MAGNETIC AND ELECTROMAGNETIC SURVEY REPORTS

PENSE TOWNSHIP (MAP - 566)

LARDER LAKE MINING DIVISION

DISTRICT OF TEMISKAMING, ONTARIO

NTS 31 M/13

2.13843

PROPERTY

The property consists of 17 unpatented mining claims registered in the name of G.J. Gereghty and one leased claim owned by T & H Resources Limited of Toronto, Ontario. Claim numbers, and their respective description of land parcel coverage by lot and concession are listed:-

Pense Twp.	L 1076182	- SE¼ of S½	Lot 8,	Con.V
" "	L 1076183	- NE¼ of S½	Lot 8,	Con.V
" "	L 1076184	- NW¼ of S½	Lot 9,	Con.V
" "	L 1076185	- NE¼ of N½	Lot 8,	Con.IV
" "	L 1076186	- NW¼ of N½	Lot 9,	Con.IV
" "	L 1076187	- NE¼ of N½	Lot 9,	Con. IV
" "	L 1076188	- SE¼ of S½	Lot 9,	Con.V
" "	L 1076189	- NE¼ of S½	Lot 9,	Con.V
" "	L 1076190	- NW¼ of S½	Lot 10,	Con.V
" "	L 1076191	- SW¼ of S½	Lot 10,	Con.V
" "	L 1076192	- NW¼ of N½	Lot 10,	Con.IV
" "	L 1076195	- SE¼ of S½	Lot 10,	Con.V
" "	L 1076196	- NE¼ of S½	Lot 10,	Con.V
" "	L 1076197	- SW¼ of N½	Lot 10,	Con.V
" "	L 1076198	- SE¼ of N½	Lot 9,	Con.V
" "	L 1076199	- SW¼ of N½	Lot 9,	Con.V
" "	L 1117786	- SE¼ of N½	Lot 10,	Con.V
" "	L 104660 (leased)	SW¼ of S½	Lot 9,	Con.V

Magnetometer survey coverage was filed for assessment work credits in January 1990 on eleven claims numbered L 1076182 to 1076192 inclusive and also on leased claim L 104660.

No previous VLF electromagnetic survey work was submitted for assessment credits.

LOCATION AND ACCESS: The center of the claim group is at 47° 49' latitude and 79° 32' 30" longitude. The property is fifteen miles due east of Englehart, Ontario. Summer access is as follows: Two miles north of Hilliardton on Highway #569 then eastward along the common borders of Ingram - Hilliard and Pense-Brethour Townships for a distance of 4 miles on gravelled road. Then north for one mile along Pense Lot 2 - Lot 3 line, and one mile eastward along Concession 1 - Con. 2 line to Broderick's abandoned farm house. A tractor road leads from Broderick's northeastward into the center of the claim group a distance of 3½ miles.

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Location and Access: continued

Winter access to the subject claims is also via highway #569 for 2 3/4 miles due east of Tomstown then continuing eastward for 4 3/4 miles along the common boundary of Concessions III and IV to the Otterskin Creek in Pense Township. Snow machine access is then necessary following old logging roads in a northeasterly direction for approximately 1¼ miles then due eastward across a vast marsh a distance of 1¼ miles to the west boundary of the claim block. Once into the claim group several branching roads lead: east, north and south, and most of these were brushed out to permit more rapid access.

A grid location map, drawn on a scale of 1" = 1000 feet with 1" = 4 mile topographic inset, accompanies this report (Fig.1)

TERRAIN

Except for a high ridge along the west side of the claim group striking NNE- SSW the north half of the claim block is generally quite flat. The south half of the property is gently rolling with steep sided ravines some with associated creeks trending northeast or southeast flowing eastward into the Pontleroy river. New claims in the north part of the property have a sort of central division where drainage in the east half drains east while the western claims have a westerly drainage into the vast marsh along the western claim boundary.

PREVIOUS WORK

Highlights of all recorded assessment work done in Pense Township are summarized in "Geology of the Englehart - Earlton Area" by H.L. Lovell-1977 see Pense Township pages 12 & 13.

Reconnaissance geophysical survey work and prospecting were carried out by the writer within the subject claim area 1969-71.

OBJECT OF MAGNETOMETER SURVEY

The main purpose of the magnetic survey was to outline basic and ultrabasic rock types containing disseminated magnetic minerals such as magnetite and/or pyrrhotite, and also to locate sulphide concentrations with high pyrrhotite content in areas covered with overburden.

MAGNETOMETER SURVEY (PROCEDURE)

The instrument used is a Sharpe MF-1 Fluxgate magnetometer which measures the vertical component of the earth's magnetic field directly in gammas, positive or negative, over a range of 100,000 gammas. This hand held magnetometer requires no orientation and after coarse levelling the magnetic reading is recorded from a meter mounted on the top of the instrument.

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MAGNETOMETER SURVEY (PROCEDURE) continued

In order to make the 1990 magnetic survey results accurately correlate with the 1989 survey values successive readings were taken over a period of time at station 12W - 92N where the reading is of background value. Having determined that no diurnal changes were evident the magnetometer was fine tuned to the original station value of 1620 gammas. Base reference stations were then established along extended 92N base line from sections 00 to 8E incl.by reading at each station twice over a short time span and tying back into 12W - 92N. During the course of the extended survey magnetic diurnal/drift variations were determined by starting from, and checking into base stations at time intervals not exceeding 2½ hours. Changes noted in magnetic intensities were then applied as factors and progressive adjustments made to each reading recorded during a specific time interval. Magnetometer readings were recorded at 50 foot intervals on 400 foot spaced grid lines.

MAGNETIC SURVEY RESULTS (Figure 2)

The extended magnetic survey covers a band of claims, only one claim in width, located along the north and east sides of the original claim group shown on a single plan (Fig.2). Magnetic survey results are contoured at 100 gamma intervals on a scale of 1" = 200 feet (1:2400). Magnetic readings are plotted at each station location. A legend at the right lower corner of the sheet illustrates the values and various weights of isomagnetic lines used. Most magnetic readings were read on the 3000 gamma instrument scale where an accuracy of 10 gammas can be maintained. Readings above 3000 gammas were read on the 10,000 gamma scale where an accuracy of 30 gammas is realized.

Claim L 1076195 contains the eastern extension and apparent termination of the magnetic anomaly thought to be the faulted extension of the magnetic anomaly drilled on sections 32W, 34W and 36W. This linear anomaly is 900 gammas above magnetic background on section 4W weakening to +100 gammas above background on 4E. The south part of this claim overlies the northern flank of a broad and long +1,000 gamma magnetic zone which continues southward and eastward beyong the claim border.

A number of small elliptical or lense shaped positive and negative anomalies are scattered throughout claim 1076195 these range from +500 to -1600 gammas from background.

