



010

(705) 268-2511

P.O. Box 1163, TIMMINS, ONTARIO P4N 7H9

MAGNETOMETER

AND

VLF EM 16 SURVEYS

FOR

KIMEX RESOURCES INC.

TIMMINS AND SHERATON TOWNSHIPS

PORCUPINE MINING DIVISION

NTS 42 A/7

RECEIVED

JAN 17 1989

MINING LANDS SECTION

Timmins, Ontario November, 1988 Denis Laforest Consultant

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#### INTRODUCTION

The following report describes the results of a ground magnetometer survey and VLF-EM survey for Kimex Resources Inc. on a claim group located in Timmins and Sheraton Townships, Porcupine Mining Division.

# PROPERTY LOCATION AND ACCESS - Figure 1

Kimex Resources Inc. property is located in Timmins and Sheraton Townships in the Porcupine Mining Division, Ontario at Latitude 48° 21' 30" and Longitude 80° 45' 35" or approximately 48 kilometers east-southeast of Timmins.

The access to the property is via Highway 101 East from Timmins for a distance of approximately 45 kilometers, then South on Gibson Lake Road for a distance of 25 kilometers and five kilometers East on a lumber road which passes through the west central portion of the property.

## PROPERTY DESCRIPTION - Figure 2A and 2B

The property consists of two patented and 66 unpatented contiguous mining claims numbered as follows:

TIMMINS  *Patent		-	P3452* P3453*	P997911 P997912 P998375 P998376 P998377 P1025474 P1025475 P1025476 P1025477 P1026452 P1026453	P1026455 P1026459 P1026460 P1026461 P1026462 P1026463 P1026468 P1026469 P1026470 P1026471 P1026472	P1026474 P1026475 P1026480 P1026484 P1026485 P1015791 P1015792 P1015793 P1015794 P1015795	P1015797 P1015798 P1015799 P1015800 P1015801
"Patent	.60			P1026454	P1026473	P1015796	

SHERATON TOWNSHIP - P9960°	3 P1015810 P1015819
25 claims P9960°	02 P1015811 P1015820
P10158	03 P1015812 P1015821
P10158	04 P1015813 P1015822
P10158	05 P1015814 P1015823
P10158	06 P1015815 P1015824
P10158	07 P1015816

#### PREVIOUS WORK

A review of assessment work files in the Timmins resident geologist's office reveals that the following files are pertinent to the portions of the property: T-185; T-277; T-1652; T-1754; T-1856. Almost all of the work was done on the two patented claims (P3452 and P3453) where the gold showing is located. The work included the sinking of a prospect shaft to a depth of 40 feet in 1910. At a depth of 30 feet some drifting was done in a north-westerly direction.

