A-828

41J08NE0007 2.12512 BOON

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REPORT ON AN

AIRBORNE MAGNETIC & VLF-EM SURVEY BOON TOWNSHIP SUDBURY MINING DIVISION, ONTARIO

for

GALLO EXPLORATION SERVICES INC.

by

TERRAQUEST LTD.
Toronto, Canada

May 5, 1989

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LIST OF FIGURES

LIST OF MAPS IN JACKET

240 Adelaide Street West, Toronto, Canada M5H 1W7, Telephone (416) 971-5422

1. INTRODUCTION

This report describes the specifications and results of a geophysical survey carried out for Gallo Exploration Services Inc. of 148 Allanhurst Drive, Islington, Ontario, M9A 4K5 by Terraquest Ltd., 240 Adelaide Street West, Toronto, Canada. The field work was completed on March 26, 1989 and the data processing, interpretation and reporting from March 27 to May 5, 1989.

The purpose of a survey of this type is two-fold. First to prospect directly for anomalously conductive and magnetic areas in the earth's crust which may be caused by, or at least related to, mineral deposits. A second is to use the magnetic and conductivity patterns derived from the survey results to assist in mapping geology, and to indicate the presence of faults, shear zones, folding, alteration zones and other structures potentially favourable to the presence of gold and base-metal concentration. To achieve this purpose the survey area was systematically traversed by an aircraft carrying geophysical instruments along parallel flight lines spaced at even intervals, 100 metres above the terrain surface, and aligned so as to intersect the regional geology in a way to provide the optimum contour patterns of geophysical data.

2. THE PROPERTY

The property is located in Boon township, in the Sudbury Mining Division of Ontario about 90 kilometres west of the town of Sudbury. The survey area forms an irregular long thin block which extends eastwards from East Bull Lake and can be accessed directly by Highway 553 which passes along the west side of the block. River Aux Sables passes through the central part of the survey area.

The latitude and longitude are 46 degrees 25 minutes 30 seconds, and 82 degrees 9 minutes respectively, and the N.T.S. reference is 41J/8.

The survey area is shown in figure 2.

3. GEOLOGY

Map References

1. Map 52D: East Bull Lake Area. scale 1:63,360. O.D.M. 1943.
2. Map 2419: Sault Ste Marie-Elliot Lake, Geological Compilation Series. scale 1:253,440. O.G.S. 1979.
3. McCrank, G.F.D., Kamineni, D.C., Ejeckam, R.B., and Sikorsky, R., 1989: Geology of the East Bull Lake Gabbro-Anorthosite Pluton, Algoma District, Ontario. Canadian Journal of Earth Science, 26, 357-375.