The extreme north part of claim L 1076196 and south part of claim 1117786 contain a narrow positive linear anomaly +200 to +800 gammas above background striking east to west through the numbered claims and L 1076197. On the west side of claim L 1117786 there is a +900 gamma elliptical shaped anomaly which weakens as it continues westward through claims 1076197 and into 1076198 where it becomes a lens shaped anomaly +600 gammas above background intensity, again weakening as it trends westward into the centre of claim 1076199, terminating as a small elliptical anomaly +750 gammas in strength.

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Magnetic survey results (figure 2) continued

The lens shaped anomaly occurring in claim L 1076198 was drilled by The Hudson Bay Mines Ltd. in 1972. Drill collar (casing) could not be located but will be found at some later date. One narrow intersection assayed 3.46 zinc in this drill hole (#16).

OBJECT OF THE VLF ELECTROMAGNETIC SURVEY

The VLF survey was done to outline ground conductivity that might represent disseminated or massive sulphides which might or might not be magnetic depending on the type of contained sulphides and the absence or presence of magnetite. VLF surveying is also effective in delineating conductive shear or fault zones that could have associated gold mineralization. A major advantage of the VLF survey is the definition of small sulphide bodies. A major disadvantage of the VLF survey is that it sometimes traces wet shears, creek beds, certain lake shores, conductive clays.

ELECTROMAGNETIC SURVEY PROCEDURE

The "Radem" VLF electromagnetic unit used on this survey was manufactured by Crone Geophysics Limited. Operation of the Radem unit is quoted from Crone's operating instructions:- "VLF communication broadcast stations are positioned throughout the world. Numerous VLF stations transmit steadily except for maintenance periods usually of ½ to 1/3 day per week. The Radem receives any of 7 of these stations with selection by means of a switch." (Note:- The Radem unit must be factory tuned to receive the 7 stations selected by the instrument owner). "The useable range of these stations varies widely with power and transmission conditions but is usually between 1,000 and 5,000 miles. A station should be selected that is located in the same direction as the regional strike. For example, if the geological strike is east - west then a station located east or west of the operator should be used. If in doubt of the geological strike two orthogonal stations should be read".

Parameters that can be measured by the Radem unit are: (a) Dip angle of the resultant field. (b) Out-of-phase measurement. (c) Horizontal component of the field strength.

VLF electromagnetic survey coverage was completed over all 18 claims listed on page 1. Station intervals are 100 feet on both the 200 and 400 foot spaced grid lines. Transmitter station used was "NLK" Seattle, Washington operating at 24.8 KH_Z with power output of 230 Kw. The dip angle of the resultant field and the out-of-phase measurement were recorded but only the dip angle measurement was plotted in both profile form and as contours, after the dip angle readings had been "Fraser Filtered".

ELECTROMAGNETIC SURVEY RESULTS (Figures 3 &4)

Profiled VLF electromagnetic survey results are shown on a single plan on a scale of 1" = 200 feet (1:2400). Readings are plotted on a scale of 1"= 20°. The number written at the station denotes the tilt angle in degrees. Negative values are plotted on the east side of the grid line while positive values are plotted on the west side. A conductor axis is indicated when E.M. readings cross the grid line from west to east while the operator traverses southward. The profile on the 200 foot spaced grid lines has been plotted as short dashed lines to avoid confusion where E.M. profiles cross one another.

Electromagnetic Survey Results (Figures 3 & 4) continued

Profiled VLF may only show an inflection while filtered and contoured data may show that the inflection is in fact a conductive zone.

Filtered and contoured VLF survey results are shown in Figure 4. Contour intervals are in 10 degree increments and numbers written at the grid station are the mathematically adjusted ("Fraser Filtered") original dip angle readings. Positive trends indicate zones of conductivity. Comparing the profiled survey results with the contoured E.M. data one can see that conductive zones are often discontinuous in profile but continuous on the contoured plan. Furthermore, conductor axes determined from profiled crossover points are usually shifted and considered more accurately located at the positive peak values on the contoured plan.

Eleven or more VLF conductors of variable strength and strike length generally strike east-west across the claim group. These conductors vary from very short (200 feet) to very long (5600 feet). No attempt has been made to classify the strength of conductivity, however, one can determine strength by seeking the maximum deflections in the profile or the largest positive numbers within the contour closures.

Many of the conductors are disjointed especially in the central part of the claim group where the more important mineralization found to date was drilled in 1969 & 1970.

The west end of the VLF conductors all seem to terminate under a high conglomerate ridge in claims L 1076182, 83 and 85.

Weak conductors in the south part of the claim group may be caused by conductive clay overburden. Most of the lengthy conductors coincide in part with relatively short magnetic anomalies probably indicative of lenses or pods of sulphide mineralization.

SURVEY DATA

Grid line cutting was contracted to Glen McBride of New Liskeard, Ontario. Three line cutters were employed in this grid work travelling daily from their homes in New Liskeard. Base line cutting and chaining commenced November 12th. and grid line cutting and chaining were completed November 15,1990. Grid lines are spaced 400 feet apart with 100 foot spaced station intervals.

The magnetic survey was carried out within the six new claims by G.J. Gereghty of Copper Cliff, Ontario. Magnetic station intervals are 50 feet apart and the survey work was done from November 20th. to 22,1990 inclusive.

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Survey Data (continued)

VLF electromagnetic survey work over the original claim group was conducted by Vern Foulser of Whitefish, Ontario from October 16th. to 23,1990 inclusive. The newly gridded claims were surveyed with VLF by G.J. Gereghty during the period November 23rd. to 27,1990 inclusive. Most VLF readings were taken at the 100 foot station picket, however, 50 foot spaced stations were often taken on either side of the conductors.

Both Foulser and Gereghty stayed at the Eldon Hotel in Englehart, Ontario during the time periods required to complete these surveys.

During October travel was via truck and on foot but during November a truck and snow machine were used, however, the large swamp on the west side of the claim group would not freeze sufficiently to allow crossing with snow machine, therefore, snow shoes were used even during periods when snow had completely melted. Travel time was 2½ hours per day.

Total number of claims covered with new grid	=	6
Total base line cut and chained	=	1,547 ft.
Total grid line cut and chained	=	23,300 ft.
Total number of claims surveyed magnetically	=	6
Total number of magnetic readings	=	501
Total number of claims surveyed with VLF	=	18
Total number of VLF readings	=	1,147

INTERPRETATION (MAGNETIC)

Along the south border of claim L 1076195 the northern flank of a broad, positive, magnetic anomaly is taking shape. This anomaly is believed caused by basic and/or ultra basic rock types.

Thin linear, or short elliptical shaped, positive magnetic anomalies occurring in claims L 1076195, 96, 97, 98, 99 and L 1117786 may be due to either sulphides in meta sediments or mixed magnetite and sulphides in volcanic rocks.

