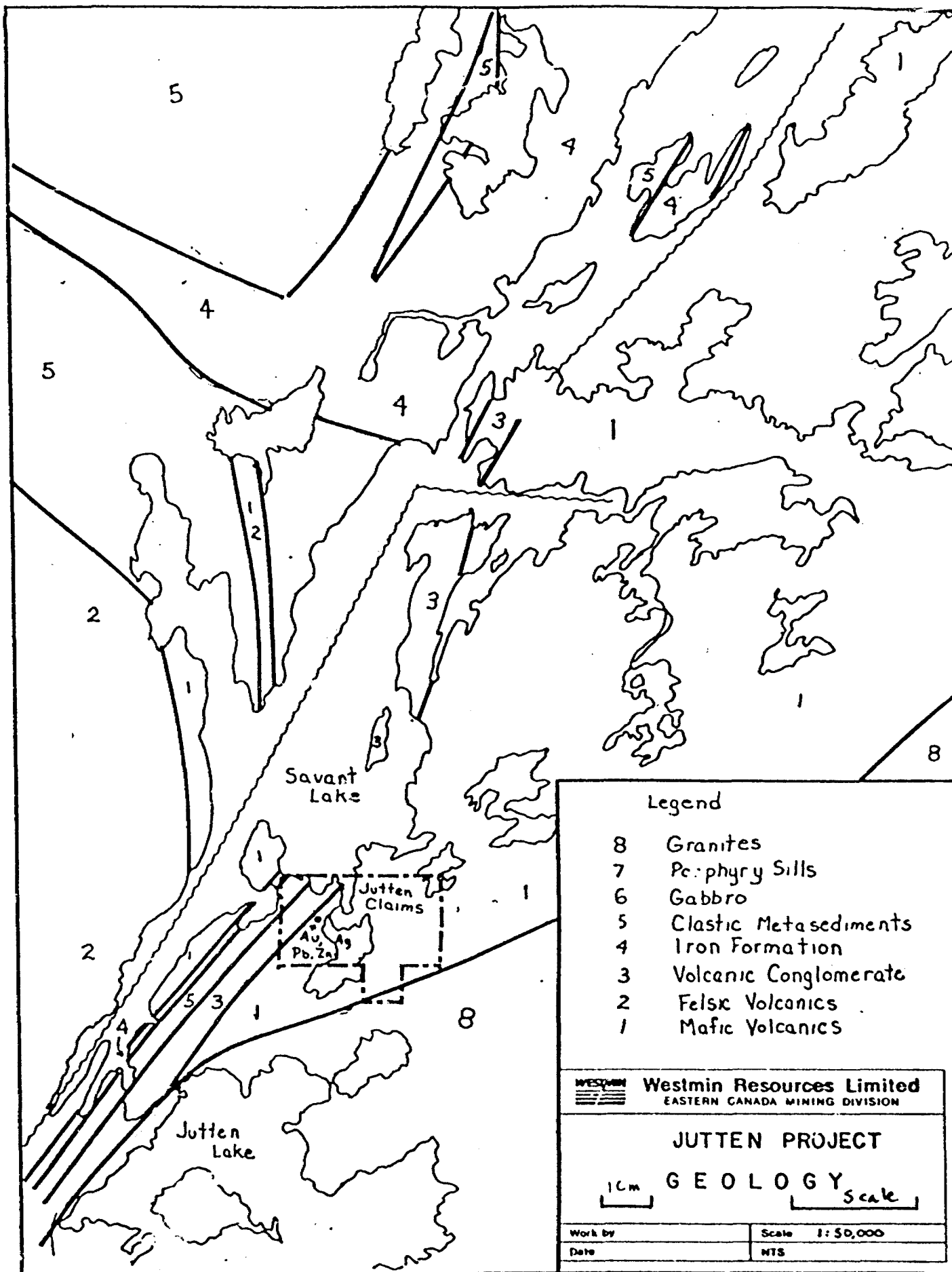


Figure 3



## VLF-EM

A VLF-EM survey was completed over the property using a Geonics EM-16 instrument with Seattle, Washington as the transmitter station. All readings were taken (facing north) at 25 metre intervals and plotted at a scale of 1:2000.

### Survey Results

#### Magnetometer Survey

The magnetic gradient on the property is generally low (59,200 - 59,900 gammas) with the exception of the two north-easterly trending magnetic highs.

- 1) In the northwestern corner of the claim group (Claim PA.829929) a highly magnetic feature (>61,000 gammas) was located. This feature is interpreted to represent oxide facies (magnetite) iron formation that has been located to the south of the property (Bond, 1979).
- 2) A second magnetic feature (59,900 - 61,000 gammas) traced across the central portion of the property. This magnetic feature is discontinuous and occurs as pods and may represent the presence of magnetite within the mafic volcanic rocks.

### Electromagnetic Surveys

#### VLF-EM

Many conductive horizons were defined by the VLF-EM survey. Many of these believed to be related to varying thickness of overburden as indicated by the broad nature of profiles, low amplitude (<20% peak to peak) of anomaly. One conductor that may reflect a bedrock source is located within a small lake (Claim PA.829712) and has a strong amplitude (up to 154% peak to peak). This conductor may extend to the south where a second conductor (amplitude up to 80%) has also been identified. These two conductors appear to cross-cut the stratigraphy and may reflect fracture zones.

Two conductors identified in Claim PA.829715 are of moderate strength (30% peak to peak) amplitude and may represent bedrock conductors.

## Max-Min II

The Max-Min II results have been interpreted by J. Betz and only one true bedrock conductor has been identified. The conductor is located in Claim PA.829715 and corresponds to one of the VLF conductors. The conductor is strong (50 mhos) and was tested by two drill holes completed by Bird River Mines in 1972. These drill holes (5 and 6) intersected massive pyrite.

All other conductors are believed to represent thick overburden troughs that may be related to fracturing in the rock or recessive weathering units.

## 1985 Soil Geochemistry :

In August 1985 a total of 164 samples were collected on the Jutten property. The samples were dried and shipped to Barringer Magenta in Toronto where they were ashed and analysed for Au, Ag, Cu, Zn, Pb, As, and Mo by Atomic Absorption. The results have been plotted on two maps (Au, Ag, Mo and As on one, and Cu, Zn, and Pb on a second) at a scale of 1:2,000.

The data was statistically classified into categories using cumulative frequency plots. The categories and results of the statistical analysis are presented in Table 2. As most of the results for Au, Ag, and Mo were very low there were not statistically treated and any values greater than detection limits were considered anomalous.

### Results

The results of the surveys located the following anomalies.

- 1) A strong Cu, Zn, Pb anomaly in proximity to the trench (3+00E, 1+35S) with values up to 103, 170, and 231 ppm respectively. Associated with this anomaly are anomalous Ag and Arsenic values (up to 1.0 ppm and 32.0 ppm respectively).
- 2) Line 6+00E, 0+50 - 0+75S - isolated strongly anomalous Zn and Au values (180 ppm and 108 ppb) respectively were located. These may be along strike from Anomaly 1.
- 3) Numerous isolated anomalous Cu, and Zn values were located in Claims PA.829714 and 829715. No definite trends are apparent.

Table 2  
Statistical Summary  
1985 Soil Geochemistry  
Jutten Claims

	Percentile	Au ppb	Ag ppm	Cu ppm	Zn ppm	Pb ppm	Mo ppm	As ppm
Detection Limit		3	.2	1	1	1	1	1
Background	<70			<10	<45	<12		<4
Elevated Background	70<90			10<30	45<72	12<27		4<8
Positive	90<95			30<50	72<98	27<30		8<10
Anomalous	95<98	>3	>.2	50<55	98<140	30<35	>1	10<14
Strongly Anomalous	>98			>55	>140	>35		>14

## 1985 Property Geology

All lines on the property were mapped in August 1985 and the results are plotted at a scale of 1:2000.

### Surficial Geology

Outcrop exposure on the property is generally poor (<10%) with the remainder of the property covered by thin overburden and swamp. A north trending esker composed of sand and gravel was mapped along the western edge of the property.

The area is generally covered by mixed forest of poplar and spruce except in the east where the ground is poorly drained and cedars predominate.

### Bedrock Geology

The area is predominantly underlain by mafic volcanic flows which are unconformably overlain by conglomerates, volcanic conglomerates, felsic tuffs and siltstones. The oldest rocks located in the area consists primarily of fine-grained light to medium green mafic flows. The flow units are generally massive although numerous pillowed flows are common in the northern portion of the property. Pillow structures consistently face north indicating that the stratigraphy is younger to the north. The mafic volcanics generally trend at 070 - 080 Azimuth and appear to be vertical to steeply dipping south. Hematitic and brown weathered outcrop are common in the central portion of the claim group and may indicate cross-fracturing and or shearing in the mafic flows.

Within the mafic sequence one thin (25 metre thick) felsic volcanic unit consisting of quartz-sericite schists, felsic tuffs, and quartz feldspar porphyries has been traced from the trench across the property. This unit is conformable with mafic volcanics and locally contains pyrite and tourmaline.

From the data present there appears to be an angular unconformity between the mafic volcanics and overlying units. Above the unconformity the rocks consist of a matrix supported conglomerate which contains rounded granitoid clasts, a volcanic conglomerate with elongate sub-angular volcanic clasts, felsic tuffs, and/or quartz rich siltstones. These units generally have a strike of 60 Azimuth. Pyrite has been found in one outcrop of the volcanic conglomerate.

## Discussion of Results

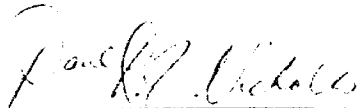
Mineralization on the Jutten property is hosted within a thin stratiform felsic volcanic horizon within a mafic volcanic sequence. The ground magnetometer and electromagnetic surveys show a discontinuity in a magnetic marker unit (high) associated with a strong cross-cutting VLF-EM conductors.

The primary exploration targets on the property are:

- 1) The extension of the known mineralized zone along the north flank of the magnetic marker horizon.
- 2) Crosscutting electromagnetic conductors
- 3) The pyritic felsic volcanic horizon tested by Holes 5 and 6 represents an exhalative horizon and should be tested.

Prior to spotting drill holes, additional geophysics and induced polarization should be completed.

Respectfully submitted by:

  
\_\_\_\_\_  
Paul R. J. Nicholls, P.Eng.

Appendix 1

List of Personnel

Geophysics

Duties

Paul R. J. Nicholls,  
Toronto, Ont.

Max-Min II and  
VLF-EM Operator  
Drafting

Chris Edwards,  
Thunder Bay, Ont.

Max-Min II and  
VLF-EM Operator

Chris Crow,  
Thunder Bay, Ont.

Max-Min II and  
Magnetometer  
Operator

Geological Mapping

Paul R. J. Nicholls,  
Toronto, Ont.

Geological mapping,  
soil sampling, drafting

Rod Pertson,  
Winnipeg, Man.

Geological mapping,  
soil sampling

Report

Paul R. J. Nicholls,  
Toronto, Ont.

Appendix 2  
Specifications for Geophysical Equipment



# EM 16

Pioneered and patented exclusively by Geonics Limited, the VLF method of electromagnetic surveying has been proven to be a major advance in exploration geophysical instrumentation.

Since the beginning of 1965 a large number of mining companies have found the EM16 system to meet the need for a simple, light and effective exploration tool for mining geophysics.

The VLF method uses the military and time standard VLF transmissions as primary field. Only a receiver is then used to measure the secondary fields radiating from the local conductive targets. This allows a very light, one-man instrument to do the job. Because of the almost uniform primary field, good response from deeper targets is obtained.

The EM16 system provides the *in-phase* and *quadrature* components of the secondary field with the polarities indicated.

Interpretation technique has been highly developed particularly to differentiate deeper targets from the many surface indications.

## Principle of Operation

The VLF transmitters have vertical antennas. The magnetic signal component is then horizontal and concentric around the transmitter location.



## Specifications

Source of primary field	VLF transmitting stations.	Reading time	10-40 seconds depending on signal strength.
Transmitting stations used	Any desired station frequency can be supplied with the instrument in the form of plug-in tuning units. Two tuning units can be plugged in at one time. A switch selects either station.	Operating temperature range	-40 to 50° C.
Operating frequency range	About 15-25 kHz.	Operating controls	ON-OFF switch, battery testing push button, station selector, switch, volume control, quadrature, dial $\pm 40\%$ , inclinometer dial $\pm 150\%$ .
Parameters measured	(1) The vertical in-phase component (tangent of the tilt angle of the polarization ellipsoid). (2) The vertical out-of-phase (quadrature) component (the short axis of the polarization ellipsoid compared to the long axis).	Power Supply	6 size AA (penlight) alkaline cells. Life about 200 hours.
Method of reading	In-phase from a mechanical inclinometer and quadrature from a calibrated dial. Nulling by audio tone.	Dimensions	42 x 14 x 9 cm (16 x 5.5 x 3.5 in.)
Scale range	In-phase $\pm 150\%$ ; quadrature $\pm 40\%$ .	Weight	1.6 kg (3.5 lbs.)
Readability	$\pm 1\%$ .	Instrument supplied with	Monotonic speaker, carrying case, manual of operation, 3 station selector plug-in tuning units (additional frequencies are optional), set of batteries.
		Shipping weight	4.5 kg (10 lbs.)



GEONICS LIMITED

Designers & Manufacturers  
of Geophysical Instruments

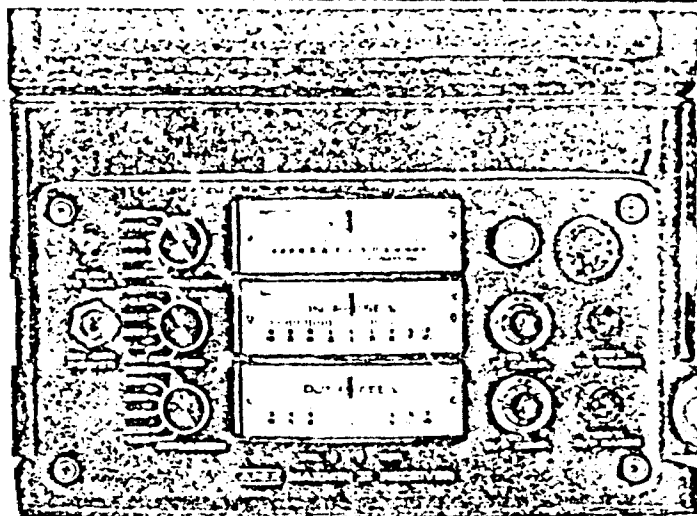
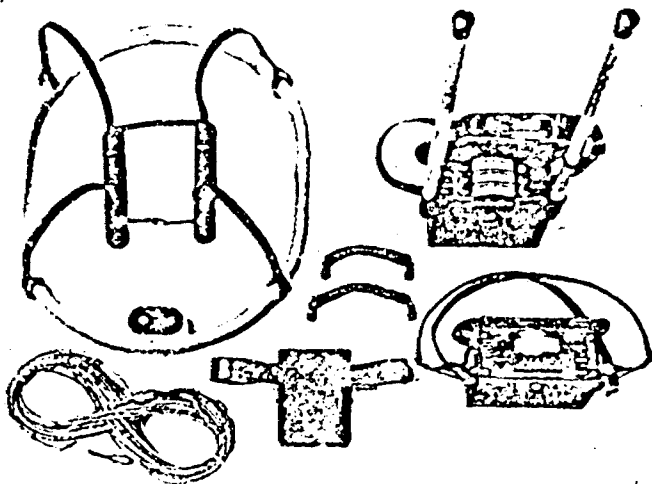
1745 Meyerside Drive, Unit 8  
Mississauga/Ontario/Canada  
L5T 1C5  
Tel: (416) 676-9580  
Cables: Geonics

# APEX

# MAXMIN II PORTABLE EM

- Five frequencies: 222, 444, 888, 1777 and 3555 Hz.
- Maximum coupled (horizontal-loop) operation with reference cable.
- Minimum coupled operation with reference cable.
- Vertical-loop operation without reference cable.
- Coil separations: 25, 50, 100, 150, 200 and 250 m (with cable) or 100, 200, 300, 400, 600 and 800 ft.
- Reliable data from depths of up to 180m (600 ft).
- Built-in voice communication circuitry with cable.
- Tilt meters to control coil orientation.