240 Adelaide Street West, Toronto, Canada M5H 1W7 Telephone (416) 971-5432 Fax (416) 971-6449

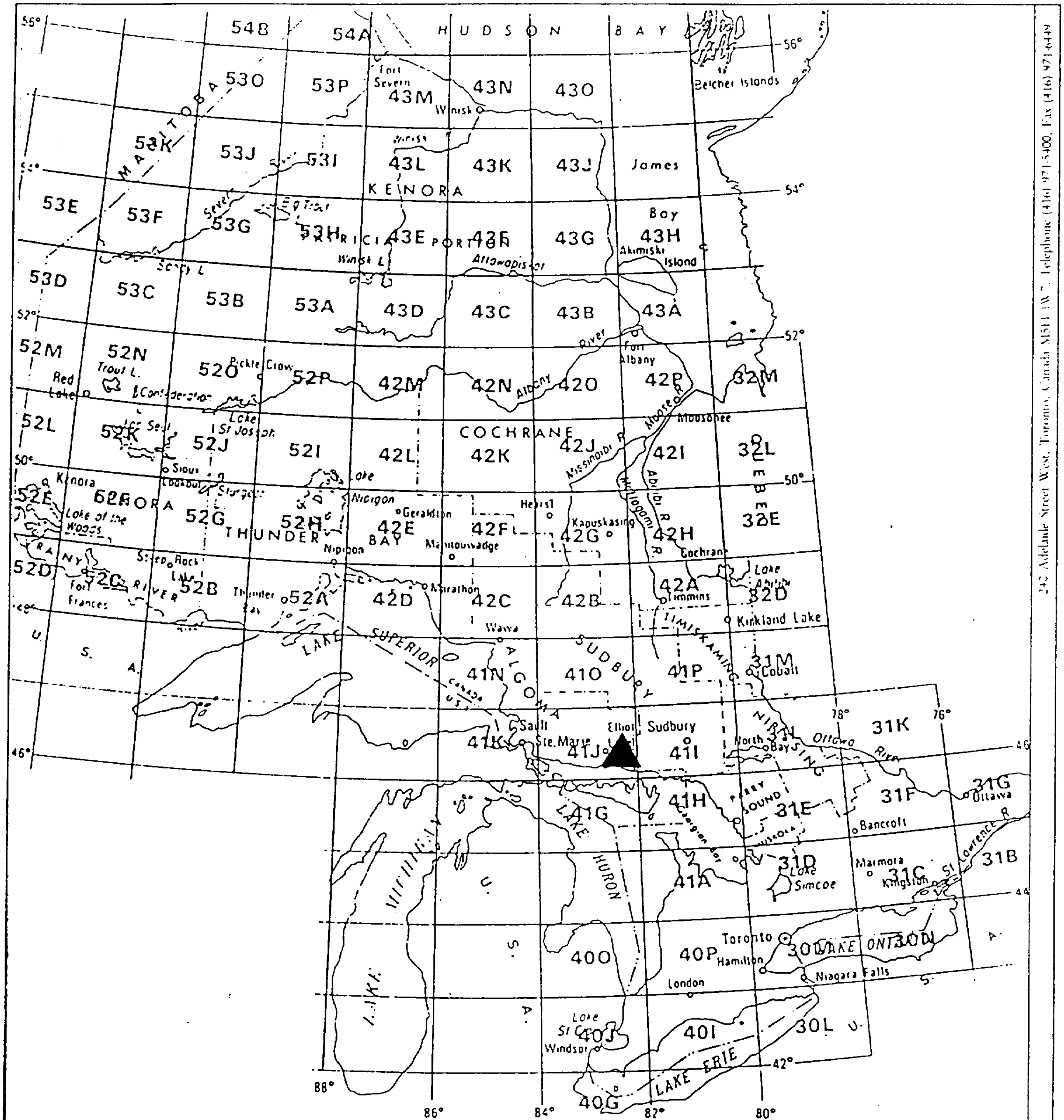

FIGURE 1. Location Map

245 Adelaide Street West, Toronto, Canada M5H 1W7 · Telephone (416) 971-5400, Fax (416) 971-6449

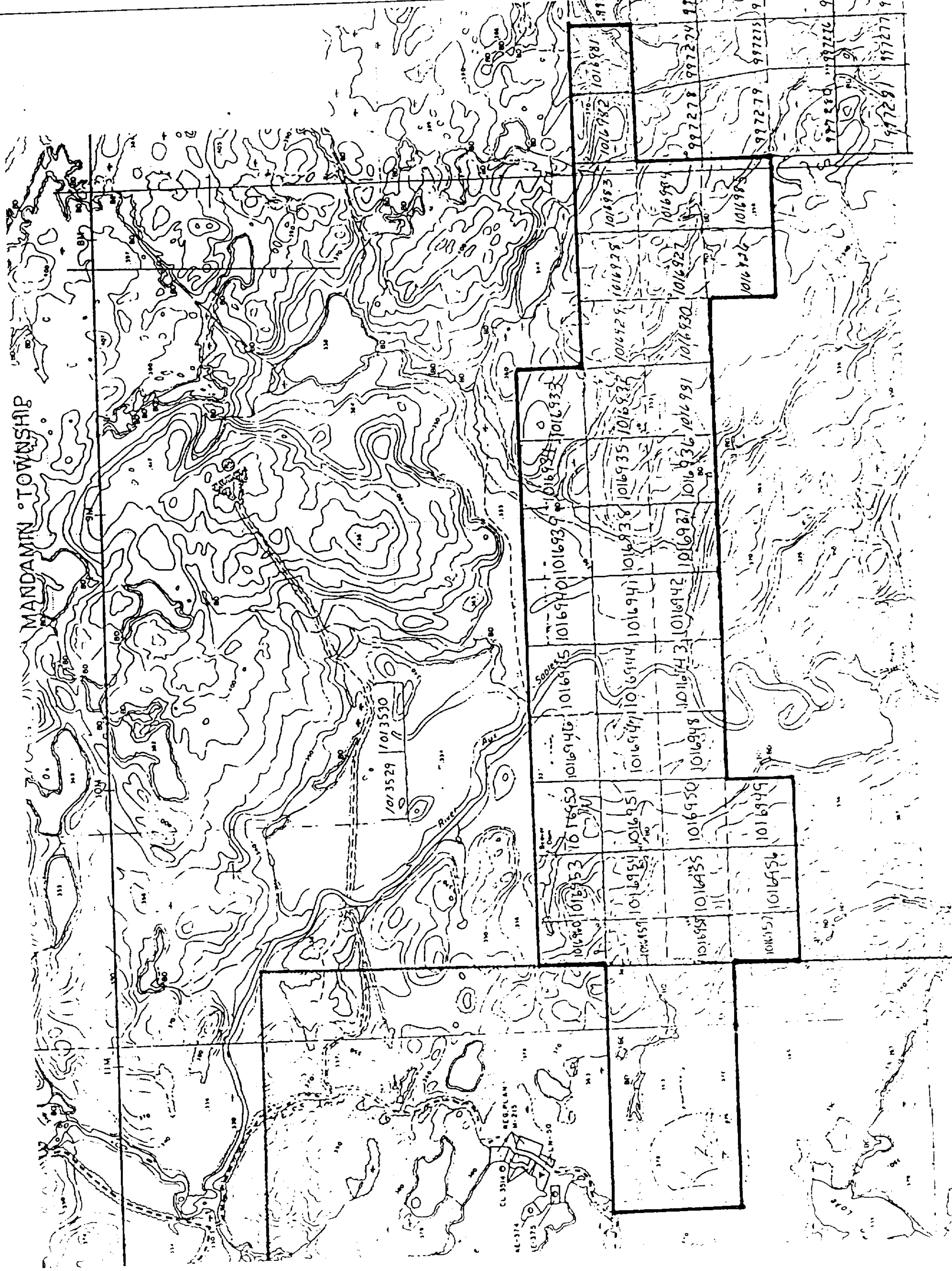

FIGURE 2. SURVEY AREA

(exact claim locations not certified)

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The survey area covers the eastern arm of the East Bull Lake Pluton which is an inward dipping lopolith comprised of layered gabbroic anorthosite. In this area the intrusion varies from 0 to 400 metres thick and has been divided into several composite rock units which represent a simplification of a very complex stratigraphic succession. A basal anorthositic unit occurs within the survey area and includes nodular anorthositic gabbro, leucogabbro and anorthosite to leucogabbro. Successive units to the west of the property include rhythmic-layered gabbro, troctolite, layered gabbro and massive gabbro.

The host rock to the southeast is a syenite belonging to the Parisien Lake Syenite which is part of the Superior geological province. Elsewhere the lopolith intrudes metavolcanic rocks of the Whiskey Lake belt which belong to the Southern geological province.

The lopolith is bounded to the southwest by a younger granite pluton and to the northeast by the Nipissing Diabase. All lithologies have been intruded by late Precambrian northwest trending diabase dykes. The northwest trending Folson Lake fault zone passes immediately south of the survey area.

Several pits and a trench have exposed copper and nickel mineralization within the granite along the southwest corner of the property.