The folded, linear, positive magnetic anomaly in the northwest part of claim L 1076198 was drilled by The Hudson Bay Mines Limited in 1972. A number of mineralized graphitic tuff horizons in basic to intermediate volcanic rock contain py, po, cpy -two of which contained anomalous gold values of 147 ppb. This drill hole stopped at 327 feet in felsic tuff containing narrow stringers of quartz-calcite with visible sphalerite. One intersection at 313.3' - 314' assayed 3.46% zinc and trace gold.

INTERPRETATION (ELECTROMAGNETIC)

Two of the eleven VLF conductors outlined were previously drill tested (1969-72) and explained by sulphide intersections with or without graphite. Two other conductors drilled during that same time interval were explained by graphitic zones, however, disseminated sulphides occur wide spread through sedimentary and volcanic rocks flanking the graphitic zone(s). Contained sulphides in diminishing order are: po,py, zn, cpy, au, Ag.

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Interpretation (Electromagnetic) continued

VLF conductors in the northern two thirds part of the property are believed caused by a combination of sulphides and graphite.

CONCLUSION

Some of the positive magnetic anomalies outlined by the magnetic survey are known to be caused by magnetic sulphides. Most magnetic anomalies are not continuous from line to line but many form linear trends with general east-west strike direction.

VLF conductors coincide with many small positive magnetic anomalies supporting a sulphide source.

RECOMMENDATION

Diamond drilling is recommended to test the two anomalies where interesting zinc and gold values have been found and also to test various conductive-magnetic anomalies outlined by the geophysical surveys. Approximate locations for drill hole collars are listed below but these will vary depending upon the size of drill used and the pin-pointed position of the conductor axis as determined by vertical loop electromagnetic survey work to be performed prior to drilling:-

Note: Most of the strong VLF conductors are known to respond to 1000 cycle vertical loop E.M. but to be sure that weaker VLF conductors will respond to VLEM a higher frequency should be used (eg) 3,000 - 5000 cycles.

B.H. No.	Approx. Co-ord.	Angle & Dir.	Depth
B.H. #17	34W - 91 N	-45°N	550 ft.
B.H. #18	24W - 92 N	-45°N	225 ft.
B.H. #19	22W - 83 N	-45°N	375 ft.
B.H. #20	12W - 95 N	-45°N	200 ft.
(Cont.on #20) B.H. #21	00 - 94 + 50 N	-45°N	200 ft.
B.H. #22	00 - 89 N	-45°N	200 ft.
B.H. #23	4W - 113 + 50N	-45°N	250 ft.
Deepen B.H. #16	? casing to be located	-45°N	100 ft.
B.H. #24	Same anomaly as B.H.16	-45°N	350 ft.
(cont.on #24) B.H. #25	40W - 113 + 50 N	-45°N	250 ft.
B.H. #26	44W - 97 N	-45°N	300 ft.
		Total	3,000 ft.

Gerald J. Gereghty

Gerald J. Gereghty

M.L. W900800727

Ministry of Northern Development and Mines
Ontario

DOCUMENT No W 9008•007

31M13SE0008 2.13843 PENSE

900

Mining Act — Report of Work (Geophysical, Geological and Geochemi

Type of Survey(s)	Mining Division	Township or Area
Magnetometer Survey	Larder Lake	Pense Township

Recorded Holder(s)	Prospector's Licence No.
Gerald J. Gereghty 2.13843	B23495
Address P.O. Box 19, 10 Godfrey Drive, Copper Cliff, Ontario POM 1N0	**Telephone No.** 705-682-4704
Survey Company Gerald J. Gereghty	
Name and Address of Author (of Geo-Technical Report) Gerald J. Gereghty (address given)	**Date of Survey (from & to)** 19 11 90 — 22 11 90 (Day / Mo. / Yr.)

Credits Requested per Each Claim in Columns at right

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

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Mining Claim Prefix	Mining Claim Number	Mining Claim Prefix	Mining Claim Number
L	1076195				
L	1076196				
L	1076197				
L	1076198				
L	1076199				
L	1117786				

RECEIVED
JAN 22 1991
MINING LANDS SECTION

Total number of mining claims covered by this report of work. 6

Date	Recorded Holder or Agent (Signature)
December 10/90	A.G. Gereghty

Certification Verifying Report of Work

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

Name and Address of Person Certifying	Telephone No.	Date	Certified By (Signature)
Gerald J. Gereghty (address given above).	705-682-4704	December 10/90	A.G. Gereghty

Received Stamp

RECEIVED
LARDER LAKE
MINING DIVISION
DEC 18 1990
TIME 10.52 a.m.

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
240	Dec 12/90	
	Date Approved as Recorded	Provincial Manager, Mining Lands
	March 19/91	

1362 (89/06)

M.L

Ministry of Northern Development and Mines
Ontario

DOCUMENT No. W 9008.00728

2.13843

Mining Act

Report of Work
(Geophysical, Geological and Geochemical Surveys)

Instructions
- Please type or print.
- Refer to Section 77, the Mining Act for assessment work requirements and maximum credits allowed per survey type.
- If number of mining claims traversed exceeds space on this form, attach a list.
- Technical Reports and maps in duplicate should be submitted to Mining Lands Section, Mineral Development and Lands Branch.

Type of Survey(s)	Mining Division	Township or Area
VLF Electromagnetic Survey	Larder Lake	Perse Township

Recorded Holder(s): Gerald J. Gereghty — Prospector's Licence No.: B 23495

Address: P.O. Box 19, 10 Godfrey Drive, Copper Cliff, Ontario P0M 1N0 — Telephone No.: 705-682-4704

Survey Company: Gerald J. Gereghty and Vern Foulser

Name and Address of Author (of Geo-Technical Report): Gerald J. Gereghty (address given)

Date of Survey (from & to): 16 | 10 | 90 (Day | Mo. | Yr.) — 26 | 11 | 90

Credits Requested per Each Claim in Columns at right

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

Total miles flown over claim(s).

Date: December 10/90 — Recorded Holder or Agent (Signature): Gerald J. Gereghty

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Mining Claim Prefix	Mining Claim Number	Mining Claim Prefix	Mining Claim Number
L	1076182	L	1076195		
L	1076183	L	1076196		
L	1076184	L	1076197		
L	1076185	L	1076198		
L	1076186	L	1076199		
L	1076187				
L	1076188	L	1117786		
L	1076189				
L	1076190				
L	1076191				
L	1076192				

RECEIVED
JAN 22 1991
MINING LANDS SECTION

Total number of mining claims covered by this report of work: 17

Certification Verifying Report of Work

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

Name and Address of Person Certifying: Gerald J. Gereghty (address given above).