## SPECIFICATIONS :

**Frequencies:** 222, 444, 888, 1777 and 3555 Hz.

**Modes of Operation:** MAX: Transmitter coil plane and receiver coil plane horizontal (Max-coupled; Horizontal-loop mode). Used with refer. cable.

MIN: Transmitter coil plane horizontal and receiver coil plane vertical (Min-coupled mode). Used with reference cable.

V.L. : Transmitter coil plane vertical and receiver coil plane horizontal (Vertical-loop mode). Used without reference cable, in parallel lines.

**Coil Separations:** 25, 50, 100, 150, 200 & 250m. (MMI) or 100, 200, 300, 400, 600 and 800 ft. (MMIF). Coil separations in VL mode not restricted to fixed values.

**Parameters Read:** - In-Phase and Quadrature components of the secondary field in MAX and MIN modes.  
- Tilt-angle of the total field in VL mode.

**Readouts:** - Automatic, direct readout on 90mm (3.5") edgewise meters in MAX and MIN modes. No nulling or compensation necessary.  
- Tilt angle and null in 90mm edgewise meters in VL mode.

**Scale Ranges:** In-Phase: ±20%, ±100% by push-button switch.  
Quadrature: ±20%, ±100% by push-button switch.  
Tilt: ±75% slope.  
Null (VL): Sensitivity adjustable by separation switch.

**Readability:** In-Phase and Quadrature: 0.25% to 0.5% ; Tilt: 1%.

**Repeatability:** ±0.25% to ±1% normally, depending on conditions, frequencies and coil separation used.

**Transmitter Output:** 222Hz : 220 Atm<sup>2</sup>  
- 444Hz : 200 Atm<sup>2</sup>  
- 888Hz : 120 Atm<sup>2</sup>  
- 1777Hz : 60 Atm<sup>2</sup>  
- 3555Hz : 30 Atm<sup>2</sup>

**Receiver Batteries:** 9V trans. radio type batteries (4)  
Life: approx. 35hrs. continuous duty (alkaline, 0.5 Ah), less in cold weather.

**Transmitter Batteries:** 12V 6Ah Gel-type rechargeable battery. (Charger supplied)

**Reference Cable:** Light weight 2-conductor teflon cable for minimum friction. Unshielded. All reference cables optional at extra cost. Please specify.

**Voice Link:** Built-in intercom system for voice communication between receiver and transmitter operators in MAX and MIN modes, via reference cable.

**Indicator Lights:** Built-in signal and reference warning lights to indicate erroneous readings.

**Temperature Range:** -40°C to +60°C (-40°F to +140°F)

**Receiver Weight:** 6kg (13 lbs.)

**Transmitter Weight:** 13kg (29 lbs.)

**Shipping Weight:** Typically 60kg (135 lbs.), depending on quantities of reference cable and batteries included. Shipped in two field/shipping cases.

Specifications subject to change without notification.

# APEX

## PARAMETRICS LIMITED

200 STEELCASE RD. E., MARKHAM, ONT., CANADA, L3R 1G2

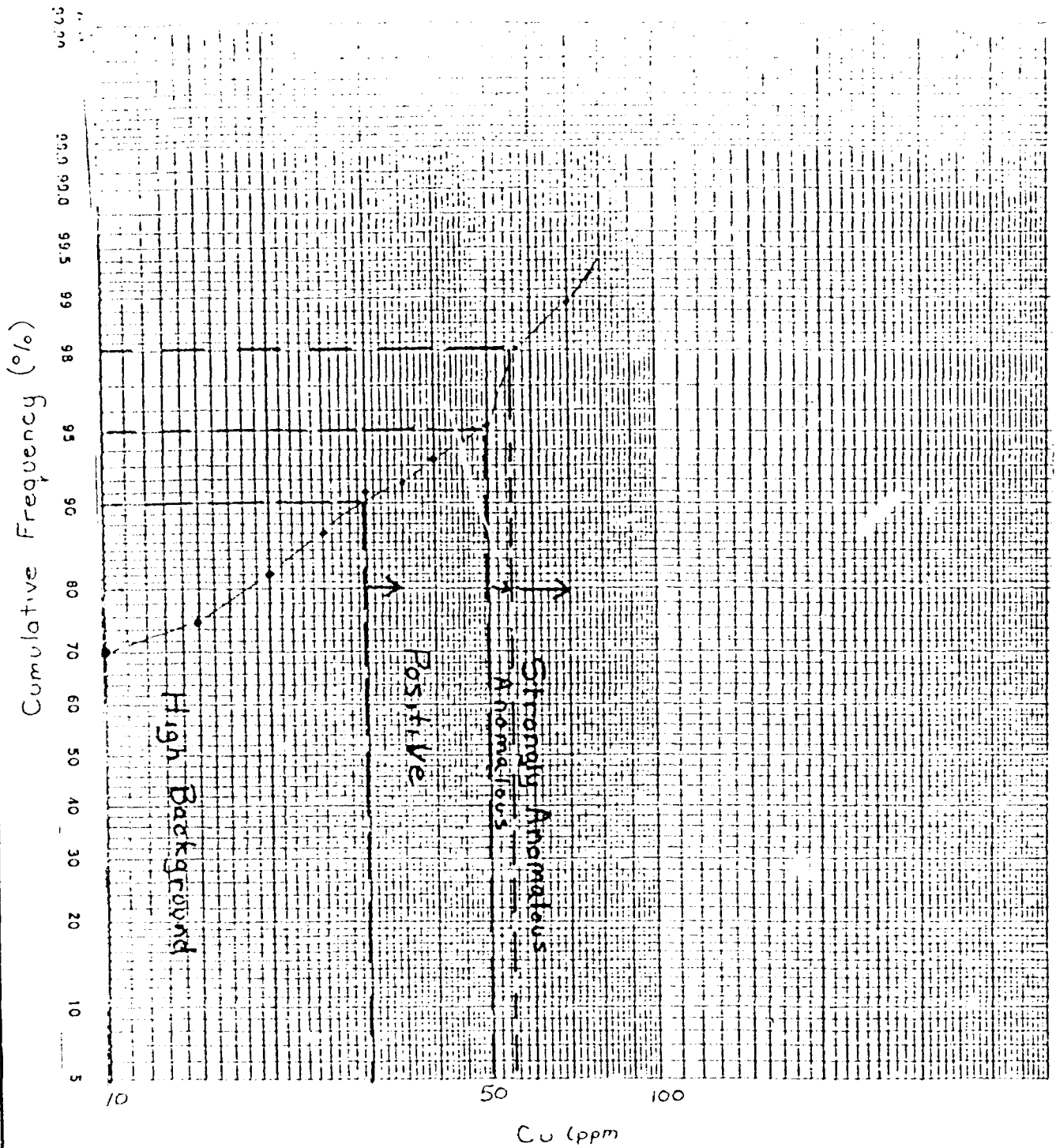
Phone: (416) 495-1612

Cables: APEXPARA TORONTO

Telex: 02 66672 APEX  
CALL OUR NEW TELEX NUMBER  
06-956775 APEXPARA MKHM

Appendix 3

Soil Geochemical Results

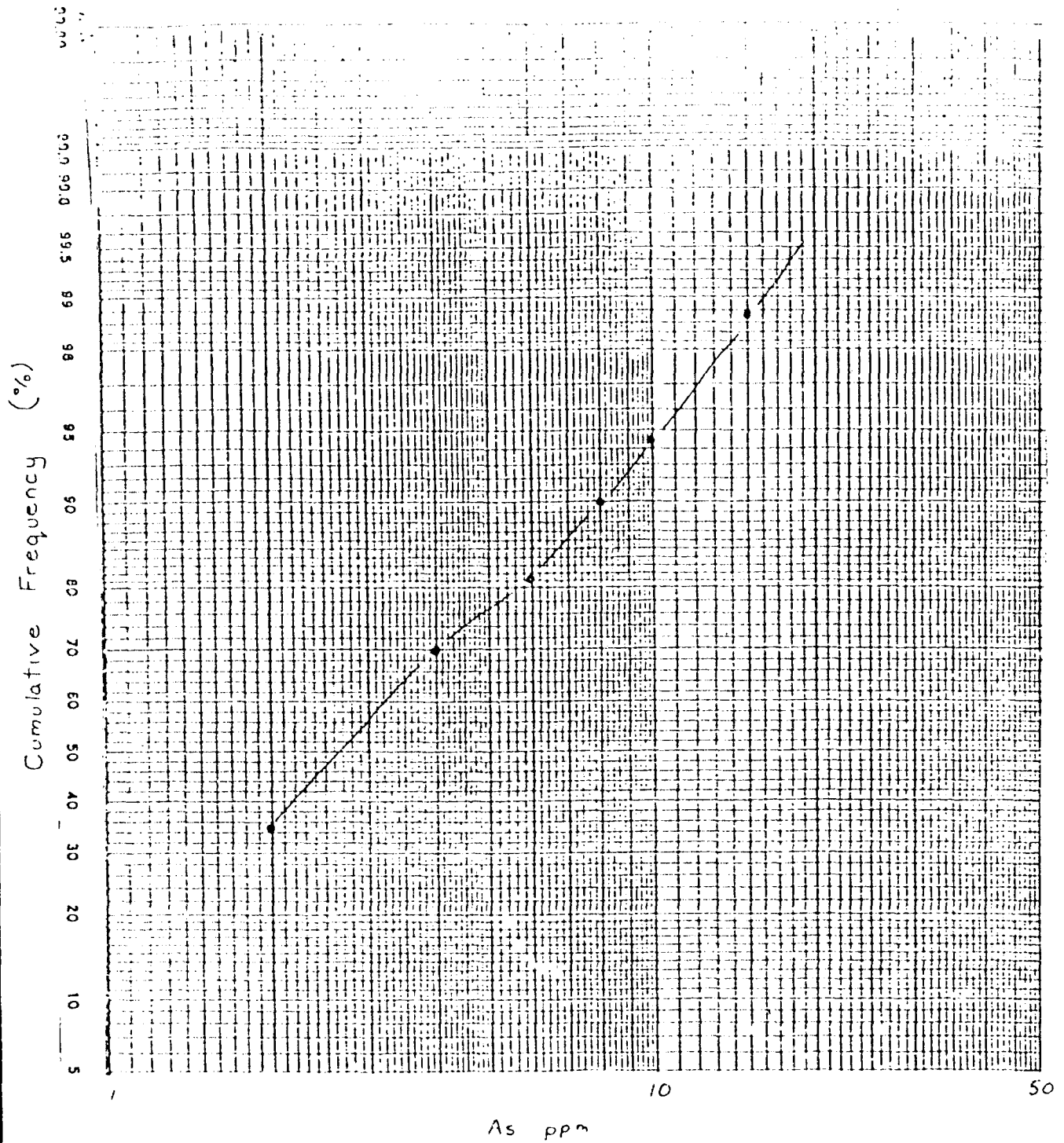



Westmin Resources Limited  
EASTERN CANADA MINING DIVISION

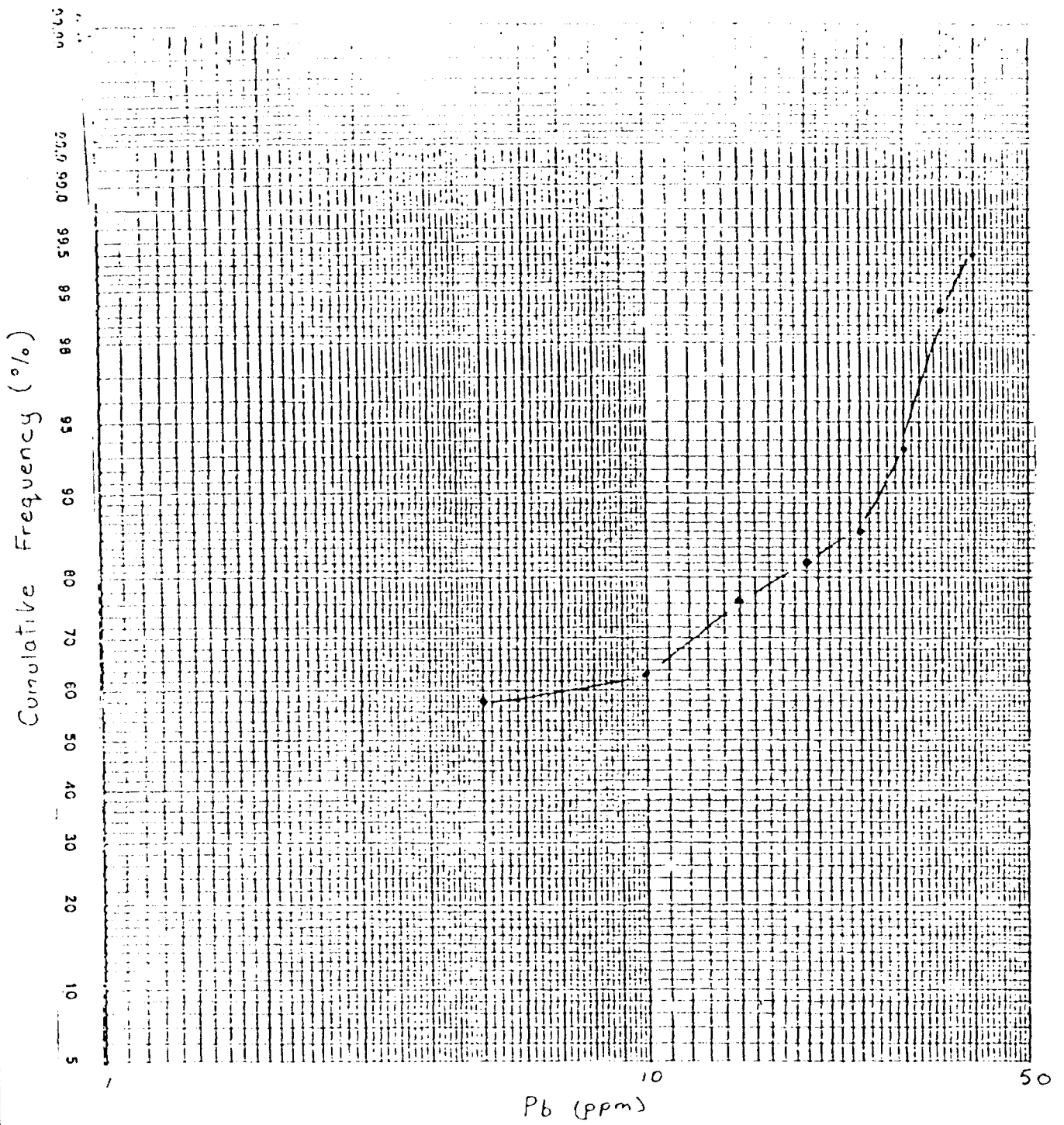
Jutten Claims  
Cumulative Frequency Plot  
Copper