4. SURVEY SPECIFICATIONS

4.1 Instruments

The survey was carried out using a Cessna 206 aircraft, registration C-GUCE, which carries two magnetometers, one in each wing tip extension and a VLF electromagnetic detector.

The magnetometers are a high sensitivity, optically pumped cesium vapour magnetometer mounted in a stinger attached to the tail of the aircraft. It's specifications are as follows:

Working range:	20,000-100,000 gammas
Sensitivity:	0.001 gammas
Sampling rate:	0.2 seconds
Model:	BIW 2321H8
Manufacturer:	Scintrex, Concord Ontario.

The magnetometer processor is a PMAG 3000 and the data acquisition system is a PDAS 1000, both manufactured by Picodas Group Inc.

The signal to noise ratio of the magnetic response is improved by a real time compensation technique provided by Picodas Limited. The sources of compensated noise are permanent, induced and eddy current effects of the airframe an. the heading effects. The system uses three fluxgate magnetometers to measure the aircraft attitude with respect for the earth magnetic field vector. A mathematical model is used to solve this interference effect.

The VLF-EM unit uses three orthogonal detector coils to measure (a) the total field strength of the time-varying EM field and (b) the phase between the vertical coil and both the "along line" coil (LINE) and the "cross-line" coil (ORTHO). The LINE coil is tuned to a transmitter station that is ideally positioned at right angles to the flight lines, while the ORTHO coil transmitter should be in line with the flight lines. It's specifications are:

Accuracy:	1%
Reading Interval:	1/2 second
Model:	TOTEM 2A
Manufacturer:	Herz Industries, Toronto, Canada

The VLF sensor is mounted in a plastic pipe projected forward from the mid-section of the starboard wing.

Other instruments are:

* King KRA-10A radar altimeter
* UDAS-100 data processor with Digidata nine track tape recorder, manufactured by Urtec Ltd., Markham, Ontario.
* Geocam video camera and recorder for flight path recovery, manufactured by Geotech Ltd., Markham, Ontario.

4.2 Lines and Data

Line spacing:	100 metres
Line direction:	040 degrees
Terrain clearance:	100 m
Average ground speed:	193 km/hr
Data point interval:	
Magnetic:	11 metres
VLF-EM:	11 metres
Tie Line interval:	2 km
Channel 1 (LINE):	NAA Cutler, 24.0 kHz
Channel 2 (ORTHO):	NSS Annapolis, 21.4 kHz
Line km over total survey area:	155 line km

4.3 Tolerances

Line spacing: Any gaps wider than twice the line spacing and longer than 10 times the line spacing were filled in by a new line.
Terrain clearance: Portions of line which were flown above 125 metres for more than one km were reflown if safety considerations were acceptable.
Diurnal magnetic variation: Less than ten gammas deviation from a smooth background over a period of two minutes or less as seen on the base station analogue record.