Telephone No.: 705-682-4704 — Date: December 10/90 — Certified By (Signature): A. J. Gereghty

For Office Use Only

Received Stamp: RECEIVED LARDER LAKE MINING DIVISION DEC 12 1990 TIME 10.52am

Total Days Cr. Recorded	Date Recorded	Mining Recorder
340	Dec 12/90.	
	Date Approved as Recorded	Provincial Manager, Mining Lands
	March 19/91	

1362 (89/06)

Ontario

Ministry of Natural Resources

File 682-9704

GEOPHYSICAL – GEOLOGICAL – GEOCHEMICAL TECHNICAL DATA STATEMENT

2.13843

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) Magnetometer and VLF EM (Radem)
Township or Area Pense Township
Claim Holder(s) G. J. Gereghty (17 claims)
The Hudson Bay Mines (leased claim L 104660)
Survey Company
Author of Report G. J. Gereghty
Address of Author 10 Godfrey Drive, Copper Cliff, Ontario
Covering Dates of Survey October 16 to December 27, 1990 (linecutting to office)
Total Miles of Line Cut 4.7 miles

SPECIAL PROVISIONS CREDITS REQUESTED

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

ENTER 20 days for each additional survey using same grid.

	DAYS per claim
Geophysical	
–Electromagnetic	20
–Magnetometer	40
–Radiometric	
–Other	
Geological	
Geochemical	

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

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

DATE: January 13/91 SIGNATURE: G. J. Gereghty Author of Report or Agent

Res. Geol. _____ Qualifications 63.2370

Previous Surveys

File No.	Type	Date	Claim Holder

OFFICE USE ONLY

MINING CLAIMS TRAVERSED
List numerically

	(prefix)	(number)
20)	L	104660
20)	L	1076182
20)	L	1076183
20)	L	1076184
20)	L	1076185
20)	L	1076186
20)	L	1076187
20)	L	1076188
20)	L	1076189
20)	L	1076190
20)	L	1076191
20)	L	1076192
60)	L	1076195
60)	L	1076196
60)	L	1076197
60)	L	1076198
60)	L	1076199
60)	L	1117786

If space insufficient, attach list

TOTAL CLAIMS 18

837 (5/79)

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations 501 (magnetic) / Number of Readings 1147 (electromagnetic)

Station interval 50 feet / Line spacing 200 & 400 feet

Profile scale / 1" = 20'

Contour interval 100 γ's / 10'

MAGNETIC

Instrument Sharpe MF-1 fluxgate magnetometer

Accuracy -- Scale constant 10 γ's on 3000 γ scale, 30 γ's on 10,000 γ scale.

Diurnal correction method Base line station tie-ins.

Base Station check-in interval (hours) 1½ - 2½ hours.

Base Station location and value All 52N base line - grid line intersections are base stations.

ELECTROMAGNETIC

Instrument Radem VLF electromagnetic unit.

Coil configuration Fixed vertical transmitter - horizontal receiver

Coil separation 1000 - 5000 miles.

Accuracy Dip angle ± ½°, Out-of-phase component ± 2%

Method: ☑ Fixed transmitter ☐ Shoot back ☐ In line ☐ Parallel line

Frequency 24.8 Khz Seattle, Washington.
(specify V.L.F. station)

Parameters measured Dip angle and out-of-phase component.

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)