Work by PRJN  
Date Oct 1985

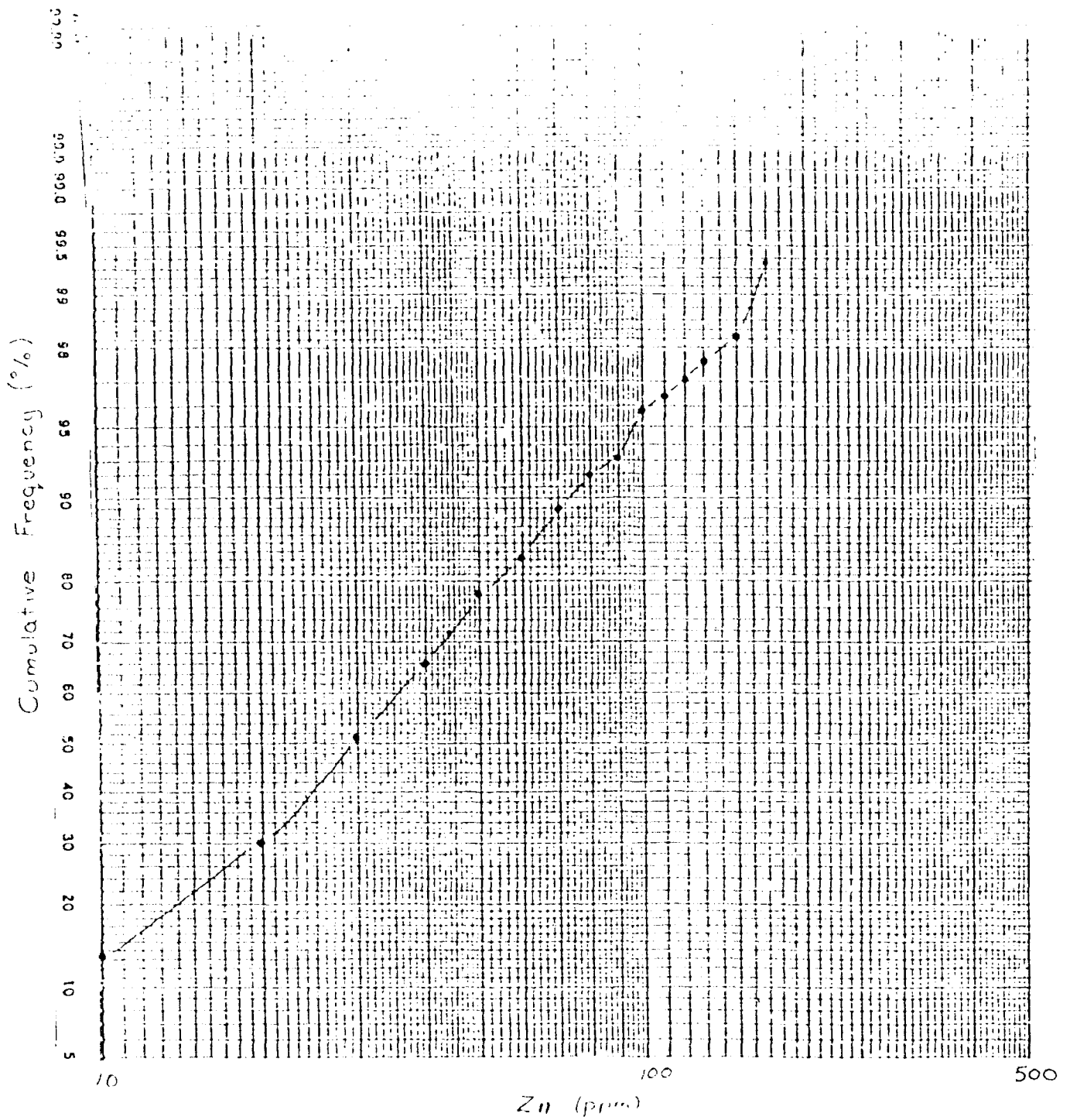
Scale  
NTS 52 J-7




 <b>Westmin Resources Limited</b> EASTERN CANADA MINING DIVISION	
Jutten Claims Cumulative Frequency Plot Arsenic	
Work by	PRJN
Date	Oct 1985
Scale	NTS 52 J-7



 <b>Westmin Resources Limited</b> EASTERN CANADA MINING DIVISION	
Jutten Claims Cumulative Frequency Plot Lead	
Work by	PRJN
Date	Oct 1985
Scale	NTS 52 J-7




**Westmin Resources Limited**  
 EASTERN CANADA MINING DIVISION  
 Jutten Claims  
 Cumulative Frequency Plot  
 Zinc  
 Work By PRJN      Scale  
 Date Oct 1985      NIS 52 J-7



# BARRINGER MAGENTA

504 CARLINGVIEW DRIVE  
REXDALE, ONTARIO  
M9W 5G2  
(416) 875-3870

3750 - 18TH STREET  
SUITE 105  
CALGARY, ALBERTA  
T2E 8V2  
(403) 278-9701

FILE: T5\_0508  
DATE: 09/09/85  
MATRIX: HUMUS

WESTMIN RESOURCES (R. MCHILLAN/P. NICHOLS)

PROJ: JUTTEN

WD NO: 85-0508

PAGE: 1

SAMPLE ID	CU PPM	ZN PPM	PR PPM	AG PPM	AU PPM	MO PPM	AS PPM	LDA %
J85-RP-0001	28	170	11	<.2	<3	1	.6	23.6
J85-RP-0002	54	110	20	<.2	<3	1	.9	54.8
J85-RP-0003	5	29	31	<.2	<3	1	1.7	81.7
J85-RP-0004	5	6	3	<.2	<3	1	.4	17.2
J85-RP-0005	4	9	<1	<.2	<3	1	2.8	5.94
J85-RP-0006	5	17	<1	<.2	<3	2	3.1	4.95
J85-RP-0007	3	8	<1	<.2	<3	1	.6	1.94
J85-RP-0008	6	11	13	<.2	<3	1	1.2	84.6
J85-RP-0009	6	71	27	<.2	<3	1	1.6	90.3
J85-RP-0010	5	49	33	<.2	<3	1	1.4	89.6
J85-RP-0011	13	28	6	<.2	<3	2	1.3	14.4
J85-RP-0012	5	42	25	<.2	<3	1	1.7	86.0
J85-RP-0013	5	20	<1	<.2	<3	3	2.1	3.96
J85-RP-0014	5	15	<1	<.2	<3	2	1.8	3.30
J85-RP-0015	6	24	<1	<.2	<3	3	3.4	4.18
J85-RP-0016	6	47	4	<.2	<3	3	5.1	7.23
J85-RP-0017	5	61	3	<.2	<3	2	2.4	5.18
J85-RP-0018	6	30	<1	<.2	<3	2	3.1	6.50
J85-RP-0019	8	16	<1	<.2	<3	1	4.3	3.11
J85-RP-0020	6	18	<1	<.2	<3	1	4.2	2.61
J85-RP-0021	17	39	<1	<.2	<3	1	6.1	5.44
J85-RP-0022	19	30	3	<.2	<3	1	2.8	6.02
J85-RP-0023	8	24	<1	<.2	<3	2	3.1	4.25
J85-RP-0024	7	24	<1	<.2	<3	1	32.0	5.56
J85-RP-0025	4	25	<1	<.2	<3	<1	1.7	2.81
J85-RP-0026	8	34	<1	<.2	<3	1	3.8	5.55
J85-RP-0027	8	40	<1	<.2	<3	2	3.8	4.83
J85-RP-0028	3	10	<1	<.2	<3	<1	.6	2.92
J85-RP-0029	7	24	<1	<.2	<3	<1	4.3	6.67
J85-RP-0030	5	18	<1	<.2	<3	<1	3.5	4.01
J85-RP-0031	14	41	8	<.2	<3	1	5.8	7.06
J85-RP-0032	17	54	20	<.2	<3	2	3.7	7.56
J85-RP-0033	17	36	8	<.2	<3	1	3.4	10.2
J85-RP-0034	22	41	7	<.2	<3	<1	7.2	6.08
J85-RP-0035	5	12	<1	<.2	<3	<1	.8	2.67
J85-RP-0037	7	26	3	<.2	<3	1	2.0	3.58
J85-RP-0038	3	15	<1	<.2	<3	<1	1.7	3.03
J85-RP-0039	10	33	<1	<.2	<3	4	5.9	6.55
J85-RP-0040	8	28	<1	<.2	<3	2	4.0	4.67
J85-RP-0041	22	41	3	<.2	<3	<1	8.0	4.64
J85-RP-0042	7	32	2	<.2	<3	1	5.4	6.12
J85-RP-0043	8	43	2	<.2	<3	1	6.3	6.12
J85-RP-0044	21	67	3	<.2	<3	<1	8.6	6.27
J85-RP-0045	5	37	<1	<.2	<3	1	1.9	7.09
J85-RP-0046	5	37	<1	<.2	<3	1	1.8	3.14

22

to PA

WESTMIN RESOURCES (R. McMILLAN/F. NICHOLS)

PROJ: JUTTEN

WO NO: 85-0508

PAGE: 2

SAMPLE ID	CU PPM	ZN PPM	FR PPM	AG PPM	AU PPM	MO PPM	AS PPM	LOA %
J85-RP-0047	7	64	<1	<.2	<3	<1	3.1	4.87
J85-RP-0048	8	67	4	<.2	<3	1	4.2	8.19
J85-RP-0049	25	77	3	<.2	<3	<1	5.5	9.48
J85-RP-0050	8	47	3	<.2	<3	<1	1.9	4.99
J85-RP-0051	38	27	11	<.2	<3	1	2.8	38.6
J85-RP-0052	8	10	20	<.2	<3	<1	.9	69.7
J85-RP-0053	18	22	6	<.2	<3	<1	1.3	35.9
J85-RP-0054	37	36	3	<.2	<3	<1	3.5	6.86
J85-RP-0055	8	21	<1	<.2	<3	<1	7.5	4.41
J85-RP-0056	14	28	<1	<.2	<3	1	14.3	74.4
J85-RP-0057	8	86	20	<.2	<3	<1	1.6	80.7
J85-RP-0058	8	27	7	<.2	<3	1	7.5	9.53
J85-RP-0059	6	46	12	<.2	<3	<1	.6	96.6
J85-RP-0060	6	44	31	<.2	<3	<1	1.4	90.9
J85-RP-0061	5	41	13	<.2	<3	<1	2.2	87.6
J85-RP-0062	6	47	15	<.2	<3	<1	3.2	87.3
J85-RP-0063	8	100	22	<.2	<3	1	13.2	84.9
J85-RP-0064	7	45	14	<.2	<3	<1	1.7	50.9
J85-RP-0065	7	47	32	<.2	<3	<1	2.7	85.4
J85-RP-0066	6	62	25	<.2	<3	<1	2.0	83.0
J85-RP-0067	7	55	35	<.2	<3	<1	1.7	76.8
J85-RP-0068	9	73	26	<.2	<3	1	1.3	69.2
J85-RP-0069	2	9	<1	<.2	<3	1	.7	2.45
J85-RP-0070	3	8	<1	<.2	<3	<1	1.1	3.79
J85-RP-0071	6	40	15	<.2	<3	<1	1.4	89.6
J85-RP-0072	5	57	27	<.2	<3	<1	1.0	93.0
J85-RP-0073	3	20	16	<.2	<3	<1	1.4	92.0
J85-RP-0074	5	28	22	<.2	<3	<1	1.7	92.1
J85-RP-0075	4	26	13	<.2	<3	<1	1.4	90.7
J85-RP-0076	33	130	26	<.2	<3	<1	2.8	86.5
J85-RP-0077	9	63	27	<.2	<3	<1	2.1	84.9
J85-RP-0078	19	48	4	<.2	<3	<1	2.7	29.8
J85-RP-0079	6	19	<1	<.2	45	<1	5.1	2.89
J85-RP-0080	51	48	30	<.2	<3	<1	3.8	77.9
J85-RP-0081	7	22	<1	<.2	<3	<1	2.7	2.72
J85-RP-0082	8	34	<1	<.2	<3	<1	4.7	3.82
J85-RP-0083	7	7	<1	<.2	<3	<1	2.9	2.53
J85-RP-0084	9	27	22	<.2	<3	<1	2.7	69.3
J85-RP-0085	6	36	35	<.2	<3	<1	2.7	72.3
J85-RP-0086	7	10	<1	<.2	<3	<1	3.3	3.43
J85-RP-0087	3	36	28	<.2	<3	<1	1.6	87.6
J85-RP-0088	4	9	<1	<.2	<3	<1	4.7	4.05
J85-RP-0089	8	12	<1	<.2	<3	1	6.7	4.48
J85-RP-0090	8	69	40	<.2	<3	1	2.1	71.7
J85-RP-0091	8	65	9	<.2	<3	1	2.9	44.2

23

WESTMIN RESOURCES (R. MCMILLAN/P. NICHOLS)

PROJ: JUTTEN

WO NO: 85-0506

PAGE: 3

24

SAMPLE ID	CU PPM	ZN PPM	PB PPM	AG PPM	AL PPM	MO PPM	AS PPM	LOA %
J85-RP-0092	5	12	<1	<.2	<3	<1	6.2	3.25
J85-RP-0093	2	10	<1	<.2	<3	<1	.5	1.68
J85-RP-0094	16	54	<1	<.2	<3	<1	8.3	2.62
J85-RP-0095	16	53	<1	<.2	<3	<1	8.0	3.57
J85-RP-0096	40	170	<1	<.7	<3	1	5.6	7.72
J85-RP-0097	8	47	<1	<.2	<3	<1	3.7	3.27
J85-RP-0098	<1	6	<1	<.2	<3	<1	.3	1.13
J85-RP-0099	54	99	5	<.2	<3	<1	5.8	12.4
J85-RP-0100	95	120	7	<.2	<3	1	10.4	16.1
J85-RP-0101	25	38	26	<.2	<3	<1	2.3	77.0
J85-RP-0102	8	23	<1	<.2	<3	<1	3.7	8.11
J85-RP-0103	27	22	14	<.2	<3	<1	1.0	78.1
J85-RP-0104	8	17	3	<.2	<3	<1	2.2	4.92
J85-RP-0105	15	14	<1	<.2	<3	<1	3.7	2.75
J85-RP-0106	45	37	<1	<.2	<3	<1	2.3	5.03
J85-RP-0107	11	28	20	<.2	<3	<1	7.2	52.1
J85-RP-0108	8	44	44	<.2	<3	<1	2.9	78.7
J85-RP-0109	28	85	11	<.2	<3	<1	1.7	8.44
J85-RP-0110	26	57	15	<.2	<3	1	4.0	45.1
J85-RP-0111	8	20	<1	<.2	<3	<1	3.3	4.07
J85-RP-0112	17	37	3	<.2	<3	<1	8.6	4.49
J85-RP-0113	17	58	8	<.2	<3	<1	8.3	7.01
J85-RP-0114	8	32	15	<.2	<3	<1	3.2	50.3
J85-RP-0115	4	6	<1	<.2	<3	<1	2.0	4.69
J85-RP-0116	3	10	<1	<.2	<3	<1	1.8	2.37
J85-RP-0117	8	31	26	<.2	<3	<1	1.8	81.8
J85-RP-0118	45	28	15	<.2	<3	<1	6.0	74.2
J85-RP-0119	7	28	22	<.2	<3	<1	4.6	49.2
J85-RP-0120	7	21	<1	<.2	<3	<1	6.7	4.27
J85-RP-0121	7	34	33	<.2	<3	<1	2.5	71.1
J85-RP-0122	4	12	<1	<.2	<3	<1	2.4	3.40
J85-RP-0123	8	19	3	<.2	<3	1	1.6	7.99
J85-RP-0124	8	14	<1	<.2	<3	<1	1.9	5.50
J85-RP-0125	69	21	17	<.2	<3	<1	2.7	84.2
J85-RP-0126	55	74	3	<.2	<3	<1	11.7	9.51
J85-RP-0127	15	51	19	<.2	<3	<1	2.3	86.1
J85-RP-0128	8	18	<1	<.2	<3	<1	2.5	43.6
J85-RP-0129	2	5	<1	<.2	<3	<1	.4	2.82
J85-RP-0130	4	9	<1	<.2	<3	<1	2.5	3.74
J85-RP-0131	21	35	<1	<.2	<3	<1	11.0	5.97
J85-RP-0132	30	22	7	<.2	<3	<1	6.5	8.90
J85-RP-0133	8	24	22	<.2	<3	<1	2.7	86.6
J85-RP-0134	5	32	27	<.2	<3	<1	1.7	88.6
J85-RP-0135	23	55	6	<.2	<3	1	1.6	29.8
J85-RP-0136	25	67	6	<.2	<3	<1	1.4	9.28

WESTMIN RESOURCES (R. MCMILLAN/P. NICHOLS)

PROJ: JUTTEN

WO NO: 85-0508

PAGE: 4

SAMPLE ID	CU PPM	ZN PPM	PB PPM	AG PPM	AU PPM	MO PPM	AS PPM	LDA %
J85-RP-0137	50	95	<1	<.2	<3	<1	7.5	7.86
J85-RP-0138	7	37	30	<.2	<3	<1	2.0	86.7
J85-RP-0139	15	30	17	<.2	<3	<1	2.0	44.8
J85-RP-0140	8	40	33	<.2	<3	<1	1.6	78.5
J85-RP-0141	4	10	<1	<.2	<3	<1	2.0	2.80
J85-RP-0142	4	8	<1	<.2	<3	<1	1.7	3.14
J85-RP-0143	8	29	<1	<.2	108	<1	6.7	4.82
J85-RP-0144	55	180	9	<.2	<3	<1	44.0	7.95
J85-RP-0145	4	23	<1	<.2	<3	<1	2.9	2.54
J85-RP-0146	4	20	<1	<.2	<3	<1	1.7	2.10
J85-RP-0147	3	12	<1	<.2	<3	<1	2.0	2.39
J85-RP-0148	4	9	<1	<.2	<3	<1	.4	2.40
J85-RP-0149	3	6	<1	<.2	<3	<1	.3	3.28
J85-RP-0150	103	95	3	<.2	<3	1	10.4	82.2
J85-RP-0151	17	150	29	1.0	<3	<1	6.5	6.18
J85-RP-0152	7	14	<1	<.2	<3	<1	5.6	2.77
J85-RP-0153	18	60	10	<.2	<3	<1	1.4	91.8
J85-RP-0154	4	12	<1	<.2	<3	<1	7.2	1.51
J85-RP-0155	9	39	<1	<.2	<3	<1	2.6	3.24
J85-RP-0156	20	40	<1	<.2	<3	<1	11.7	3.41
J85-RP-0157	14	30	10	<.2	<3	<1	3.0	62.2
J85-RP-0158	3	14	<1	<.2	<3	<1	1.2	2.53
J85-RP-0159	5	21	<1	<.2	<3	<1	2.3	2.88
J85-RP-0160	4	27	11	<.2	<3	<1	1.3	90.8
J85-RP-0161	6	14	<1	<.2	<3	<1	2.2	2.85
J85-RP-0162	4	11	<1	<.2	<3	<1	1.9	4.31
J85-RP-0163	2	10	<1	<.2	<3	<1	1.0	1.83
J85-PN-0001	6	14	<1	<.2	<3	<1	1.6	2.17
J85-PN-0002	9	78	4	<.2	<3	<1	4.8	13.0

25

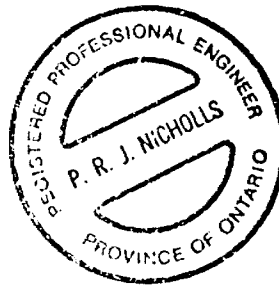
Certification

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 ten 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.