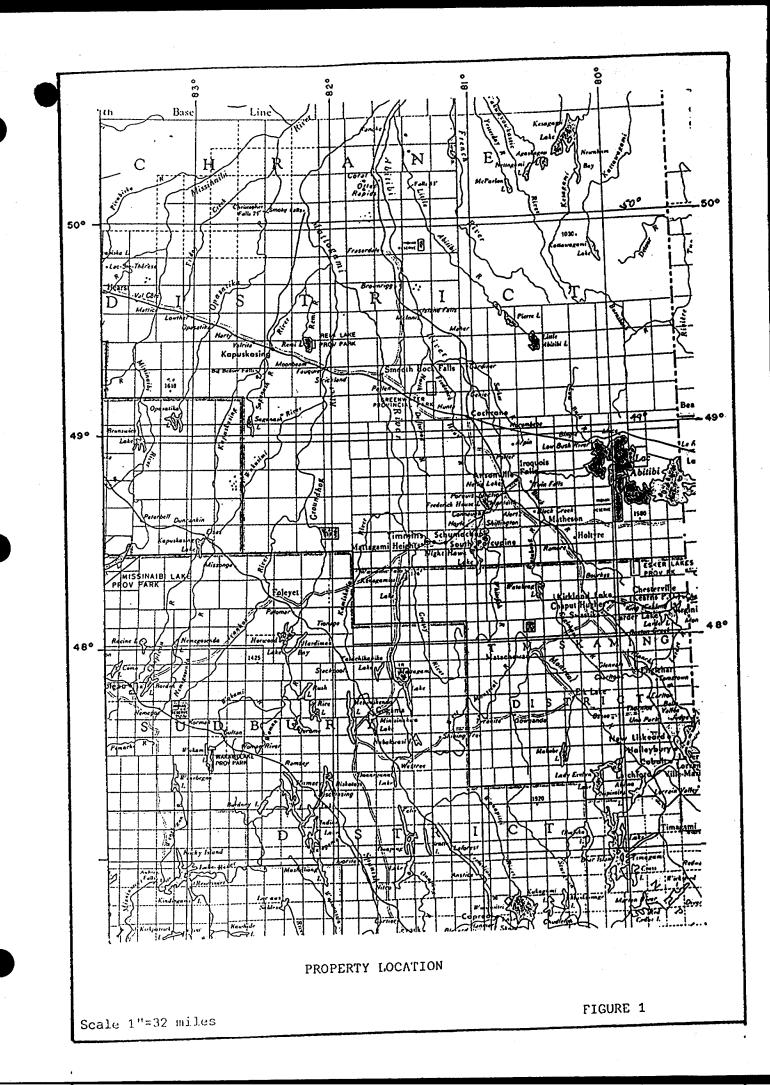
## REGIONAL GEOLOGY - Figure 3

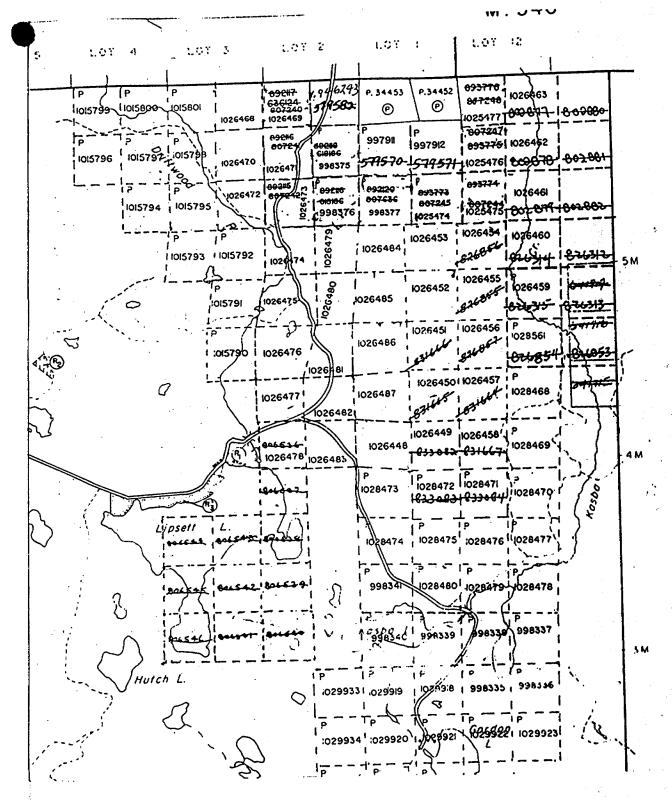
The regional geology of the area is presented on The Ontario Department of Natural Resources Compilation Map 2205 (Timmins - Kirkland Lake).

The area of the claim group is shown to be underlain by mafic flows, pyroclastic rocks, granodiorite and diabase dikes. A gold and molybdenum showing occurs on the property.

### PROPERTY GEOLOGY

Information regarding the property geology is restricted to the area covered by two patented claims and the reader is referred to files T-185; T-277; T-1652; T-1754 and T-1856 for information regarding the geology of the property.