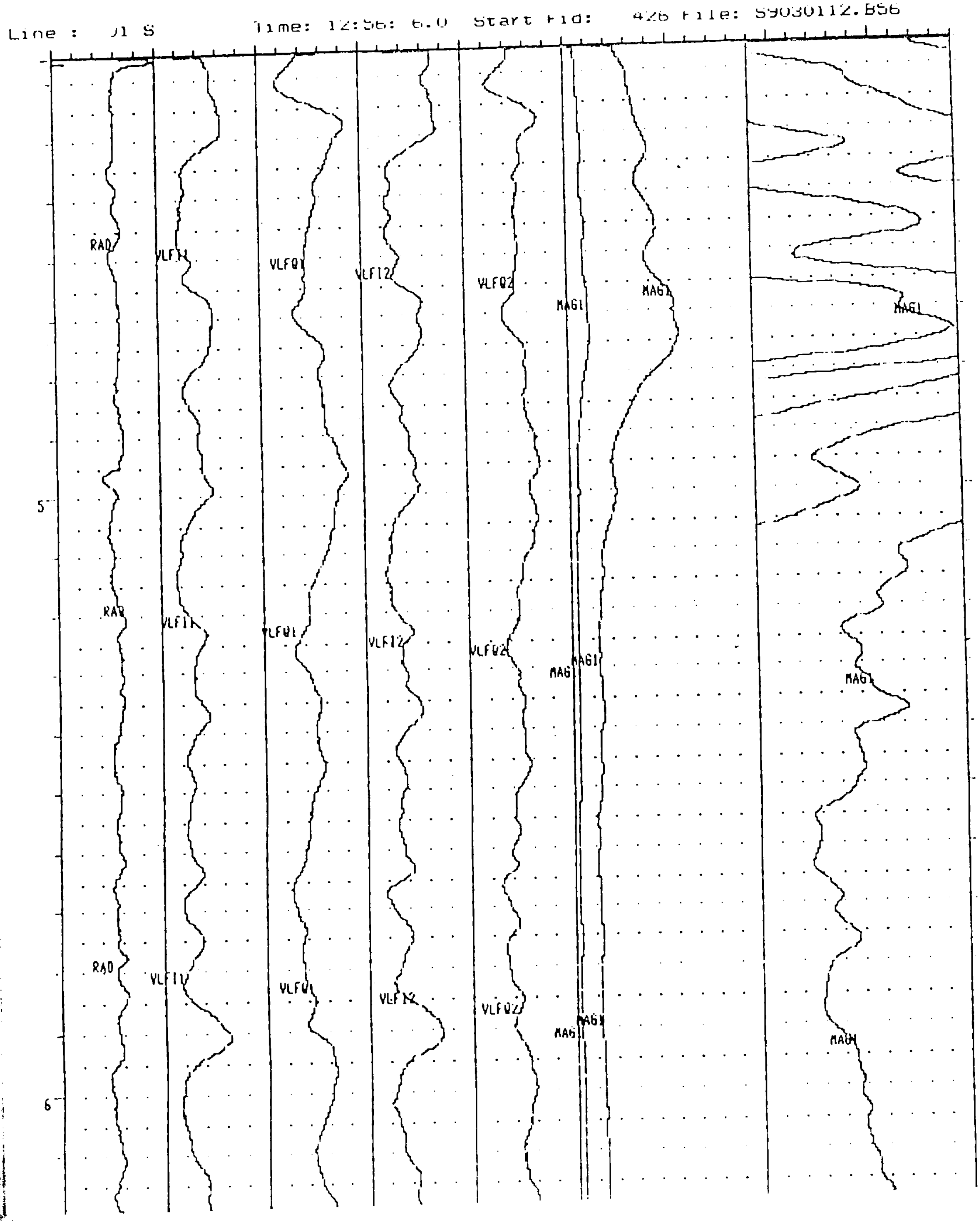

FIGURE 3. SAMPLE OF ANALOG DATA

240 Adelaide Street West, Toronto, Canada M5H 1W7 • Telephone (416) 971-5400, Fax (416) 971-

Ma uvre noise: nil

4.4 Photomosaics

For navigating the aircraft and recovering the flight path, semi-controled mosaics of aerial photographs were made from existing air photos. Each photograph forming the mosaic was adjusted to conform to the NTS map system before the mosaic was assembled.

5. DATA PROCESSING

Flight path recovery was carried out in the field using a video tape viewer to observe the flight path as recorded by the Geocam video camera system. The flight path recovery was completed daily to enable reflights to be selected where needed for the following day.

The magnetic data was levelled in the standard manner by tying survey lines to the tie lines. The IGRF has not been removed. The total field was contoured by computer using a program provided by Dataplotting Services Inc. To do this the final levelled data set is gridded at a grid cell spacing of 1/10th of an inch at map scale.