February 1986.

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





Ministry of Natural Resources

File \_\_\_\_\_

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, Geological, Geochemical  
Township or Area Jutten (G.2874)  
Claim Holder(s) Westmin Resources Limited  
Survey Company Westmin Resources Limited  
Author of Report P.R.J. Nicholls  
Address of Author 25 Adelaide St.E.#1400,  
Toronto, Ontario M5C 1Y2  
Covering Dates of Survey 14 Feb 1985-5 Aug. 1985  
(linecutting to office)  
Total ~~KMS~~ of Line Cut 18.81 km

MINING CLAIMS TRAVERSE  
List numerically

(prefix)	(number)
Pa	829711
Pa	829712
Pa	829713
Pa	829714
Pa	829715
Pa	829716
Pa	829929
Pa	829933
Pa	829937



If space insufficient, attach list

52J075E0205 52J075E0040 EVANS LAKE

SPECIAL PROVISIONS  
CREDITS REQUESTED

		DAYS per claim.
ENTER 40 days (includes line cutting) for first survey.	VLF - Electromagnetic	20
	- Magnetometer	40
	- Radiometric	-
ENTER 20 days for each additional survey using same grid.	Max-Min Other	20
	Geological	20
	Geochemical	-

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

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

DATE: 14 Feb. 1986 SIGNATURE: P.R.J. Nicholls  
Author of Report or Agent

Res. Geol. \_\_\_\_\_ Qualifications 2.5610

Previous Surveys

File No.	Type	Date	Claim Holder

TOTAL CLAIMS 9

OFFICE USE ONLY

**GEOPHYSICAL TECHNICAL DATA**

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

		VLF	Max-Min	Mag.
Number of Stations	666	Number of Readings	1,332 2,456	655
Station interval	25 m	Line spacing	100 m	
Profile scale	1cm = 5%			
Contour interval	59,500 γ to 59,900 γ (100 γ)			

**MAGNETIC**

Instrument EDA PPM 300 & 400 Field Magnetometer

Accuracy – Scale constant 0.2 gammas

Diurnal correction method Linear interpretation algorithm

Base Station check-in interval (hours) 20 sec

Base Station location and value Wild Wood Camp, Savant Lake  
Lat. 56°25'N, Long. 90°34'W, value 59,800 gammas

**ELECTROMAGNETIC**

Instrument	<u>Apex Parametrics Max-Min II</u>	<u>Geonics EM-16</u>
Coil configuration	<u>Horizontal</u>	<u>N/A</u>
Coil separation	<u>100 m</u>	<u>N/A</u>
Accuracy	<u>+ 0.5%</u>	<u>N/A</u>
Method:	<input type="checkbox"/> Fixed transmitter	<input type="checkbox"/> Shoot back
	<input checked="" type="checkbox"/> in line	<input type="checkbox"/> Parallel line
Frequency	<u>444 Hz &amp; 1777 Hz</u>	<u>Seattle, Washington</u>
Parameters measured	(specify V.L.F. station) <u>In phase and Quadrature</u>	

**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 \_\_\_\_\_

**GEOCHEMICAL SURVEY - PROCEDURE RECORD**

Numbers of claims from which samples taken Pa 829712, Pa 829714  
Pa 829715, Pa 829933

Total Number of Samples 164  
 Type of Sample Soil, Humus  
(Nature of Material)  
 Average Sample Weight 250 grams  
 Method of Collection Grubhoe  
 Soil Horizon Sampled A and/or B  
 Horizon Development \_\_\_\_\_  
 Sample Depth 10-30 cm  
 Terrain Flat  
 Drainage Development Poor

Estimated Range of Overburden Thickness 0-15 metres

**SAMPLE PREPARATION**

(Includes drying, screening, crushing, ashing)

Mesh size of fraction used for analysis \_\_\_\_\_  
 Humus: to -40 mesh  
 Soil: to -80 mesh

General \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**ANALYTICAL METHODS**

Values expressed in: per cent   
 p. p. m.   
 p. p. b.

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

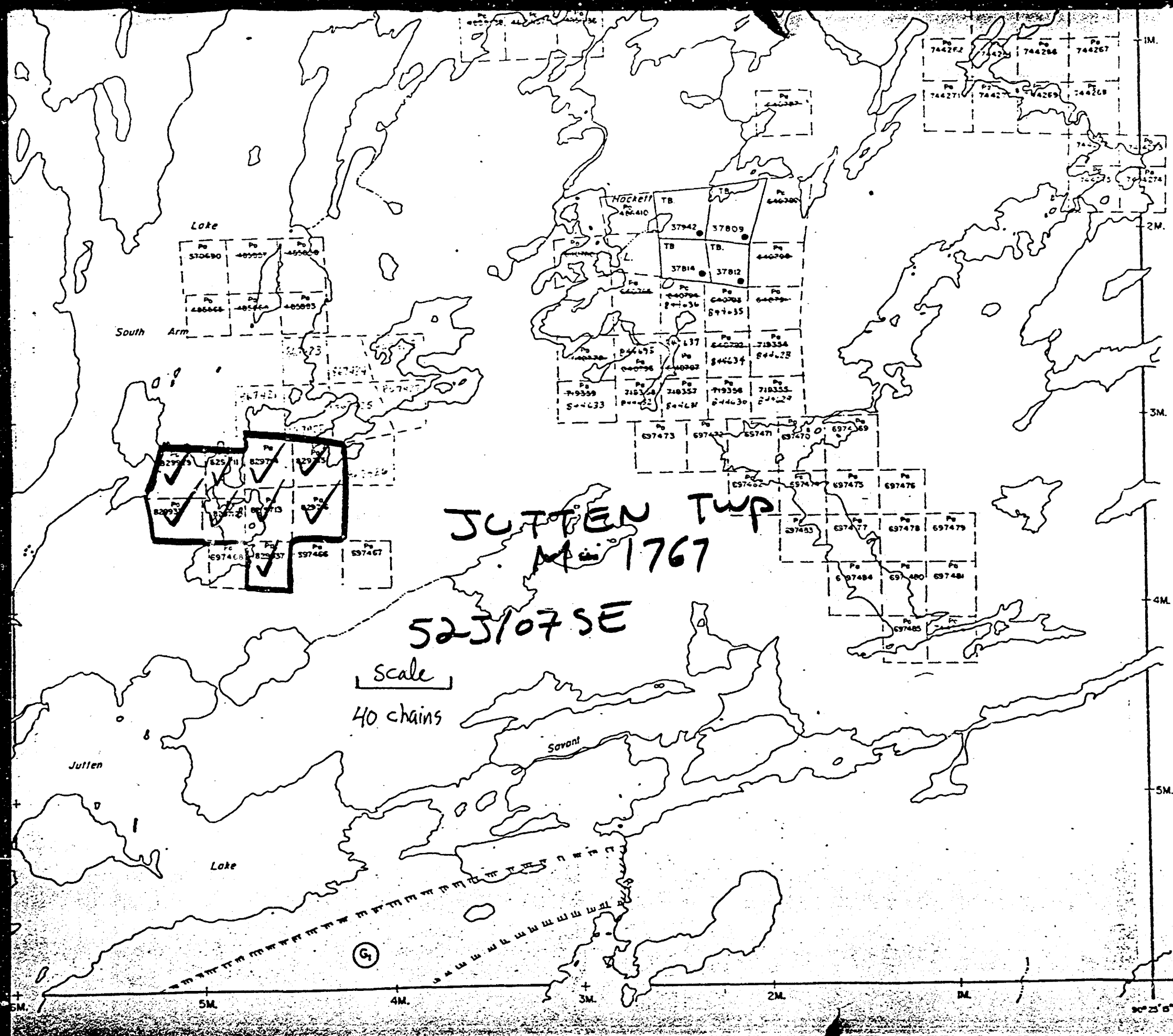
Others Au  
 Field Analysis (\_\_\_\_\_ tests)  
 Extraction Method \_\_\_\_\_  
 Analytical Method \_\_\_\_\_  
 Reagents Used \_\_\_\_\_

Field Laboratory Analysis  
 No. (\_\_\_\_\_ tests)  
 Extraction Method \_\_\_\_\_  
 Analytical Method \_\_\_\_\_  
 Reagents Used \_\_\_\_\_

Commercial Laboratory (1,148 tests)  
 Name of Laboratory Barringer Magenta  
 Extraction Method \_\_\_\_\_  
 Analytical Method Atomic Absorption  
 Reagents Used Aqua regia (HNO<sub>3</sub>/HCl)

General \_\_\_\_\_  
 \_\_\_\_\_  
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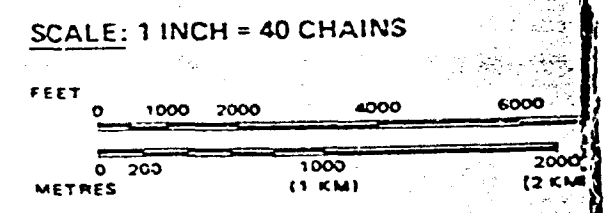
SMYE TWP. M-1893

- SUBDIVISION OR COMPOSITE PLAN
- RESERVATIONS
- ORIGINAL SHORELINE
- MARSH OR MUSKEG
- MINES
- TRAVERSE MONUMENT

**DISPOSITION OF CROWN LANDS**

- TYPE OF DOCUMENT**
- PATENT, SURFACE & MINING RIGHTS
  - " SURFACE RIGHTS ONLY
  - " MINING RIGHTS ONLY
  - LEASE, SURFACE & MINING RIGHTS
  - " SURFACE RIGHTS ONLY
  - " MINING RIGHTS ONLY
  - LICENCE OF OCCUPATION
  - ORDER-IN-COUNCIL
  - RESERVATION
  - CANCELLED
  - SAND & GRAVEL

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO 1913, VESTED IN ORIGINAL PATENTEE BY LANDS ACT, R.S.O. 1970, CHAP. 380, SEC. 63



TOWNSHIP

**JUTTEN**

M.N.R. ADMINISTRATIVE DISTRICT

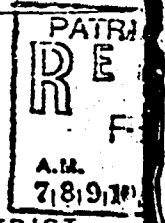
**SIoux LOOKOUT**

MINING DIVISION

**PATRICIA**

LAND TITLES / REGISTRY DIVISION

**THUNDER BAY**





Ministry of  
Natural  
Resources  
Ontario

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

# 86-16 78708

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.

Mar. 5

*R. Pichette*

**Mining Act**

Type of Survey(s) <b>Geophysical and Geological</b>		Township or Area <b>Jutten</b>
Claim Holder(s) <b>Westmin Resources Limited</b>		Prospector's Licence No. <b>G-2874</b> <b>T-778</b>
Address <b>25 Adelaide Street East, Suite 1400, Toronto, Ontario M5C 1Y2</b>		
Survey Company <b>Westmin Resources Limited</b>	Date of Survey (from & to) 14 Day   2 Mo.   85 Yr.   5 Day   8 Mo.   85 Yr.	Total Miles of line cut <b>14.45 Miles</b> <b>23.256 km</b>
Name and Address of Author (of Geo-Technical report) <b>P.R.J. Nicholls, 25 Adelaide St.E., #1400, Toronto, Ontario M5C 1Y2</b>		

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)	VLF-EM - Electromagnetic	20
	- Magnetometer	40
	- Radiometric	
	- Other Max-Min	20
	Geological	20
For each additional survey: using the same grid: Enter 20 days (for each)	Geochemical	
	Geophysical	Days per Claim
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
Man Days Complete reverse side and enter total(s) here	- 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			Mining Claim		
Prefix	Number	Expend. Days Cr.	Prefix	Number	Expend. Days Cr.
Pa	829711				
	829712				
	829713				
	829714				
	829715				
	829716				
	829929				
	829933				
	829937				

PATRICIA M. 33 DIV  
**RECEIVED**  
JAN 14 1986  
A.M. 7:30 | 10:11 | 12:11 | 2:31 | 4:56  
P.M.

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

Pa. 829711

For Office Use Only		
Total Days Cr. Recorded	Date Recorded	Mining Recorder
900	JAN. 14, 1986	<i>Joe Sporens</i>
	Date Approved as Recorded	Branch Director
	<i>See Revised Statement</i>	

Date	Recorded Holder or Agent (Signature)
9 January 1986	<i>Thompson</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



Ministry of Natural Resources

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

# 86-17

- 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.

R. Prévitt

Mining Act

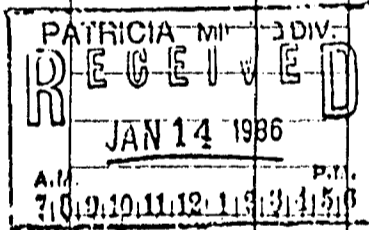
22708

may

Form header containing: Type of Survey(s) Geochemical, Claim Holder(s) Westmin Resources Limited, Address 25 Adelaide St. East, Suite 1400, Toronto, Ontario M5C 1Y2, Survey Company Westmin Resources Limited, Date of Survey (from & to) 31 7 85 to 5 8 85, Total Miles of Line Cr. 14.45 Miles, Name and Address of Author (of Geo-Technical report) P.R.J. Nicholls, 25 Adelaide St. E., Suite 1400, Toronto, Ont. M5C 1Y2

Table for Credits Requested per Each Claim in Columns at right. Includes sections for Special Provisions, Man Days, and Airborne Credits with sub-categories for Geophysical, Geological, and Geochemical.

Table for Mining Claims Traversed (List in numerical sequence). Columns include Mining Claim Prefix, Number, and Expend. Days Cr. Contains entries for claims Pa 829712, 829714, 829715, and 829933.



Form section for Expenditures (excludes power tripping). Includes Type of Work Performed (Geochemical Analysis SECTION 77-19), Performed on Claim(s) (Pa 829712, Pa 829714, Pa 829715, Pa 829933), and Calculation of Expenditure Days Credits (\$ 2,409 + 15 = 160.60 (1.61)).

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

Form section for For Office Use Only. Includes Total Days Cr. Recorded (201), Date Recorded (JAN. 14, 1986), Mining Recorder signature, and Date Approved as Recorded (10.3.86).