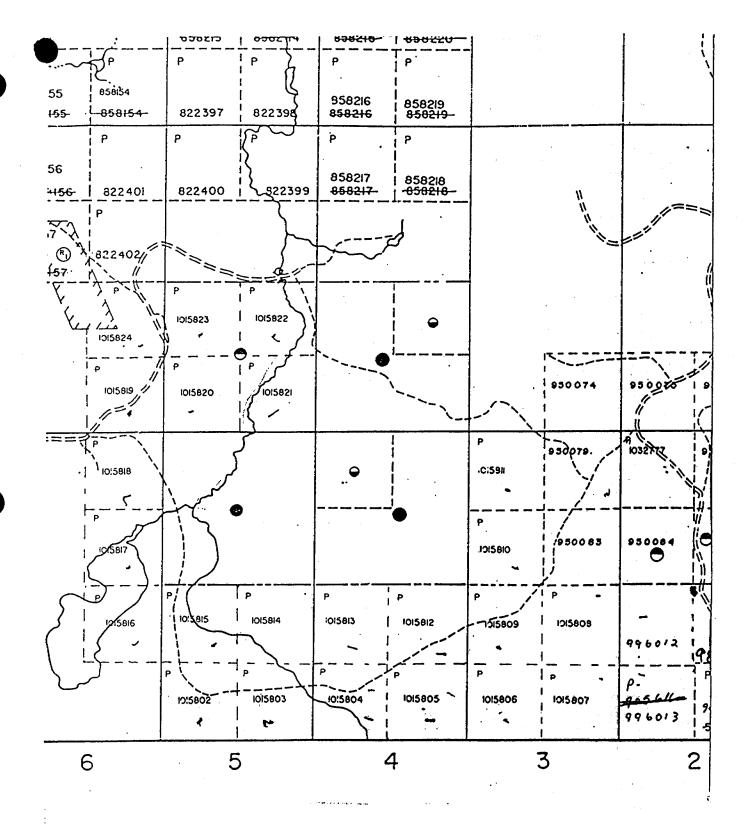


PORTION OF CLAIM MAP

TIMMINS TOWNSHIP

Scale 1"=1/2 Mile

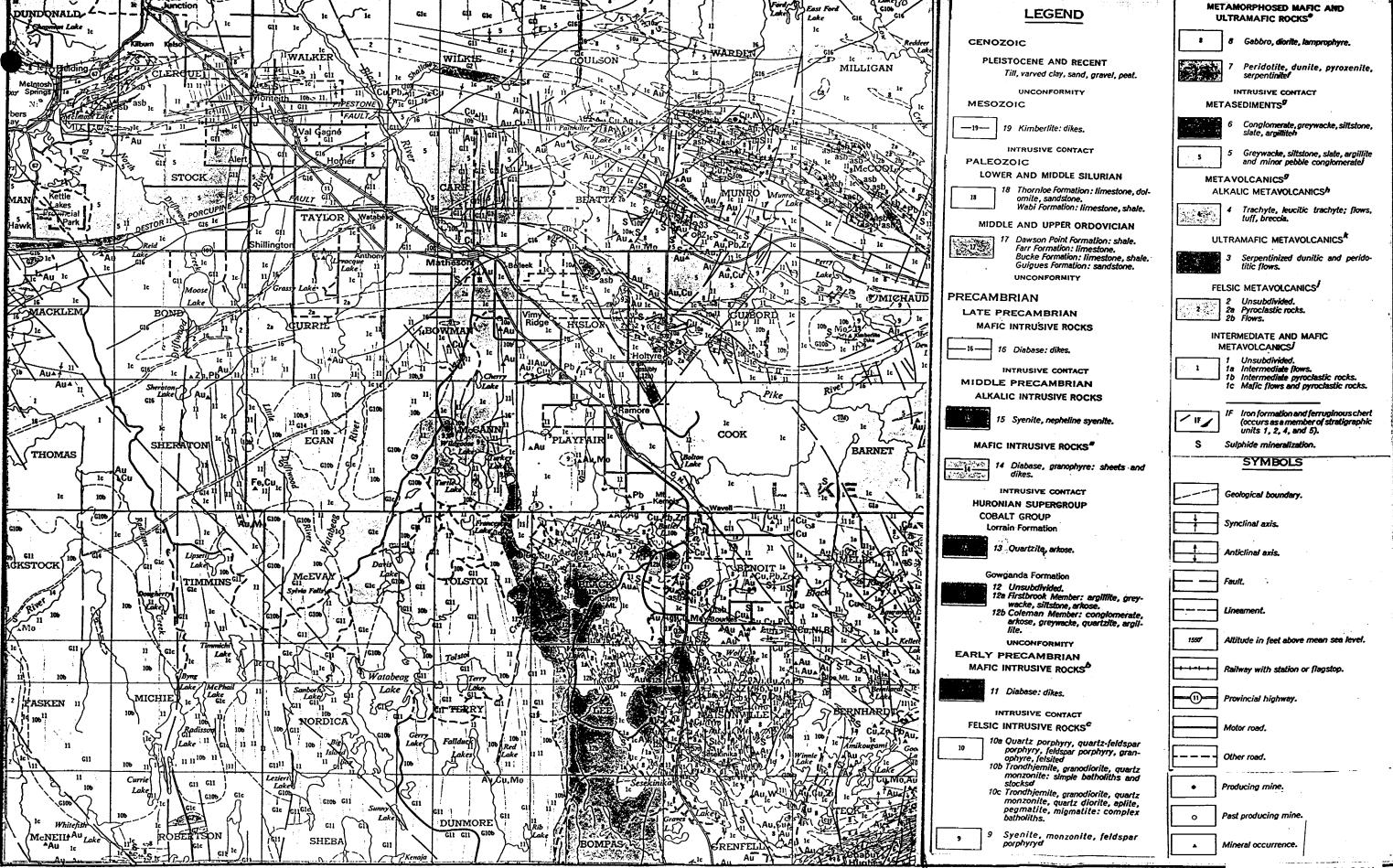
FIGURE 2A



PORTION OF CLAIM MAP
SHERATON TOWNSHIP

Scale 1:20,000

FIGURE 2B



REGIONAL GEOLOGY FIGURE 3

#### LINE CUTTING

The grid was chained utilizing the Metric System. The base line was established with an Azimuth of 130°. The grid lines were cut at right angles to the base line at 100 meter intervals with pickets at 25 meter intervals. Tie lines 14 + 00 W and 21 + 00 W were also established.

A total of 119.15 kilometers of grid lines and base and tie lines were cut.

## GROUND MAGNETOMETER SURVEY

The ground magnetometer survey was completed utilizing a proton magnetometer with gradiometer (Scintrex Model MP-2) capable of reading total field values to an accuracy of ± 1 gamma. The main base station was established at BL 0 + 00W with a value of 60,394 gammas. Secondary base stations were established at 25 meter intervals along the base line and along the tie line to provide data for diurnal corrections. Diurnal variation was corrected by tieing in to the base stations at time intervals less than 45 minutes. Maximum misclosure was 25 gammas. A total of 4,766 readings were taken.

## VLF EM 16 ELECTROMAGNETIC SURVEY

The electromagnetic survey was carried out utilizing a Geonics EM 16, VLF EM receiver. The unit measures the vertical In-phase component (tangent of the tilt angle of the polarization ellipsoid) and vertical Out-of-phase component (the short axis of the polarization ellipsoid compared to the long axis) of the secondary field generated in the vicinity of the conductors.

### VLF EM 16 ELECTROMAGNETIC SURVEY (Cont'd)

The transmitter station used for the survey was NAA Cutler Maine with a frequency of 24.0 kHz. The Azimuth to the station (NAA) is 130°. All the readings were taken with the operator facing North.

A total of 4,715 readings were taken within the property.