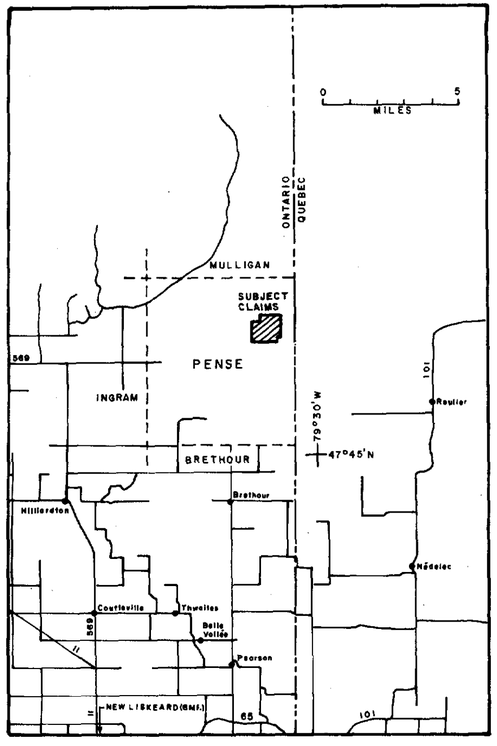
Name of Laboratory _____

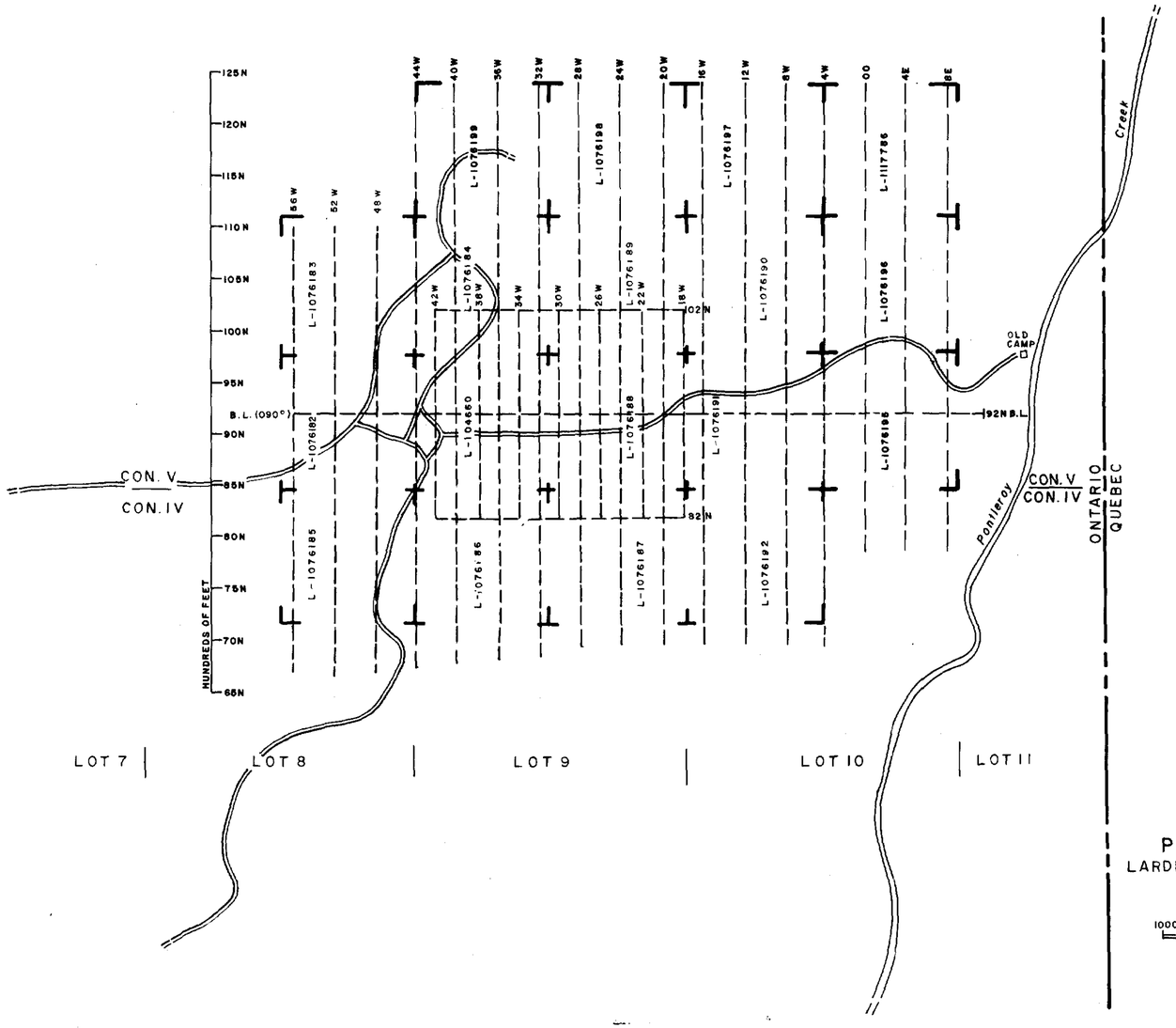
Extraction Method _____

Analytical Method _____

Reagents Used _____

General _____





2.13843

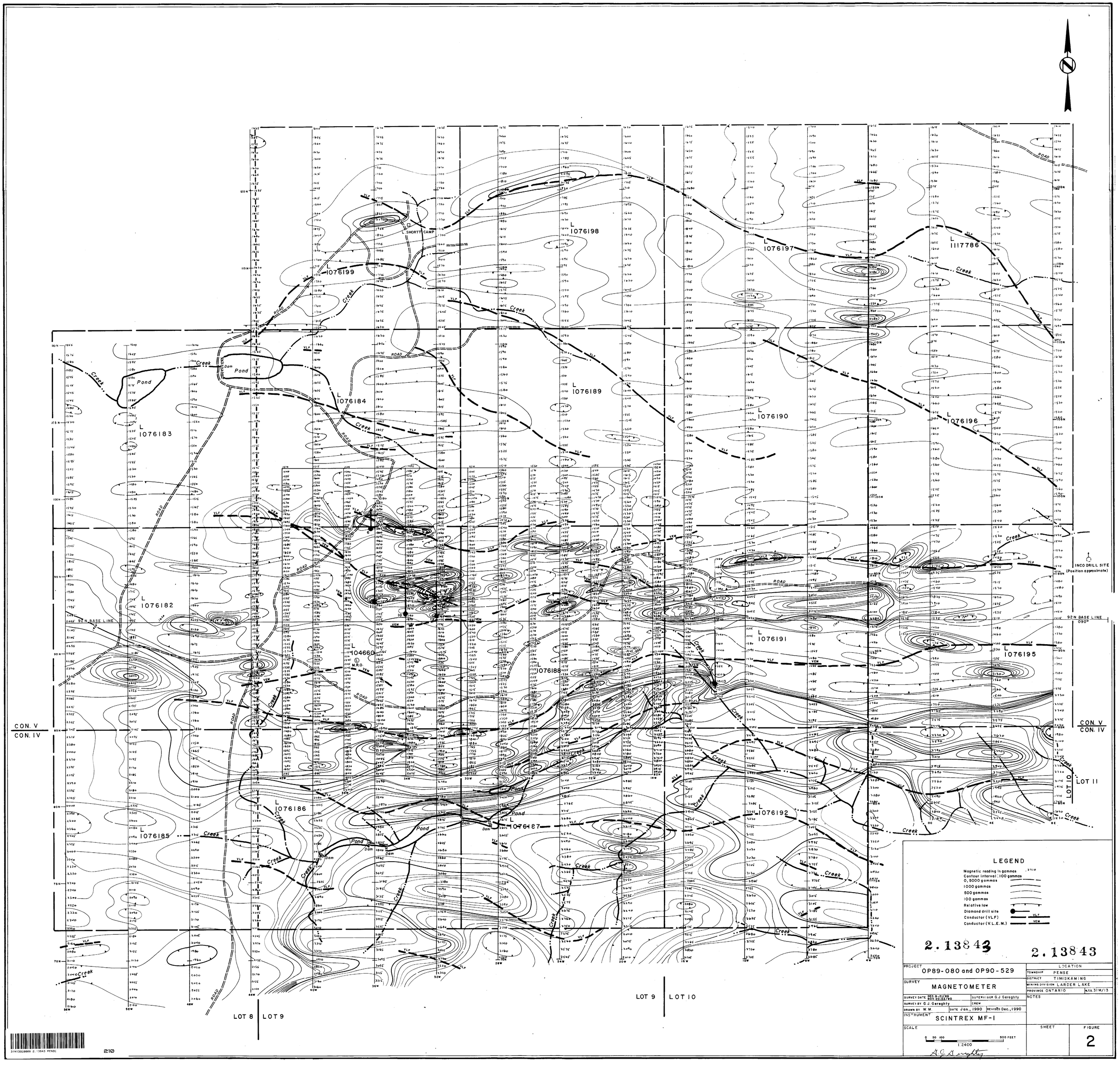
~~2.13842~~

GRID PLAN
PENSE TOWNSHIP
LARDER LAKE MINING DIVISION
ONTARIO

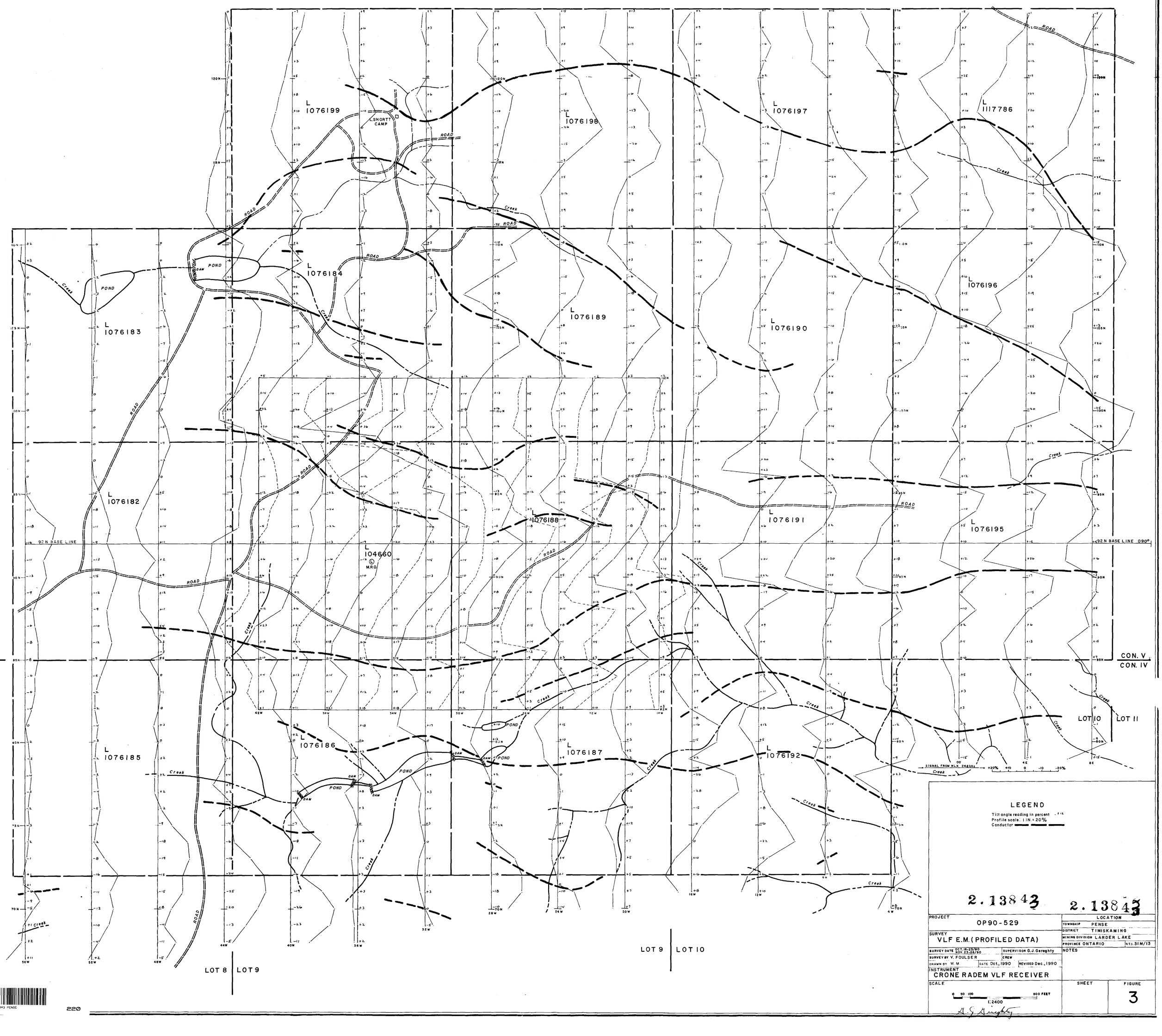
1000 0 500 1000
1 IN. = 1000 FT.

FIGURE 1

31M/13 G.J.G./w.m. 12/80 11/69



PROJECT	OP89-080 and OP90-529
SURVEY	MAGNETOMETER
SURVEY DATE	DEC 9-21/89 NOV 30-DEC 8/90
SURVEY BY	G.J. Geraghty
DRAWN BY	W.M.
DATE	Jan., 1990
REVISED TO	Dec., 1990
INSTRUMENT	SCINTREX MF-I
SCALE	1:2400 (0 50 100 500 FEET)
SUPERVISOR	G.J. Geraghty
CREW	
LOCATION	
TOWNSHIP	PENSE
DISTRICT	TIMISKAMING
MINING DIVISION	LARDER LAKE
PROVINCE	ONTARIO
NTS	31M/13
NOTES	
SHEET	
FIGURE	2