The vertical magnetic gradient is computed from the gridded and contoured total field data using a method of transforming the data set into the frequency domain, applying a transfer function to calculate the gradient, and then transforming back into the spatial domain. The method is described by a number of authors including Grant, 1972 and Spector, 1968. The computer program for this purpose is provided by Paterson, Grant and Watson Ltd. of Toronto.

The VLF data was treated automatically so as to normalize the non conductive background areas to 100 (total field strength) and zero (quadrature). The algorithms to do this were developed by Terraquest and will be provided to anyone interested by application to the company.

All of these dataprocessing calculations and map contouring were carried out by Dataplotting Services Inc. of Toronto.

Grant, F.S. and Spector A., 1970: Statistical Models for Interpreting Aeromagnetic Data; Geophysics, Vol 35

Grant, F.S., 1972: Review of Data Processing and Interpretation Methods in Gravity and Magnetics; Geophysics Vol 37-4

Spector, A., 1968: Spectral Analysis of Aeromagnetic maps; unpublished thesis; University of Toronto.

6. INTERPRETATION

6.1 General Approach

To satisfy the purpose of the survey as stated in the introduction, the interpretation procedure was carried out on both the magnetic and VLF data. On a local scale the magnetic gradient contour patterns were used to outline geological units which have different magnetic intensity and patterns or "signatures". Where possible these are related to existing geology to provide a geological identity to the units. On a regional scale the total field contour patterns were used in the same way.

Faults and shear zones are interpreted mainly from lateral displacements of otherwise linear magnetic anomalies but also from long narrow "lows". The direction of regional faulting in the general area is taken into account when selecting faults. Folding is usually seen as curved regional patterns. Alteration zones can show up as anomalously quiet areas, often adjacent to strong, circular anomalies that represent intrusives. Magnetic anomalies that are caused by iron deposits of ore quality are usually obvious owing to their high amplitude, often in tens of thousands of gammas.

VLF anomalies are categorized according to whether the phase response is normal, reverse, or no phase at all. The significance of the differing phase responses is not completely understood although in general reverse phase indicates either overburden as the source or a conductor with considerable depth extent, or both. Normal phase response is theoretically caused by surface conductors with limited depth extent. In some cases, a change in the orientation of the conductor appears to affect the sense of the phase response.

Areas showing a smooth VLF-EM response somewhat above background (ie. 110 or so) are likely caused by overburden which is thick enough and conductive enough to saturate at these frequencies. In this case no response from bedrock is seen.

The VLF-EM conductor axes have been identified and evaluated according to the Terraquest classification system (Figure 4). This system correlates the nature and orientation of the conductor axes with stratigraphic, structural and topographic features to obtain an association from which one or more origins may be selected. Alternate associations are indicated in parentheses.

6.2 Interpretation

The magnetic and VLF-EM data are shown in contoured format on maps at a scale of 1:10,000 in the back pocket. An interpretation map is also provided. The following notes are intended to supplement these maps.

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FIGURE 4

TERRAQUEST CLASSIFICATION OF VLF-EM CONDUCTOR AXES

SYMBOL	CORRELATION	ASSOCIATION: Possible Origins
a , A	Coincident with magnetic stratigraphy	Bedrock magnetic horizons: stratabound mineralogic origin or shear zone
b , B	Parallel to magnetic stratigraphy	Bedrock non-magnetic horizons: stratabound mineralogic origin or shear zone
c , C	No correlation with magnetic stratigraphy	Association not known: possible small scale stratabound mineralogic origin, fault or shear zone, overburden
d , D	Coincident with magnetic dyke	Dyke or possible fault: mineralogic or electrolytic
f , F	Coincident with topographic lineament or parallel to fault system	Fault zone: mineralogic or electrolytic
ob , OB	Contours of total field response conform to topographic depression	Most likely overburden: clayey sediments, swampy mud
cul , CUL	Coincident with cultural sources	Electrical, pipe or railway lines

NOTES

1 - Upper case symbols denote a relatively strong total field strength
2 - Underlined symbols denote a relatively strong quadrature response
3 - Mineralogic origins include sulphides, graphite, and in fault zones, gouge
4 - Electrolytic origins imply conductivity related to porosity or high moisture content

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The total magnetic field has a relief of approximately 500 gammas across the survey area and shows the strongest responses along the southern boundary. Strong responses also occur to the northeast of the property. Narrow northwest trending anomalies cross the property. The vertical magnetic gradient is primarily useful in the delineation of subunits within the higher magnetic area to the south.