#### RESULTS - MAGNETOMETER SURVEY

The results of the magnetometer survey are presented on Maps 1A; 1B; 1C; and 1D in back pockets.

The maximum magnetic relief on the property is 10,993 gammas.

The prominent linear N-S trending magnetic anomalies are caused by the presence of diabase dikes. The oval shaped magnetic anomaly between lines 6+00N and 5+50W and 3+00N 6+25W is probably due to a mafic intrusive. The northern portion of the property (lines 26+00N - 43+00N) has low magnetic relief characteristic for felsic intrusive (granite). The remainder of the property is underlain by mafic and felsic volcanic rocks.

## SURVEY RESULTS - VERTICAL GRADIENT MAGNETICS

The results of the vertical gradient magnetometer survey are presented on Maps 2A, 2B, 2C and 2D in back pockets.

## SURVEY RESULTS - VERTICAL GRADIENT MAGNETICS (Cont'd)

It should be noted that the zero contour interval coincides directly or very closely to the geological contacts. It is because of this phenomenon that the vertical magnetic gradient map can be compared to the pseudo-geological map. This is true for vertical bedding, however, with the bedding dipping the geological contacts will be closer to the magnetic peaks by a small distance.

Using known and accurate geological information and vertical gradient data, one can use the presented maps as a pseudo-geological map. Obviously, the more that is known about an area geologically, the closer this type of presentation is to what the rock types are.

This information is an invaluable tool in helping to define complex geology, especially in drift-covered areas.

### SURVEY RESULTS VLF - EM 16

The survey results are presented on Maps 3A; 3B and 3C in back pockets. A total of 127 individual anomalies were interpreted.

The qualitative interpretation of VLF data is ambiguous especially when considering the interactions of depth to conductor, conductive overburden, resistivity of the conductor etc. The detail interpretation will be possible in conjunction with a high degree of geological control.