Form section for Certification Verifying Report of Work. Includes Date (9 January 1986) and Recorded Holder or Agent (Signature) (P.R.J. Nicholls).

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, #1400, Toronto, Ontario M5C1Y2

Form section for Date Certified (9 Jan. 1986) and Certified by (Signature) (P.R.J. Nicholls).



Ministry of  
Northern Development  
and Mines

Technical Assessment  
Work Credits

File

2,8908

Date

1986.02.28

Mining Recorder's Report of  
Work No.

86-16

Recorded Holder

WESTMIN RESOURCES LIMITED

Township or Area

JUTTEN TOWNSHIP

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical	PA 829711 to 716 inclusive 829929-33-37
VLF Electromagnetic _____ 20 _____ days	
Magnetometer _____ 40 _____ days	
Radiometric _____ days	
Induced polarization _____ days	
MAX-MIN	
Other _____ 20 _____ days	
Section 77 (19) See "Mining Claims Assessed" column	
Geological _____ 16 _____ 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.	

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

The Mining Recorder may reduce the above credits if necessary in order that the total number of approved assessment days recorded on each claim does not exceed the maximum allowed as follows: Geophysical - 80; Geological - 40; Geochemical - 40; Section 77(19) - 60.

## Assessment Work Breakdown

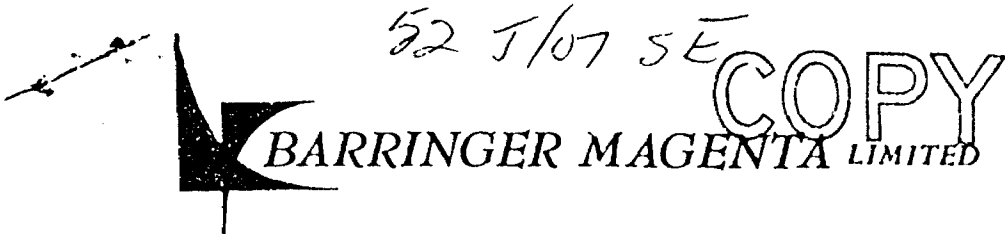
Well Days are based on eight (8) hour Technical or Line-cutting days. Technical days include work performed by consultants, draftsmen, etc..

Type of Survey <span style="float: right;">Geochemical sampling</span>												
Technical Days	X	7	=	Technical Days Credits	+	Line-cutting Days	=	Total Credits	+	No. of Claims	=	Days per Claim
6				42				42		4		10

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

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

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



304 CARLINGVIEW DRIVE  
 METROPOLITAN TORONTO  
 REXDALE, ONTARIO  
 CANADA M9W 5G2  
 PHONE: 416-675-3870  
 TELEX: 06-989183

SERVICES FOR THE EARTH AND ENVIRONMENTAL SCIENCES

DATE: September 30, 1985

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

PROJECT: 100.41

PERIOD COVERED:

SALES ORDER:  
 PROGRESS BILLING:  
 SHIPPING REPORT:  
 WORK REPORT: 85-508  
 FED. SALES TAX: N/A  
 ONT. SALES TAX: N/A

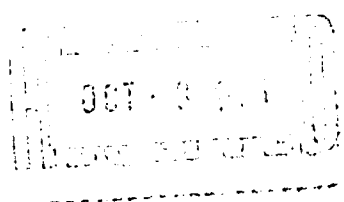
TERMS: NET 30 days

AUTHORITY: Proj. JUTTEN R. McMillan / P. Nichols

TO: ANALYSIS

164	Humus & Soil Samples		
99	Prep - Drying & Blending		
	Au, Ag, As, Cu, Zn, Pb, Mo	\$13.50	\$1,336.50 ✓
65	Prep - Drying & Blending		
	Au, Ag, As, Cu, Zn, Pb, Mo, LOA	16.50	<u>1,072.50</u>
TOTAL INVOICE			✓ <u><u>\$2,409.00</u></u>

BASE METALS



BMGEN (JUTTEN) 335 2409 00

PL 55

PRJN

R 2409 00

INVOICE NO 12137



Westmin Resources Limited  
Toronto, Ontario

CONTROL NO. 2664

TO THE BANK OF MONTREAL  
MAIN BRANCH  
VANCOUVER, B.C.

WESTMIN RESOURCES LTD. \$2,409 and 00cts

DATE October 31, 1985

PAY TO THE ORDER OF

BARRINGER MAGENTA LIMITED  
304 Carlingview Drive  
Rexdale, Ontario  
M9W 5G2

AMOUNT \$ 2,409.00  
Westmin Resources Limited

*[Signature]*  
*[Signature]*

⑆00040⑆00⑆⑆⑆

⑆09⑆⑆⑆⑆⑆⑆⑆⑆⑆

⑆0000240900⑆

COPY

19031

BANK OF MONTREAL  
VANCOUVER BRANCH  
1000-1000  
VANCOUVER, B.C. V6C 1K5

CCO-20000

504-1000

BARRINGER MAGENTA LIMITED

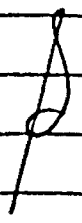
FOR DEPOSIT ONLY  
TO THE CREDIT OF

2.8908

YLF mm m GL

#

82911	✓	✓	✓	1/2	82912	✓				
12	✓	✓	✓	3/4	14	✓				
13	✓	✓	✓	1/4	15	✓				
14	✓	✓	✓	✓	829933	✓				
15	✓	✓	✓	1/4						
16	✓	✓	✓	✓						
829929	✓	✓	✓	1/4						
33	✓	✓	✓	✓						
37	✓	✓	✓	✓						
				RNC						
GL										
20 x 9 = 180										
180 ÷ 11 = 16										







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

Ressources Westmin Limitée  
Bureau 1400, 25, rue Adelaide est  
Toronto (Ontario), Canada  
M5C 1Y2  
(416) 364-8116 Telex n° 06-22072

Registered Mail

February 17, 1986.

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

**RECEIVED**

FEB 19 1986

**MINING LANDS SECTION**

Dear Sirs:

Please find enclosed in duplicate the Report on Geophysics, Geochemistry and Geological Mapping completed 1985, Jutten Project, by P. R. J. Nicholls.

Also is enclosed a form Technical Data Statement, copies of the form Report of Work submitted to the Mining Recorder in Sioux Lookout, and copies of the invoices and cancelled cheque paid to Barringer Magenta for the analysis.

I hope you will find everything in order.

Yours truly,

WESTMIN RESOURCES LIMITED

(Mrs.) S. Kuprejanov,  
Administrative Geologist.

SK/hmc  
Encls.



Ontario

Ministry of  
Northern Development  
and Mines

Notice of Intent  
for Technical Reports

February 28, 1986

2.8908/86-16

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 the 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 directly 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.



Ontario

*Mar. 17/86*

Ministry of  
Northern Development  
and Mines

February 28, 1986

Your File: 86-16  
Our File: 2.8908

Mining Recorder  
Ministry of Northern Development and Mines  
P.O. Box 309  
Sioux Lookout, Ontario  
POV 2T0

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

Mining Lands Section  
Whitney Block, 6th Floor  
Queen's Park  
Toronto, Ontario  
M7A 1W3

SH/mc

Encls.

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

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



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

Ressources Westmin Limitée  
Bureau 1400, 25, rue Adelaide est  
Toronto (Ontario), Canada  
M5C 1Y2  
(416) 364 8116 Telex: 06 22072

March 12, 1986.

Mr. R. J. Pichette,  
Land Management Branch,  
Whitney Block, 6th Floor,  
Queen's Park,  
Toronto, Ontario.  
M7A 1W3.

Dear Mr. Pichette: Re: Your File 2.8908

We are in receipt of your letter dated 28 February 1986 with the Notice of Intent and approved geophysical and geological work applied for Claims Pa.829711 to 829716 inclusive, Pa.829929, 829933 and 829937. We have however not received acknowledgement of approval for the geochemical work that was filed as part of the same report.

Thank you for your attention to this matter.

Yours truly,

WESTMIN RESOURCES LIMITED

A handwritten signature in cursive script, appearing to read "S. Kuprejanov".

(Mrs.) S. Kuprejanov,  
Administrative Geologist.

SK/hmc

March 21, 1986

Your File: 86-16  
Our File: 2.8908

Mining Recorder  
Ministry of Northern Development and Mines  
P.O. Box 309  
Sioux Lookout, Ontario  
POV 2T0

Dear Sir:

RE: Notice of Intent dated February 28, 1986  
Geophysical (Dlectromagnetic, Magnetometer  
and VLF) and Geological Surveys on Mining  
Claims PA 829711, et al, in Jutten Township

---

The assessment work credits, as listed with the  
above-mentioned Notice of Intent, have been approved  
as of the above date.

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

Yours sincerely,

J.C. Smith, Supervisor  
Mining Lands Section

Whitney Block, 6th Floor  
Queen's Park  
Toronto, Ontario  
M7A 1W3

Telephone: (416) 965-4888

SH/mc

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

Mr. B.H. Ferguson  
Mining & Lands Commissioner  
Toronto, Ontario

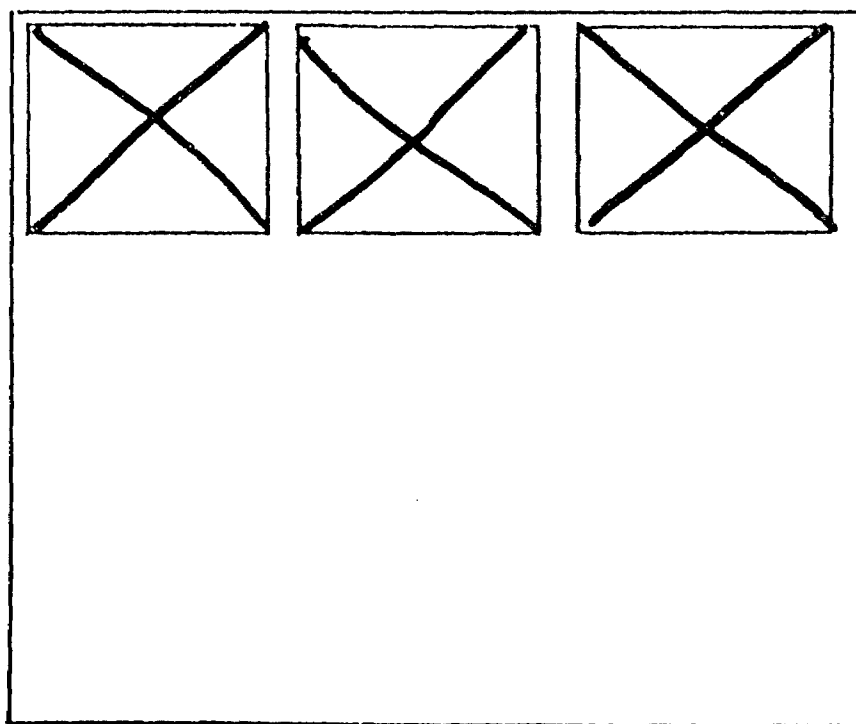
Resident Geologist  
Sioux Lookout, Ontario

Encl.

SEE ACCOMPANYING  
MAP(S) IDENTIFIED AS

52J107SE-0040 #1-3

LOCATED IN THE MAP  
CHANNEL IN THE FOLLOWING  
SEQUENCE (x)

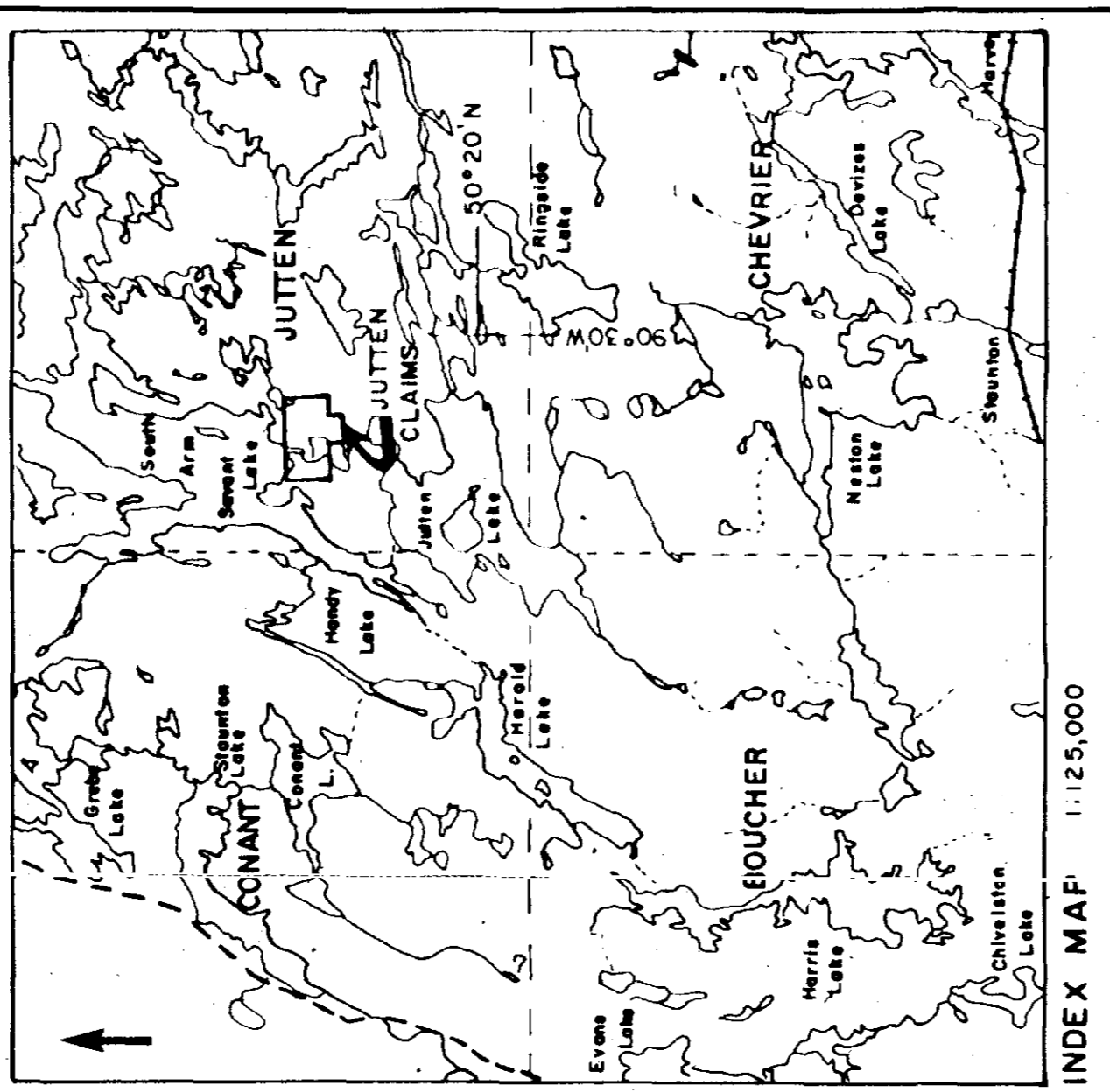
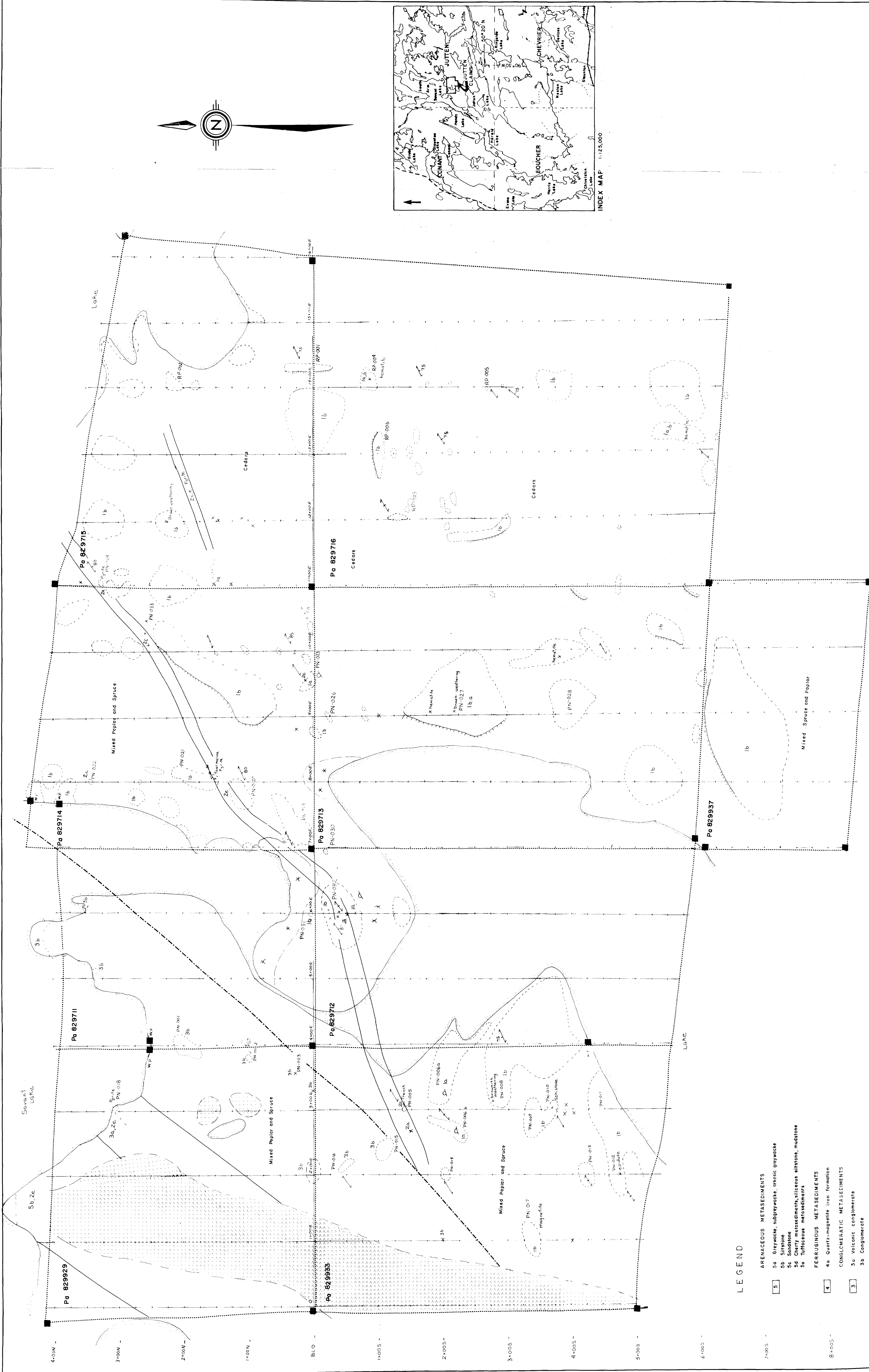