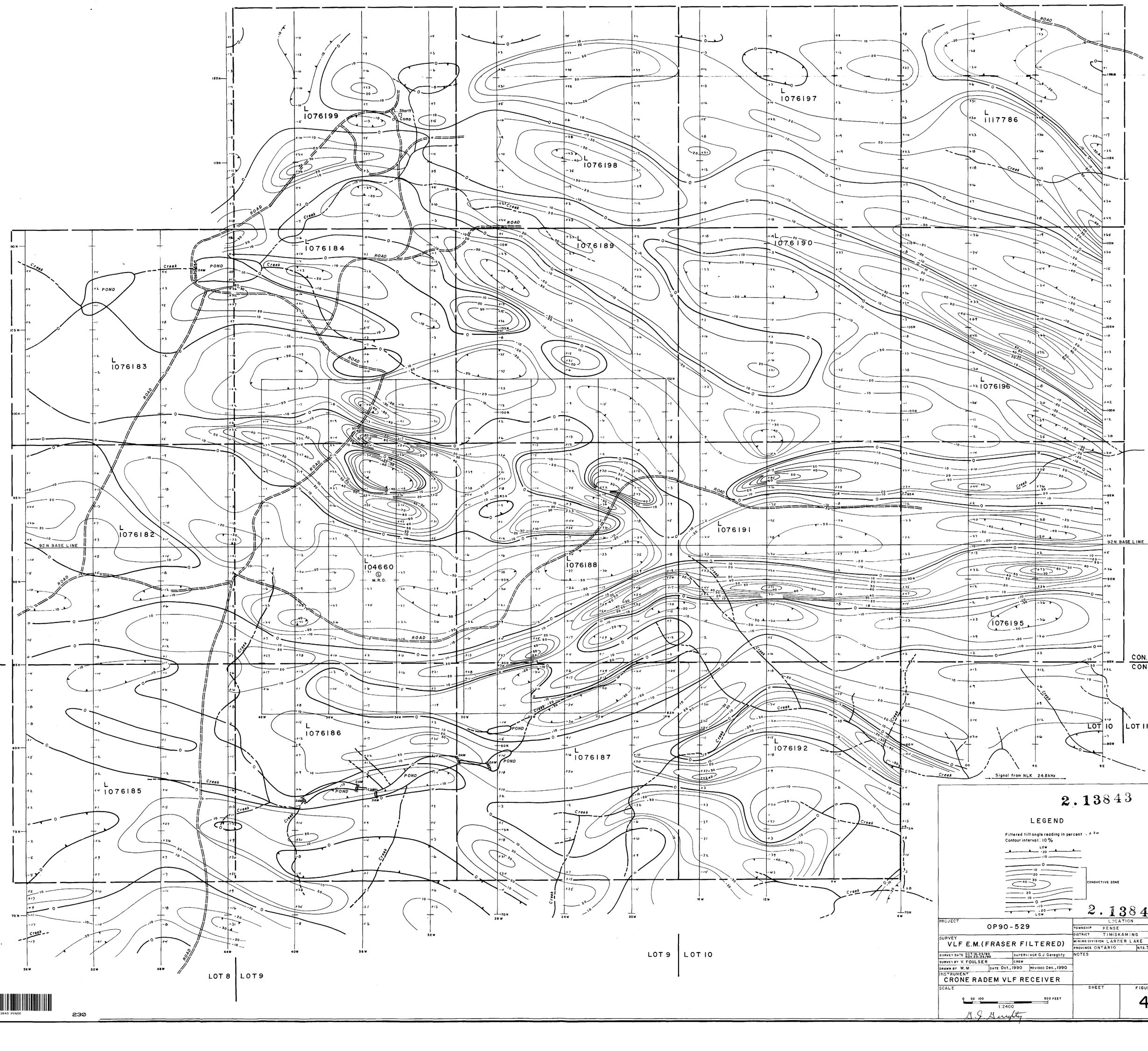


LEGEND

Tilt angle reading in percent
Profile scale: 1 IN = 20%
Conductor

2.13843 2.13843

PROJECT 0P90-529	LOCATION
SURVEY VLF E.M. (PROFILED DATA)	TOWNSHIP PENSE
SURVEY DATE OCT. 16-23/90 NOV. 23-26/90	SUPERVISOR G.J. Geraghty
SURVEY BY V. FOULSER	CREW
DRAWN BY W.M.	DATE Oct., 1990 REVISED Dec., 1990
INSTRUMENT CRONE RADEM VLF RECEIVER	DISTRICT TIMISKAMING
	MINING DIVISION LARDER LAKE
	PROVINCE ONTARIO N.T.S. 31M/13
	NOTES
SCALE 0 50 100 500 FEET 1:2400	SHEET
G.J. Geraghty	FIGURE 3



2.13843

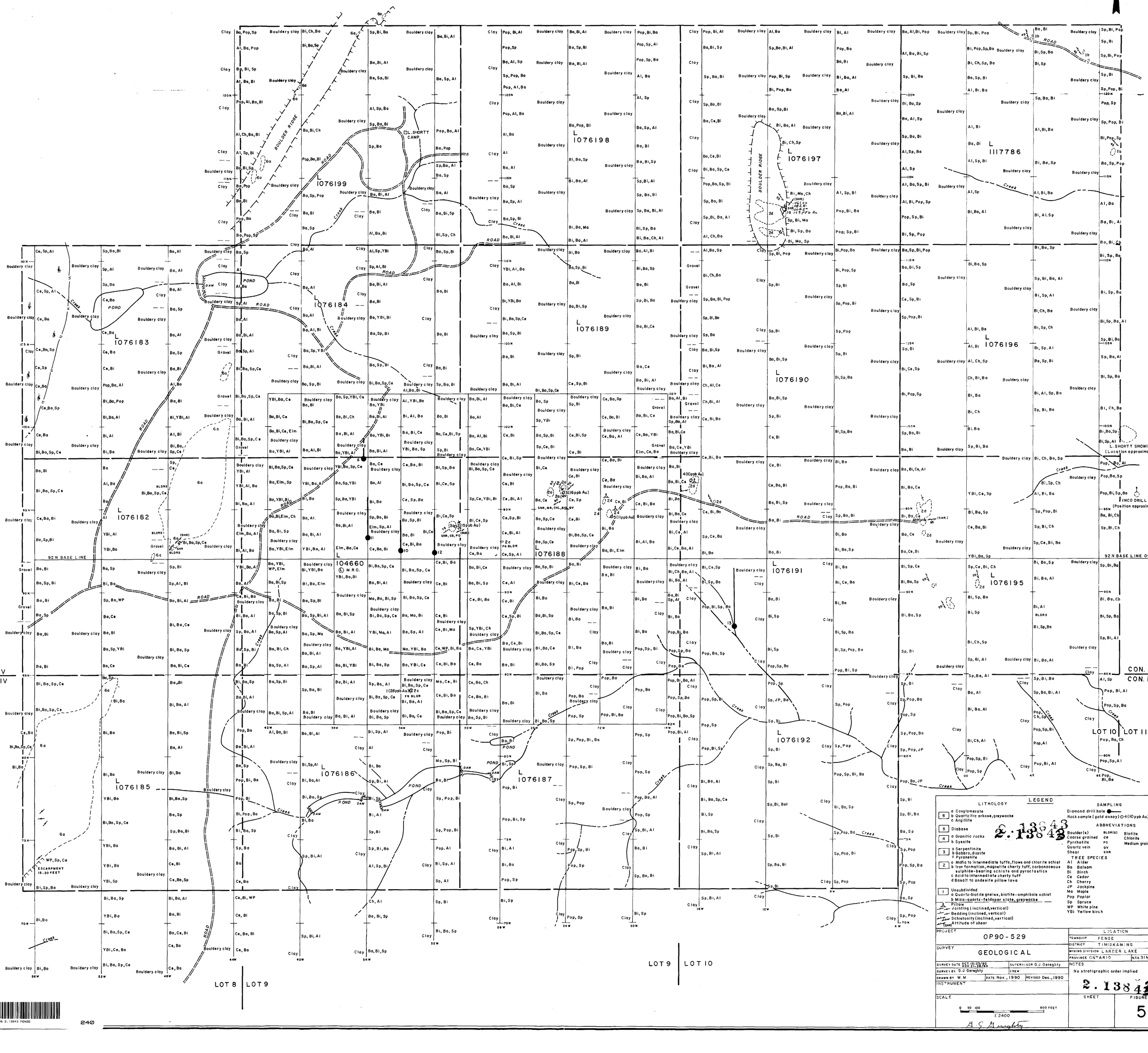
LEGEND

Filtered tilt angle reading in percent . ± 20
Contour interval: 10%

2.13843

PROJECT	OP90-529	LOCATION	
SURVEY	VLF E.M.(FRASER FILTERED)	TOWNSHIP	PENSE
		DISTRICT	TIMISKAMING
		MINING DIVISION	LARDER LAKE
		PROVINCE ONTARIO	N.T.S. 31M/13
SURVEY DATE	OCT 16-23/90, NOV 23-26/90	SUPERVISOR	G.J. Geraghty
SURVEY BY	V. FOULSER	CREW	
DRAWN BY	W.M.	DATE	Oct., 1990
REVISED	Dec., 1990	NOTES	
INSTRUMENT	CRONE RADEM VLF RECEIVER		
SCALE	0 50 100 500 FEET, 1:2400	SHEET	FIGURE 4