The strong responses correlate with the syenite (Unit 7) to the south and the Nipissing Diabase (Unit 17) to the northeast. Magnetically active horizons within the syenite (Unit 7m) trend to the northwest and are probably related to increased concentrations of magnetic minerals such as magnetite or pyrrhotite. Note that the delineation of the syenite extends further north and northwest than shown on the geological maps. This is consistent with the in-ward dipping lopolith model of the East Bull Lake gabbro overlapping the country rocks such that the magnetic responses from the syenite are detectable through the thin edges of the lopolith.

The fine grained granodiorite (Unit 3a) which belongs to the Parisien Lake Syenite and the late stage granite (Unit 15) cannot be distinguished magnetically from the East Bull Lake gabbro lithologies. The East Bull Lake lithologies correlate with weak to moderate magnetic responses. Locally, a few of these outcrops can be discriminated using magnetic techniques. The nodular anorthositic gabbro (Unit 9b), the massive gabbro (Unit 13), and some of the leucogabbro (Unit 9a) outcrops correlate with slightly stronger magnetic responses which permit their delineation. The layered gabbro (Unit 12), the anorthosite to leucogabbro (Unit 9) and most of the outcrops of leucogabbro (Unit 9a) correlate with weak and uniform magnetic responses.

Outcrops of the Late Precambrian diabase dykes (Unit 18) correlate with narrow northwest trending magnetic anomalies. In places these possess the same attitude and magnitude as the 7m magnetic units and are difficult to discriminate.

Most of the magnetically interpreted faults trend variably from the northeast through to the north-northwest and in general show limited continuity. The Folson Lake fault zone is shown on the interpretation map, taken from the mapped geology. The lack of continuity of the magnetically interpreted faults and the orientation of the Late Precambrian diabase dykes support the possible existence of other structures parallel to the Folson Lake fault zone, however these would be difficult to detect as they would be parallel to the dominant magnetic fabric across the survey area.

The VLF-EM survey has identified numerous weak to strong conductors with weak quadrature responses. The vertical scale of the quadrature profile on the data map (Map A-828-3) has been expanded to twice the normal scale.

Most of the the conductor axes are associated with structural sources, either faults or shear zones. This type of conductivity may be relate to: a) minerals such as sulphides, graphite or gouge along the structure, or to b) an ionic effect created by water or porosity either within the structure or along the upper weathered and leached edge. The Folson Lake fault zone correlates with a prominent conductor axes. Two other strong conductor axes occur within the syenite and are thought to be related to northwest trending structures. Alternatively a few of these may be related to bedrock sources such as sulphides or graphite. These should be verified by detailed follow-up using EM or IP methods.

Several of the diabase dykes correlate with good VLF-EM responses. These may originate from minerals such as sulphides within the dyke or possibly to faults or edge effects.

7. SUMMARY

An airborne combined magnetic and VLF-EM survey has been carried out at 100 metre line intervals with data reading stations at 11 metres along the flight lines. All data is produced on maps at a scale of 1:10,000.

The magnetic data has been used to modify and update the existing geology and has shown a number of new contacts and faults. Most of the VLF-EM conductor axes are interpreted to be related to structural sources and some to diabase dykes. Alternately, a few possess potential for bedrock origins and should be investigated on the ground.

TERRAQUEST LTD.