The following conductors should be verified by horizontal loop survey: 21; 23; 41; 43; 48; 97; 100; 103 and 106.

#### CONCLUSIONS AND RECOMMENDATIONS

A total of 127 individual conductors were located during the present survey. As mentioned earlier, considerable ambiguities and inconsistencies are probable when evaluating data from VLF surveys, in the absence of a high degree of geological control.

Prior to further evaluation of conductors, Kimex Resources Inc. should complete detailed geological mapping, horizontal loop survey and geochemical sampling. Once this data is available, reinterpretation of VLF data will be possible and then a meaningful decision can be made regarding those anomalies which require further evaluation.

Respectfully submitted,

Milan Hlava, B.Sc., F.G.A.S. Consulting Geologist

Qual 2.831

CERTIFICATE

#### CERTIFICATE

I, Milan Hlava, of the City of Timmins, Province of Ontario, Canada and the Town of Surrey, Province of British Columbia, Canada do state:

- 1. That I am a practising consulting geologist with offices at 24 Pine Street South, P.O. Box 1163, Timmins, Ontario P4N 7H9 and 14746 90A Avenue, Surrey, B.C. V3R 1B2.
- 2. That I am a graduate of Komensky University,
  Bratislava, Czechoslovakia (1968) with a degree
  of Bachelor of Science in Exploration Geology.
- That I have practised my profession as a Geologist continuously since 1968 and as a Consulting Geologist continuously since 1984.
- 4. That I am a Fellow of the Geological Association of Canada since 1972.
- That I have no interest directly, indirectly nor anticipated in Kimex Resources Inc. (Ressources Kimex Inc.) nor the property reported on in this report.
- That I am familiar with the material contained in this report, having examined all the material myself and visited the property myself in the field.
- 7. That the conclusions reached in this report are my own.

Respectfully submitted,

Milan Hlava, B.Sc., F.G.A.S. Consulting Geologist



 Miaistry of Northern Development and Mines

#### Report of Work

(Geophysical, Geological, Geochemical and Expenditures)



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Claim Holder(s)  Kimex Resources	Tnc.	7	• •	1204	<i>U</i>	1	7's Licence No.	<del></del>
Address	11104		· · · · · · · · · · · · · · · · · · ·				5141	
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Laforest-Hlava I	Exploration Se	rvices	Ltd.		88   30	10,88	44.18	
Name and Address of Author (c	of Geo-Technical report)	<del></del>				WIO. ] TT.	74020	2011
Milan Hlava, P.C Credits Requested per Each	O. Box 1163, T	immins						
Special Provisions	Geophysical	Days per	) MILLIN	g Claims Traversed ( Mining Claim	List in num Expend.		ince) lining Claim	/ 1 <b>5</b>
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For each additional survey: using the same grid:	- Radiometric			1015802				
Enter 20 days (for each)	- Other			1015803			A .	
	Geological			1015804				
	Geochamical			1015805		<b>***</b>		
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	Geologica!			1015811				
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Amounte Credits		Days per Claim		1015813		100		
Note: Special provisions credits do not apply	Electromagnetic			1015814		×	· · · · · · · · · · · · · · · · · · ·	
to Airborne Surveys.	Magnetometer			1015815			RECO	BDE
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Lo.		'		1015820				
Calculation of Expenditure Days		otal		1015821				
Total Expenditures		Credits	2	1015822		***		
\$	+   15   =					Total numb	per of mining	
Instructions Total Days Credits may be app	portioned at the claim ho	Ider's				report of w	ork.	25
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	1/1/1		I Stangard		4/88	Mining R	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	-
Nov. 23, 1988 Recorded House or agent (Signature)				Daje Approved	n Recorded	Brench Dire	ctor	
Nov. 23, 1988 Zertification Verifying Report	KARAJA A			1 wy 22,	189 RB	us	low-	
I hereby certify that I have a p	ersopel and intimate kno	wiedge of	the facts se	t forth in the Report o	f Work annex	ed hereto, ha	ving performed th	ne work
or witnessed same during and/o Name and Postal Address of Perso	or arres 112 combienous	nd the anne	xed report	is true.				
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		-,	,	Date Certified		Calying ov	(Specure)	
362 (85/12)				Nov. 23	1988	コンルト	4113	

# Technical Assessment Work Credits

			2.12049
1	Date		Mining Recorder's Report of
	July 20.	1989	Mining Recorder's Report of W8906-18