FOR ADDITIONAL

INFORMATION

SEE MAPS:

52J/07SE-0040 #4-7



**LEGEND**

- [ 3 ] ARENACEOUS METASEDIMENTS
  - 5a Greywacke, subgreywacke, arkosic greywacke
  - 5b Siltstone
  - 5c Sandstone
  - 5d Cherty metasediments, siliceous siltstone, mudstone
  - 5e Turfaceous metasediments
- [ 4 ] FERROUGINOUS METASEDIMENTS
  - 4a Quartz-magnetite iron formation
- [ 3 ] CONGLOMERATIC METASEDIMENTS
  - 3a Volcanic conglomerate
  - 3b Conglomerate
- [ 2 ] FELSIC TO INTERMEDIATE METAVOLCANICS
  - 2a Quartz-bericite schist
  - 2b Basaltic to andesitic metavolcanics
  - 2c Quartz-feldspar porphyry, quartz porphyry
  - 2d Feldspar porphyry
  - 2e Tuff
- [ 1 ] INTERMEDIATE TO MAFIC METAVOLCANICS
  - 1a Pillow lavas
  - 1b Fine to medium-grained flows, derived amphibolites
  - 1c Medium to coarse-grained flows, derived amphibolites
  - 1d Porphyritic (feldspar) flows
- [ 22 ] ESKER
- [ 23 ] SWAMP

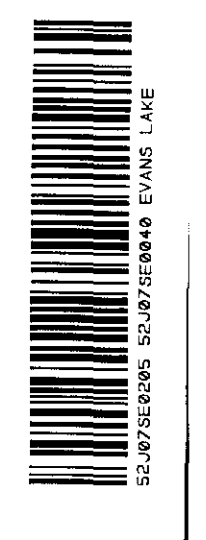
**Westmin Resources Limited**  
 P. B. HADFIELD  
 PROFESSIONAL ENGINEER  
 PROVINCE OF ALBERTA

JUTTEN PROJECT  
 GEOLOGICAL SURVEY 18908

Work by: P. H. H.  
 Date: March 1985  
 Scale: 1:2,000  
 N.T.S. 82-J-7

*Paul H. Hadfield*

52 J/07 SE - 0040 #1





4+005 -

3+005 -

2+005 -

1+005 -

BLO -

1+005 -

2+005 -

3+005 -

4+005 -

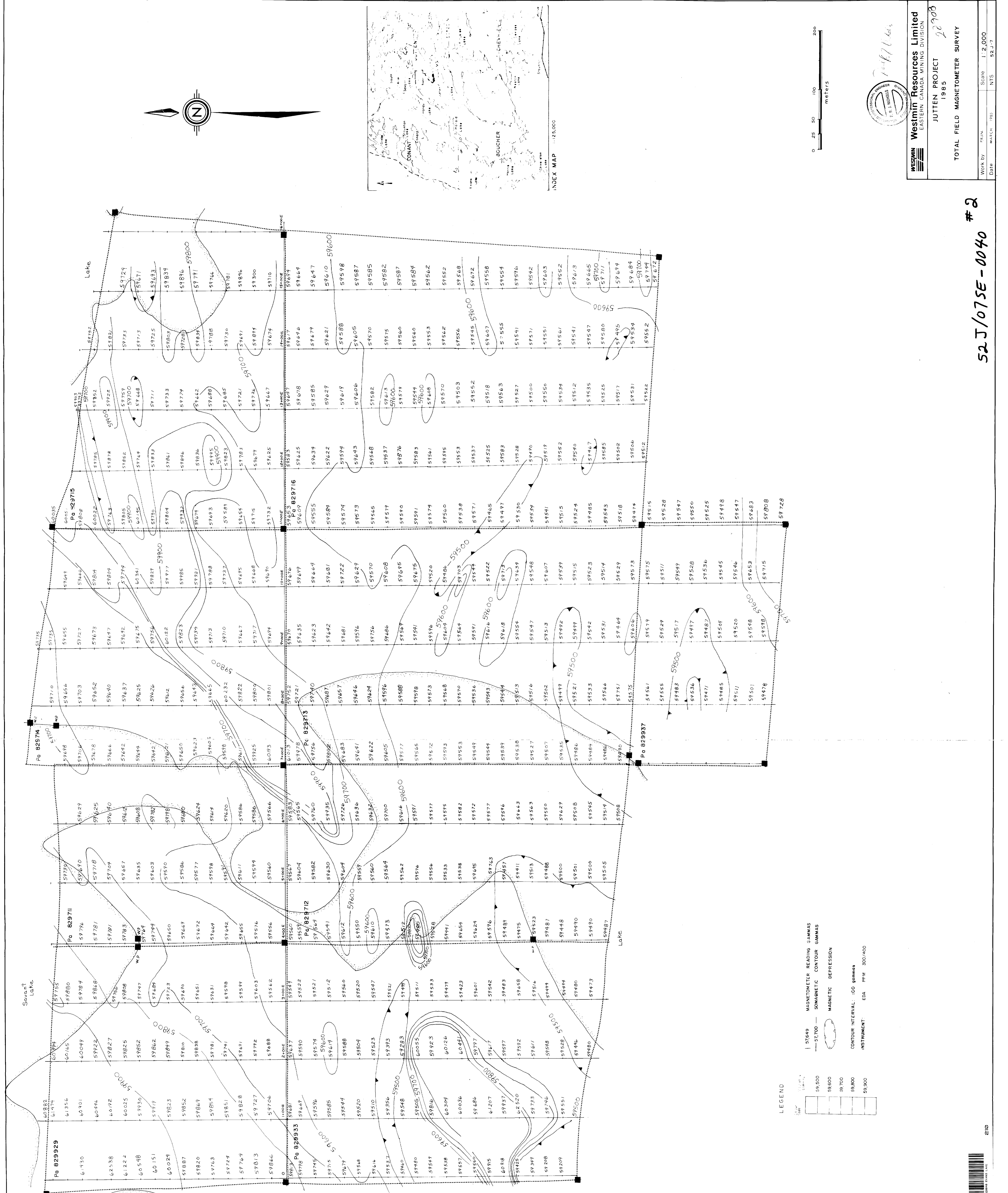
5+005 -

6+005 -

7+005 -

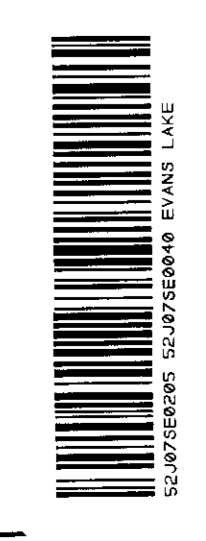
8+005 -

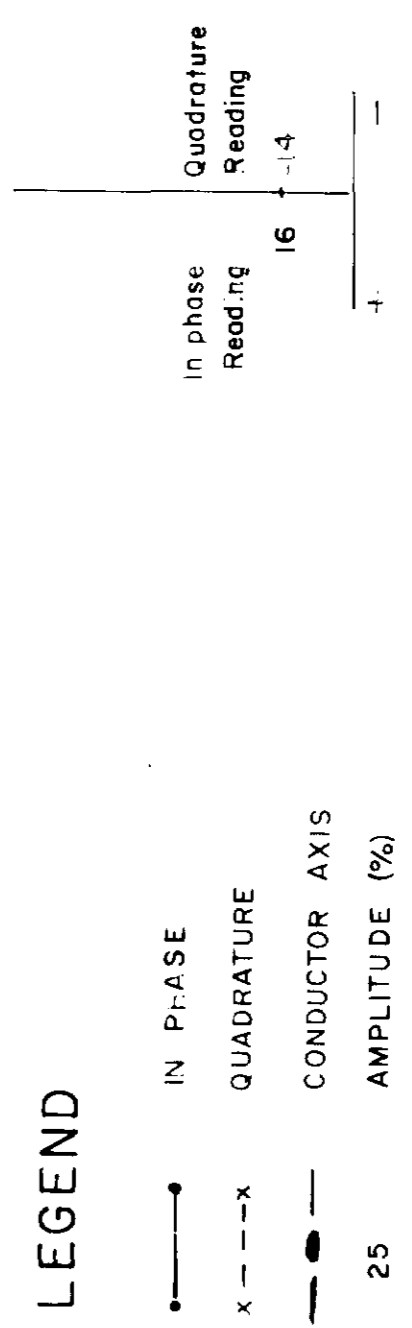
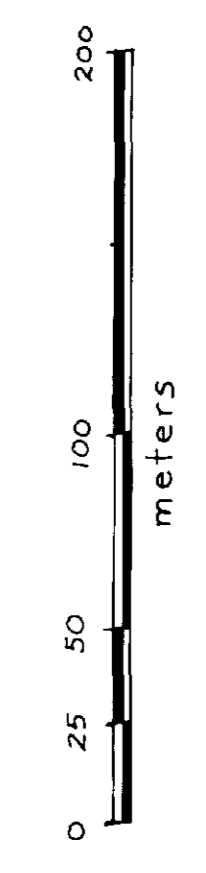
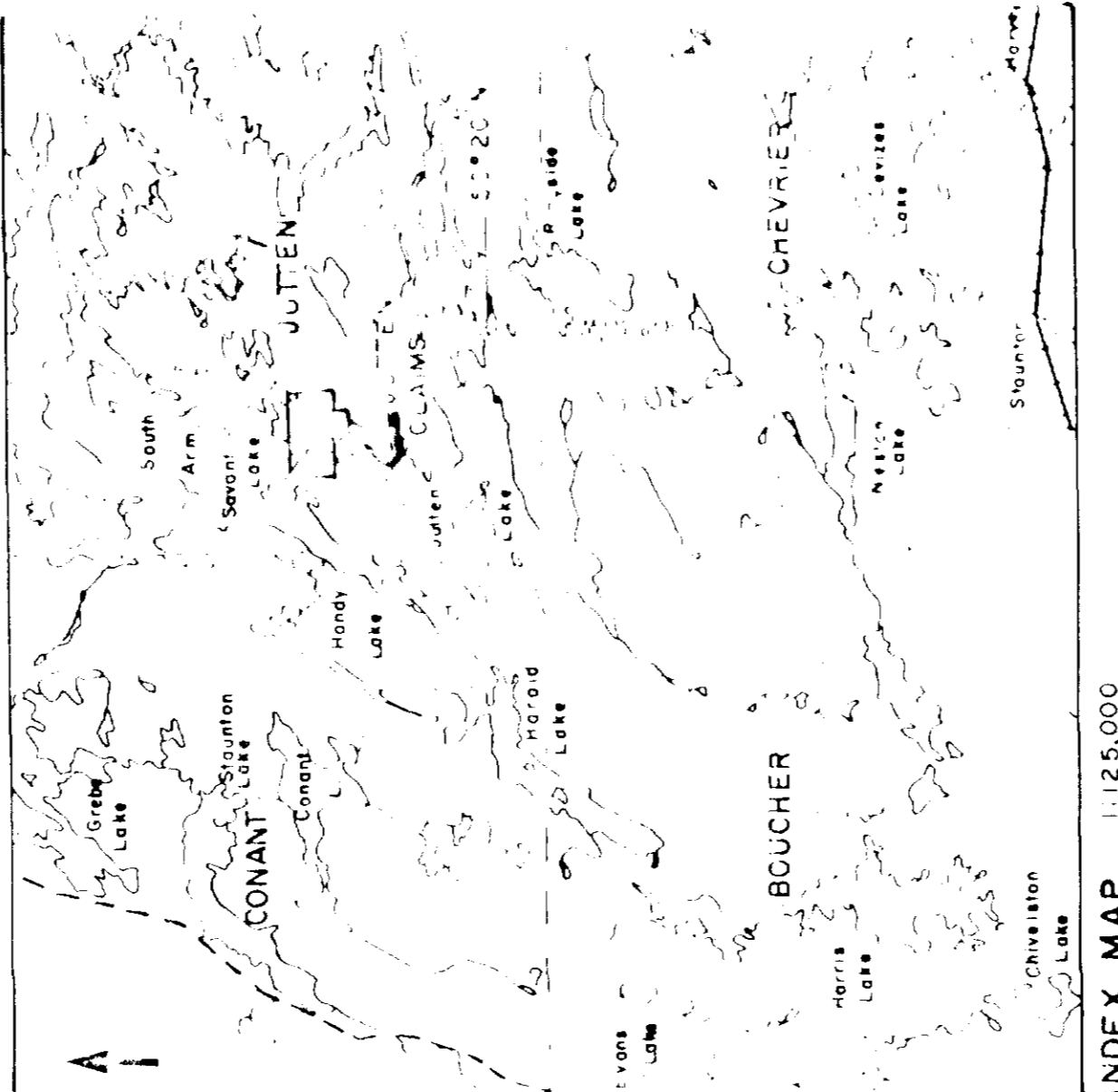
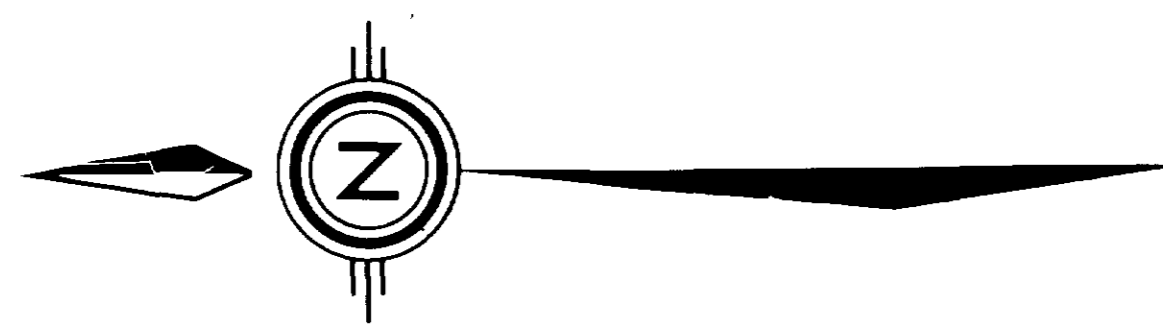
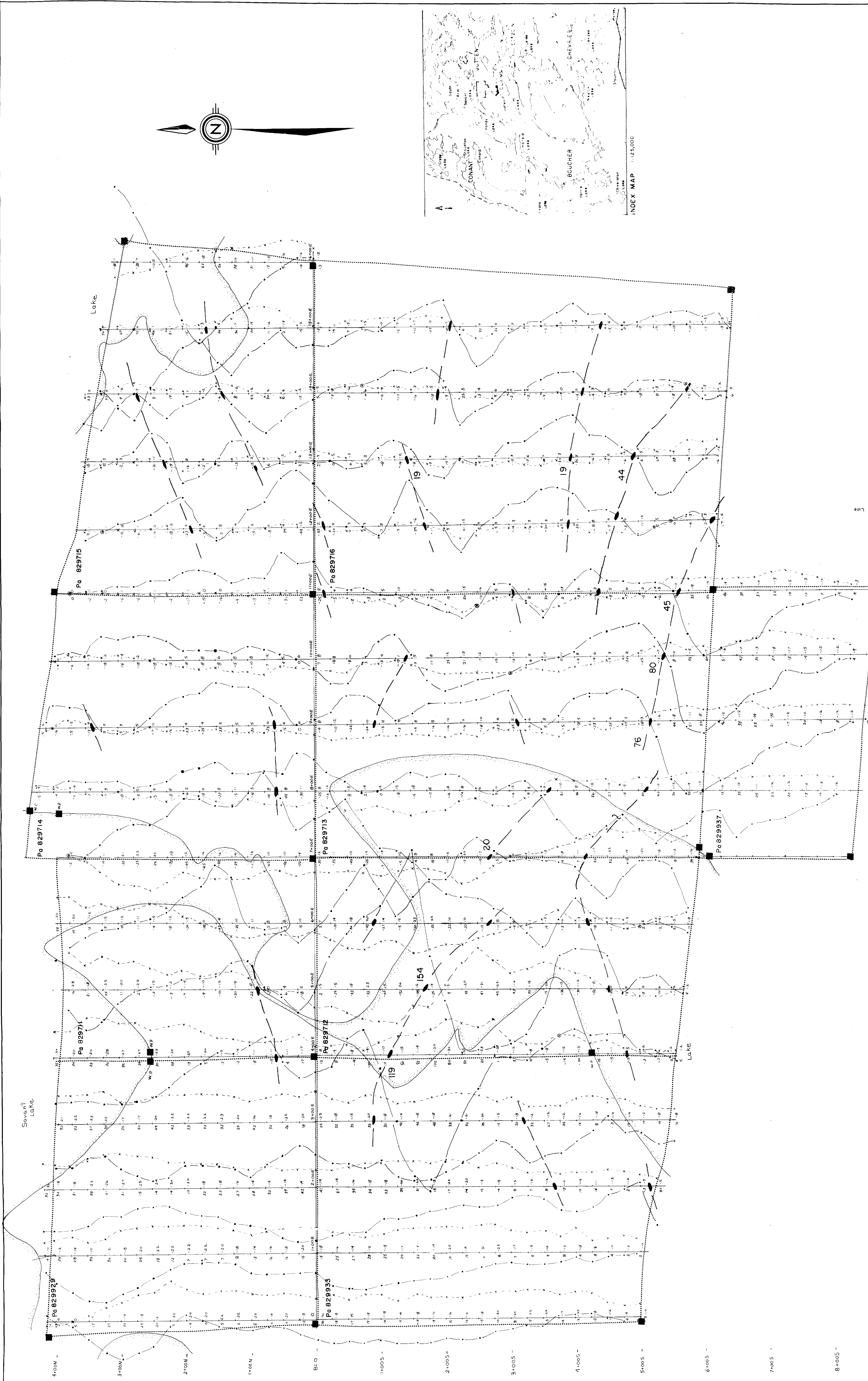
9+005 -