G.J. Geraghty



LEGEND

LITHOLOGY

- 6 a Conglomerate; b Quartzitic arkose, greywacke; c Argillite
- 5 Diabase
- 4 a Granitic rocks; b Syenite
- 3 a Serpentinite; b Gabbro, diorite; c Pyroxenite
- 2 a Mafic to intermediate tuffs, flows and chlorite schist; b Iron formation, magnetite cherty tuff, carbonaceous sulphide-bearing schists and pyroclastics; c Acid to intermediate cherty tuff; d Basalt to andesite pillow lava
- 1 Unsubdivided; a Quartz-biotite gneiss, biotite-amphibole schist; b Mica-quartz-feldspar slate, greywacke

Pillow; Jointing (inclined, vertical); Bedding (inclined, vertical); Schistosity (inclined, vertical); Attitude of shear

SAMPLING

Diamond drill hole; Rock sample (gold assay) O4 (10 ppb Au)

ABBREVIATIONS

Boulder(s) BLDR(s); Coarse grained ce; Pyrrhotite PO; Quartz vein qv; Shear SHR; Biotite BIO; Chlorite CHL; Medium grained MDG

TREE SPECIES

Al Alder; Ba Balsam; Bi Birch; Ce Cedar; Ch Cherry; JP Jackpine; Ma Maple; Pop Poplar; Sp Spruce; WP White pine; YBi Yellow birch

2.13643

PROJECT	OP90-529
SURVEY	GEOLOGICAL
SURVEY DATE	OCT 10-25/90, NOV 27-28/90
SUPERVISOR	G.J. Geraghty
SURVEY BY	G.J. Geraghty
CREW	
DRAWN BY	W.M.
DATE	Nov., 1990
REVISED	Dec., 1990
INSTRUMENT	
SCALE	1:2400 (0 50 100 500 FEET)

LOCATION

TOWNSHIP	PENSE
DISTRICT	TIMISKAMING
MINING DIVISION	LARDER LAKE
PROVINCE	ONTARIO
N.T.S.	31M/13

NOTES

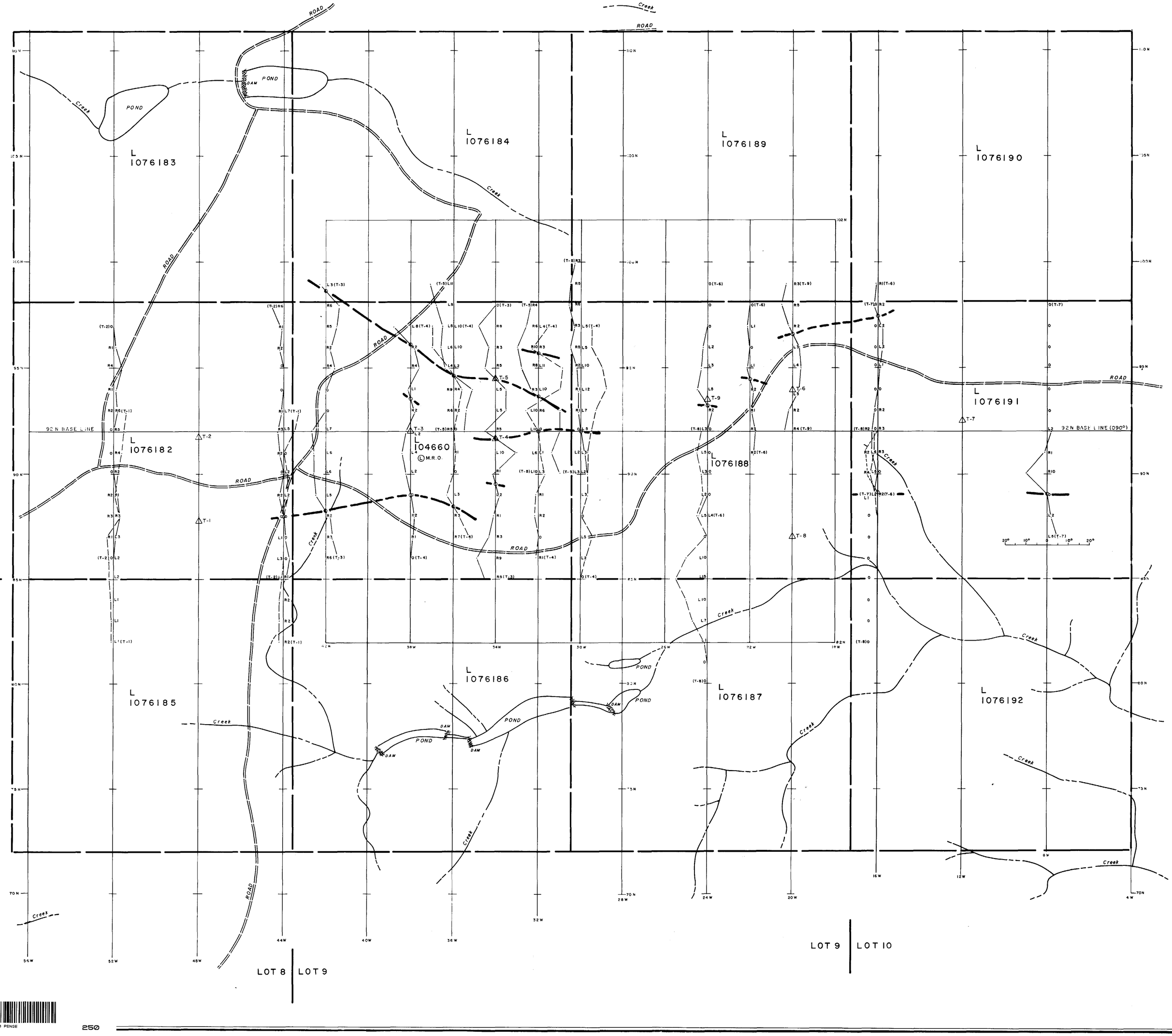
No stratigraphic order implied

2.13843

SHEET

FIGURE 5

G. J. Geraghty



LEGEND

Transmitter location and number △T-1

Tilt angle readings in degrees right, left (T-1)-R4 -L4(T-1)

Profile scale: 1 inch = 20 Degrees

Conductor — STRONG — MEDIUM — WEAK

2.13843
2.13843

PROJECT	OP90-529
SURVEY	V.L. ELECTROMAGNETIC
SURVEY DATE	JUNE 10-13/90
SUPERVISOR	G.J. Gereghty
SURVEY BY	G.J. GEREGHTY
CREW	V. FOULSER
DRAWN BY	W.M.
DATE	Nov., 1990
REVISED	
INSTRUMENT	INCO VERTICAL LOOP-1000 Hz
SCALE	0 50 100 500 FEET, 1:2400

LOCATION

TOWNSHIP	PENSE
DISTRICT	TIMISKAMING
MINING DIVISION	LARDER LAKE
PROVINCE	ONTARIO
N.T.S.	31M/13

NOTES

SHEET	FIGURE
	6

G.J. Gereghty