File

Time	
TIMMINS TOWNSHIP.  Type of survey and number of Assessment days credit per claim  Geophysical Electromagnetic 40 days Magnetometer 20 days  Fadiometric days Induced polarization days Other days Other days Geochemical days Geochemical days Man days Airborne Special provision Goround Ground Grown to work dates and figures of applicant.  Special 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  20 days Electromagnetic 10 days Magnetometer  Mining Claims Assessed 1025474-75-76 1026459 to 52 incl. 1026479-80 1026484 to 75 incl. 1026479-80 1026484-85 1015791 to 801 incl.  Special provision Goround Goround Goround Ground Grou	
Geophysical 40 days Electromagnetic days Magnetometer 20 days Induced polarization days Other days Other days Geochemical days Geochemical days Man days Assessed' column Geological days 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  Assessment days credit per claims P 997911-12 998376-77 1025474-75-76 1026452 to 55 Incl. 1026459 to 62 Incl. 1026479-80 1026484-85 1015791 to 801 incl.  Section 77 (19) See "Mining Claims Assessed" column Geological days Man days Special credits have been reduced because of partial coverage of claims.  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  20 days Electromagnetic 10 days Magnetometer	
Geophysical 40 days Electromagnetic days Magnetometer 20 days Induced polarization days Other days Other days Geochemical days Geochemical days Man days Assessed' column Geological days 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  Assessment days credit per claims P 997911-12 998376-77 1025474-75-76 1026452 to 55 Incl. 1026459 to 62 Incl. 1026479-80 1026484-85 1015791 to 801 incl.  Section 77 (19) See "Mining Claims Assessed" column Geological days Man days Special credits have been reduced because of partial coverage of claims.  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  20 days Electromagnetic 10 days Magnetometer	
Electromagnetic 40 days 99376-77  Magnetometer 20 days 1026452 to 55 incl. 1026455 to 62 incl. 1026459 to 62 incl. 1026479-80 1026479-80 1026484-85 1015791 to 801 incl. Section 77 (19) See "Mining Claims Assessed" column Geological days Man days Airborne Special provision Ground Ground Credits have been reduced because of partial coverage of claims.    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	
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Induced polarization	
Other	
Section 77 (19) See "Mining Claims Assessed" column  Geological	
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Man days ☐ Airborne ☐  Special provision ☒ Ground ☒ ☐ Credits have been reduced because of partial coverage of claims. ☐ 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  20 days Electromagnetic 10 days Magnetometer	
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Special credits under section 77 (16) for the following mining claims  20 days Electromagnetic 10 days Magnetometer	
20 days Electromagnetic 10 days Magnetometer	•
20 days Electromagnetic 10 days Magnetometer	
10 days Magnetometer	
P 998375	j
	-
No credits have been allowed for the following mining claims	
not sufficiently covered by the survey     insufficient technical data filed	
P 1025477	
- 1026463	

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; Geologocal +40; Geochemical +40; Section 77(19) +60.



Ministry of Northern Development and Mines

Ministère du Développement du Nord et des Mines

August 22, 1989

Mining Recorder Ministry of Northern Development and Mines 60 Wilson Avenue Timmins, Ontario P4N 2S7

Mining Lands Section 880 Bay Street, 3rd Floor Toronto, Ontario M5S 1Z8

Telephone: (416) 965-4888

Your File: W8906-18 Our File: 2.12049

Dear Sir:

Notice of Intent dated July 20, 1989 Geophysical (Electromagnetic and Re:

Magnetometer) Survey submitted on Mining Claims P 997911 et al in Timmins 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,

W.R. Cowan

Provincial Manager, Mining Lands

Mines & Minerals Division

AB:eb Enclosure

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

> > Kimex Resources & Roger Leblanc 101-A Ave. Principale Rouyn-Noranda, Quebec J9X 4P1