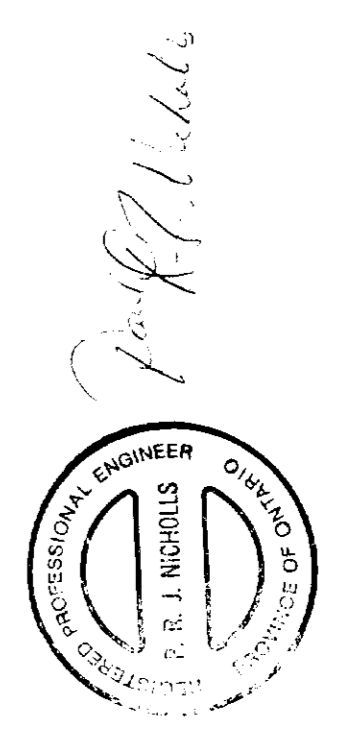
- LEGEND**
- 57649 MAGNETOMETER READING GAMMAS
  - 57700 SONARMETIC CONTOUR GAMMAS
  - MAGNETIC DEPRESSION
  - CONTOUR INTERVAL: 100 gammas
  - INSTRUMENT: EDA PPM 300/400

#2  
 52J/07SE-0040





POSITIVE READINGS TO LEFT OF SURVEY LINE  
 NEGATIVE READINGS TO RIGHT OF SURVEY LINE  
 PROFILE SCALE: 1cm = 10 %  
 INSTRUMENT: EM - 15



**Westmin Resources Limited**  
 EASTERN CANADA MINING DIVISION

JUTTEN PROJECT  
 1985

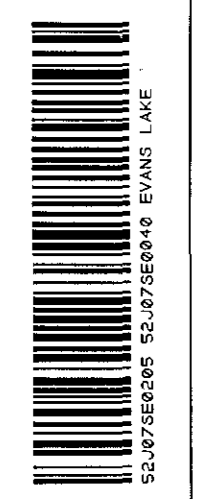
VLF-EM SURVEY

Work By: P.F.J. McHollis  
 Date: MARCH 1985

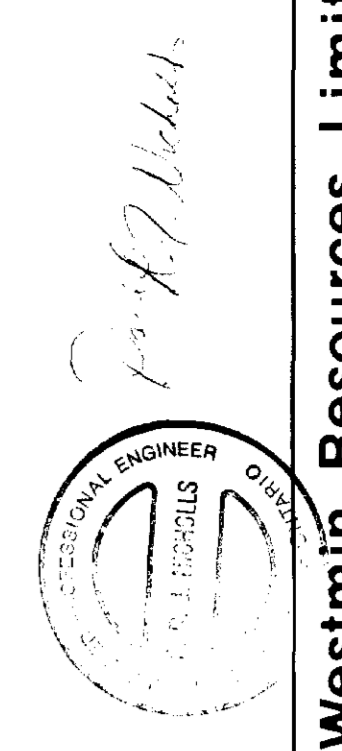
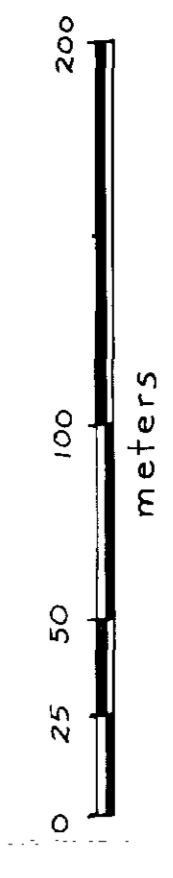
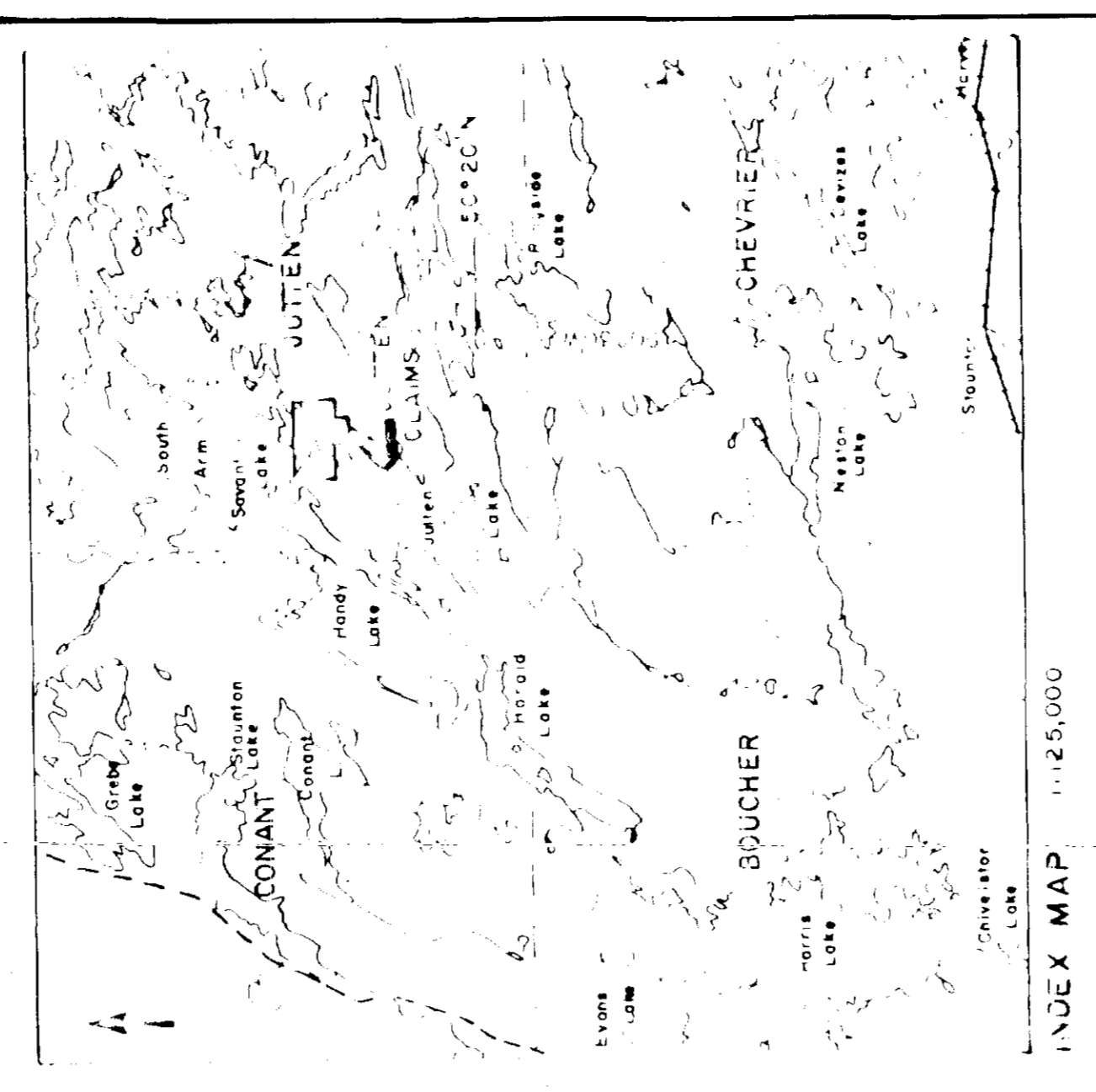
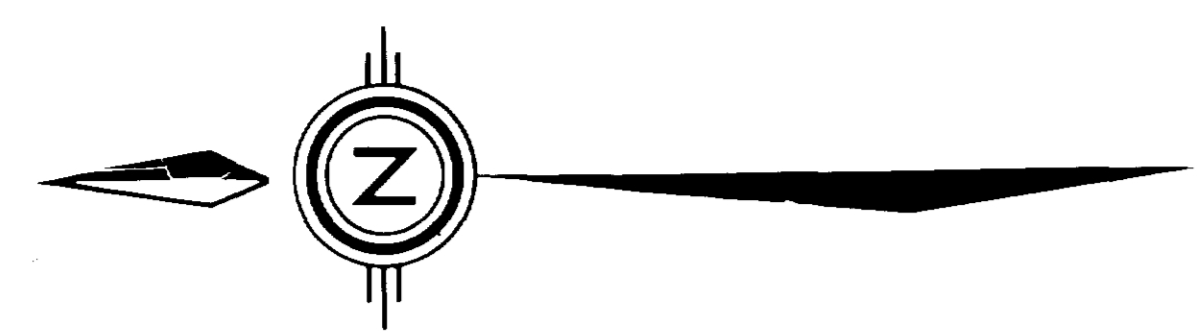
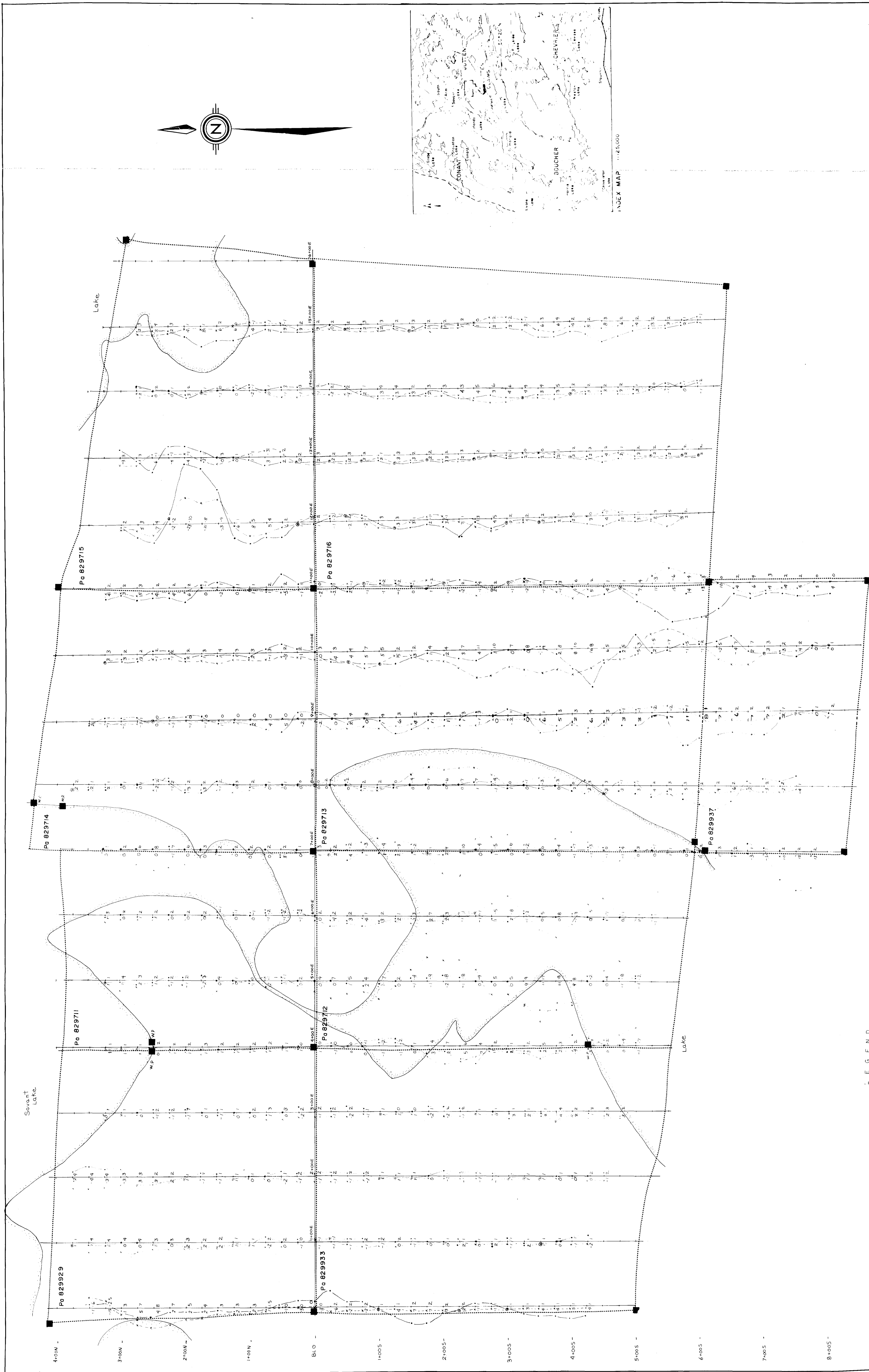
Scale: 1:2,000  
 NTS 52-J-7