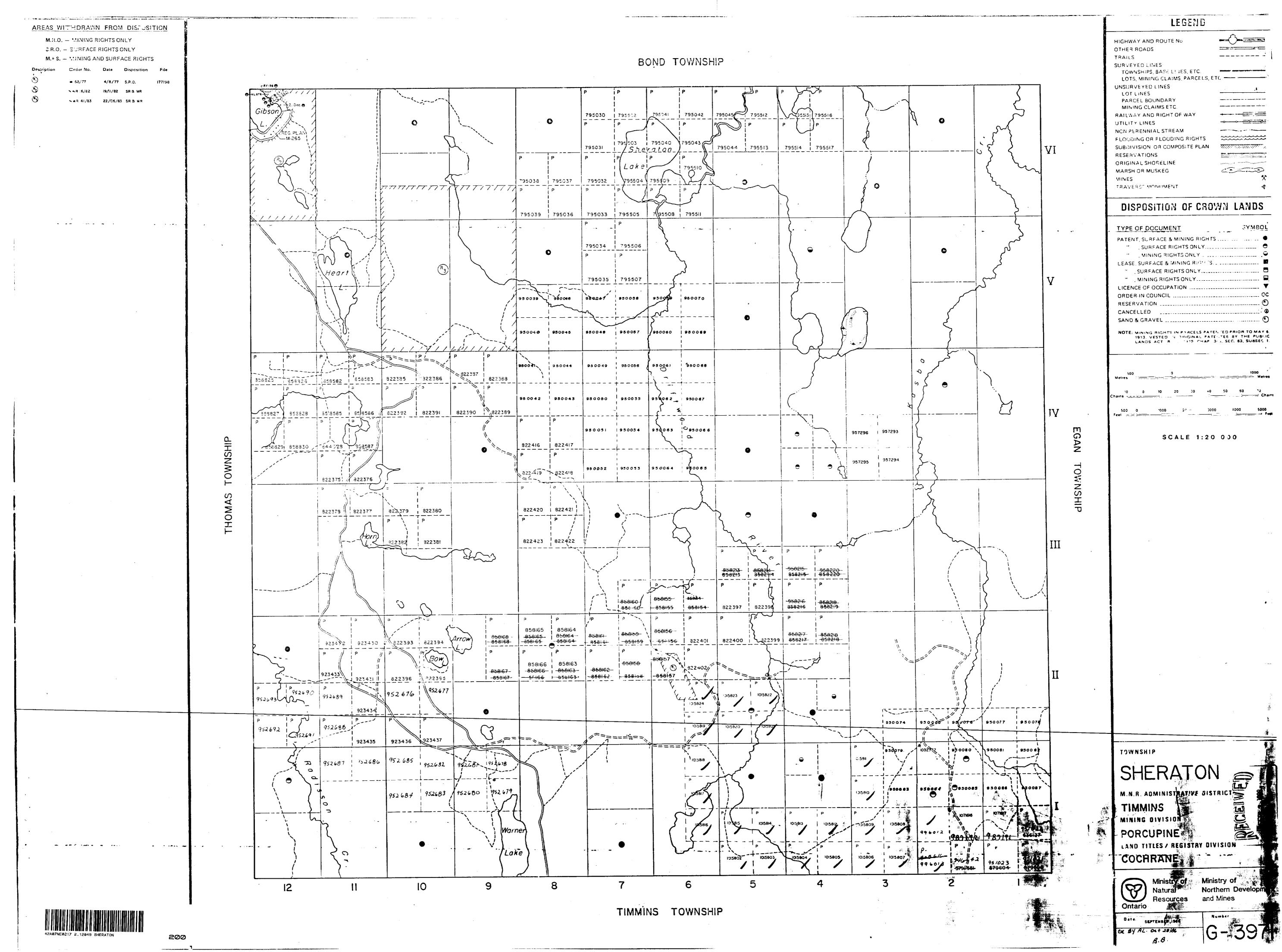
Milan Hlava P.O. Box 1163 Timmins, Ontario P4N 2J8

Resident Geologist Timmins, Ontario

ONTARIO GEOLOGICAL SURVEY ASSESSMENT FILES OFFICE

AUG 22 1989

RECEIVED



NOTES

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

Areas withdrawn from staking under Section 43 of the Mining Act, R.S.O. 1970. Disposition 28/6/71 10/10/78

10/17/85

SAND and GRAVEL

LEGEND

LICENSE OF OCCUPATION LOCATED LAND MINING RIGHTS ONLY RAILWAYS . **POWER LINES** MARSH OR MUSKEG

TOWNSHIP OF

DISTRICT OF COCHRANE

PORCUPINE MINING DIVISION

MINING DIVISION

SCALE: 1 INCH 40 CHAINS (1/2 MILE)

DATE MARCH '71

PLAN NO. 1

ONTARIO

MINISTRY OF NATURAL RESOURCES SURVEYS AND MAPPING BRANCH