52 J/07 SE - 0040 #3

OPERATOR: P. F. J. MCHOLLIS  
 TRANSMITTER STATION: SEATTLE WASHINGTON





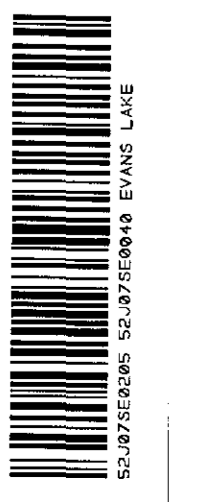


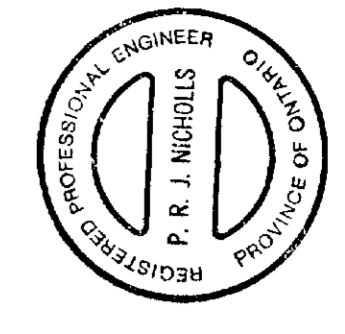
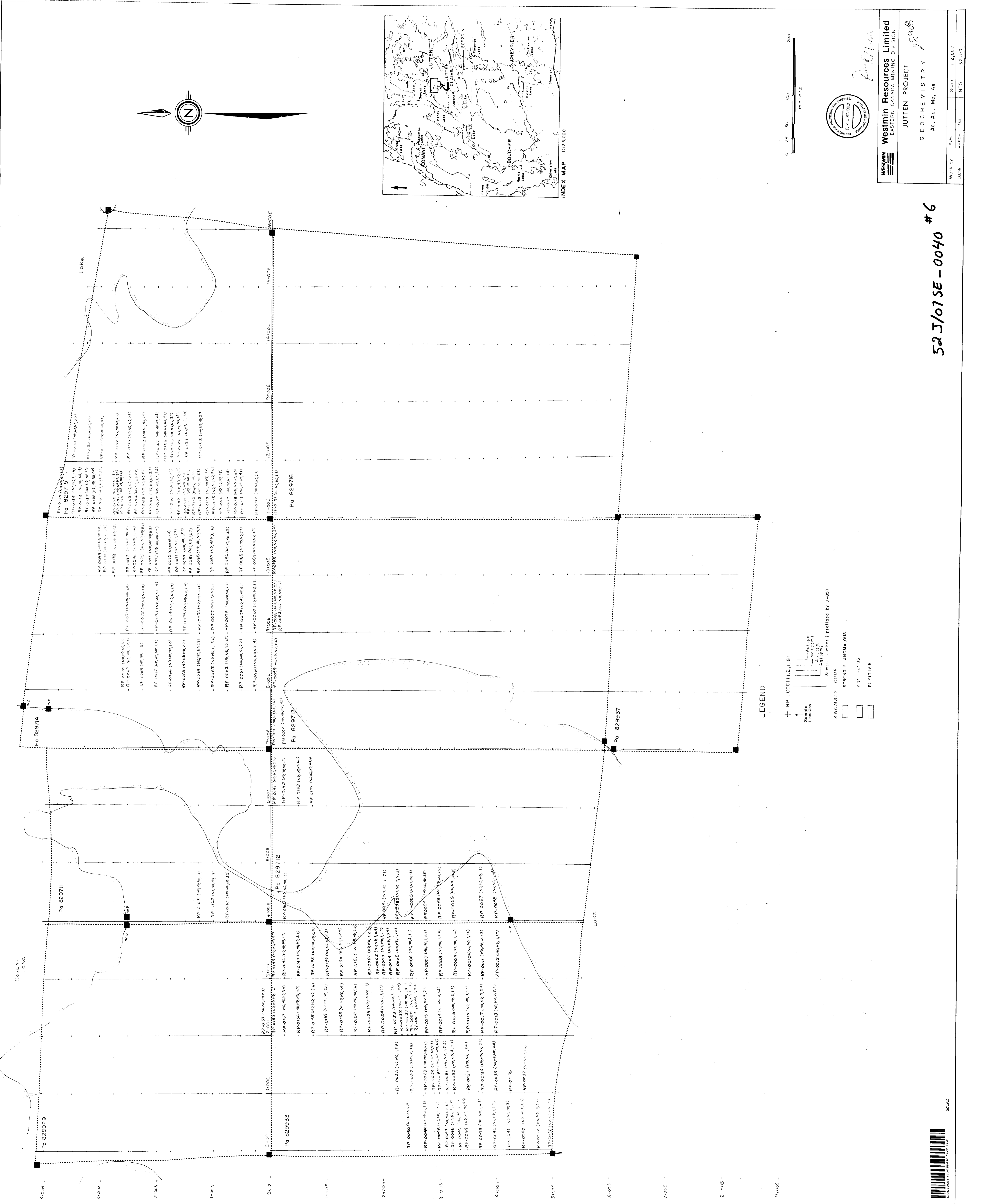
**Westmin Resources Limited**  
 EASTERN CANADA MINING DIVISION  
**JUTTEN PROJECT**  
 MAX-MIN II SURVEY 1985 *9808*  
 Frequency 1777 Hz  
 Scale 1:2,000  
 WORK BY: FSLIN Scale 1:2,000  
 DATE: MARCH 1985 NTS 52 J-7

**LEGEND**

- N-PHASE PROFILE
- OUT OF PHASE PROFILE
- BEDROCK CONDUCTOR
- PROFILE SCALE 1cm = 5m
- COL. SEPARATION 100 METERS

52 J/07 SE - 0040 #5



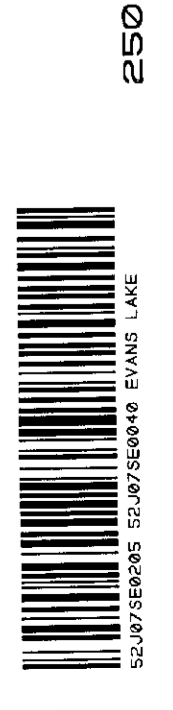


Westmin Resources Limited  
EASTERN CANADA MINING DIVISION

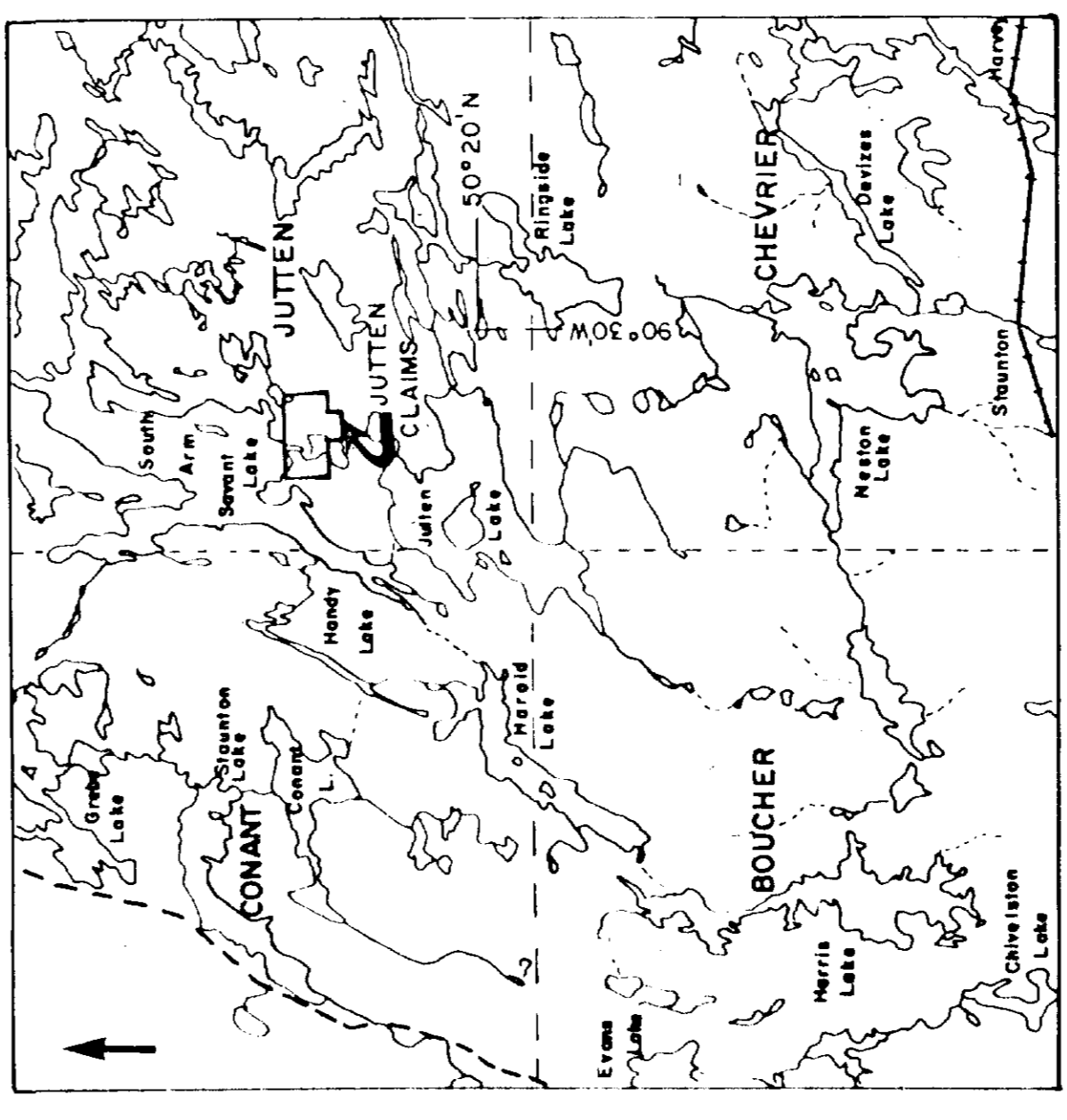
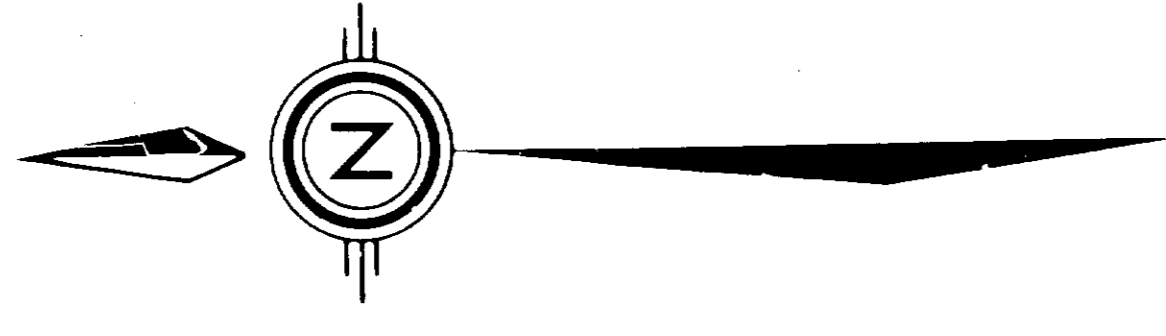
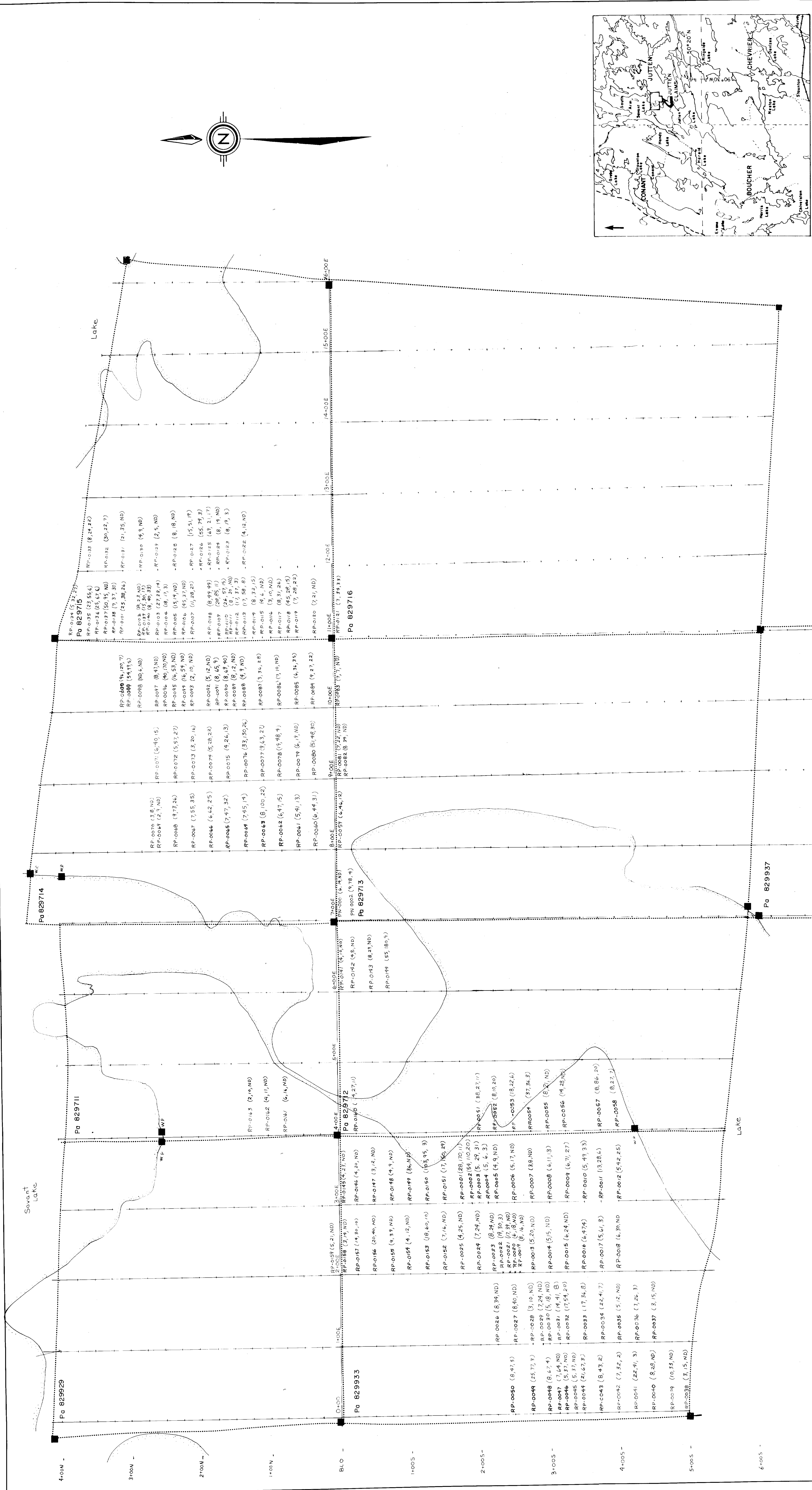
JUTTEN PROJECT  
GEOCHEMISTRY  
Ag. Au, Mo, As

Work by P.J.N. Scale 1:2,000  
Date: MAR 93 NTS 52-J-7

52J/07 SE - 0040 #6



2550



INDEX MAP 1:125,000

**LEGEND**

+ RP - 0001 (8, 27, 7)

↑ Sample Location

□ Pb (ppm)

□ Zn (ppm)

□ Cu (ppm)

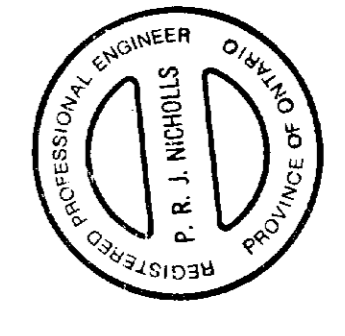
— Sample number (prefixed by J-85)

**ANOMALY CODE**

□ STRONGLY ANOMALOUS

□ ANOMALOUS

□ POSITIVE



*R. J. Boudreau*

52J/07SE - 0040 #7