Charles Q. Barrie, M.Sc.
Geologist

Ontario

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Ministry of
Northern Development
and Mines

Ministère du
Développement du Nord
et des Mines

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

Telephone: (416) 965-4888

July 21, 1989

Your file: W8907-68
Our file: 2.12512

Mining Recorder
Ministry of Northern Development and Mines
Bag 3000
200 Brady Street, 6th floor
Sudbury, Ontario
P3A 5W2

Dear Sir:

Re: Notice of Intent dated July 5, 1989 Airborne Geophysical (Electromagnetic & Magnetometer) Survey submitted on Mining Claims S 1016926 et al in the Township of Boon.

Please disregard the above-mentioned Notice of Intent. New information has been supplied to this office that has changed the status of this file. It should now be considered a straight approval 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 and Minerals Division

RM
RM:eb
Enclosure:

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

Gallo Exploration Services Inc.
Islington, Ontario

Terraquest Ltd.
Toronto, Ontario

Resident Geologist
Sudbury, Ontario

Ministry of Northern Development and Mines
Ontario

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

DOCUMENT No. W8907-068

Mining Act 2.12512

Instructions: — Please type or print.
— If number of mining claims traversed exceeds space on this form, attach a list.
Note: — Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns.
— Do not use shaded areas below.

Type of Survey(s)	Geophysical - Airborne VLF EM & Mag
Township or Area	Boon Twp. (G 3180)
Claim Holder(s)	Gallo Exploration Services Inc.
Prospector's Licence No.	T-1308
Address	148 Allanhurst Drive, Islington, Ontario M9A 4K7
Survey Company	Terraquest Ltd.
Date of Survey (from & to)	26 03 89 (Day Mo. Yr.) to 05 05 89 (Day Mo. Yr.)
Total Miles of line Cut	
Name and Address of Author (of Geo-Technical report)	Charles Barrie, 240 Adelaide Street West, Toronto, Ontario M5H 1W7

Credits Requested per Each Claim in Columns at right

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

SUDBURY MINING DIV. RECEIVED MAY 29 1989 A.M. P.M. 7|8|9|10|11|12|1|2|3|4|5|6
9:15 [initials]

Expenditures (excludes power stripping)

RECEIVED JUN - 9 1989

Type of Work Performed

Performed on Claim(s)

Calculation of Expenditure Days Credits

Total Expenditures $ ÷ 15 = Total Days Credits

Instructions
Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

Mining Claims Traversed (List in numerical sequence)

Prefix	Number	Expend. Days Cr.	Prefix	Number	Expend. Days Cr.
S	1016926		S	1016946	
	1016927			1016947	
	1016928			1016948	
	1016929			1016949	
	1016930			1016950	
	1016931			1016951	
	1016932			1016952	
	1016933			1016953	
	1016934			1016954	
	1016935			1016955	
	1016936			1016956	
	1016937			1016957	
	1016938			1016958	
	1016939			1016959	
	1016940			1016960	
	1016941		S	1016981	
	1016942			1016982	
	1016943			1016983	
	1016944			1016984	
	1016945			1016985	

* changes made per telephone conversation b/w E. Gallo / K. Giroux - 89.05.30.

Total number of mining claims covered by this report of work. **40**

Date	Recorded Holder or Agent (Signature)
May 23, 1989	[signature]

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
3200	May 30, 1989	[signature]
	Date Approved as Recorded: See reverse	Branch Director: [signature]

Certification Verifying Report of Work

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

Name and Postal Address of Person Certifying
E. A. Gallo, 148 Allanhurst Drive, Islington, Ontario M9A 4K7

Date Certified	Certified by (Signature)
May 23, 1989	[signature]

1362 (85/12)

Ministry of Northern Development and Mines
Ontario

Technical Assessment Work Credits

File
2.12512

Date	Mining Recorder's Report of Work No.
July 5, 1989	W8907-68

Recorded Holder
GALLO EXPLORATION SERVICES INC.

Township or Area
BOON TOWNSHIP

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical	S 1016926 to 960 incl. 1016981 to 985 incl.
Electromagnetic 36 days	
Magnetometer 36 days	
Radiometric ____ days	
Induced polarization ____ days	
Other ____ days	
Section 77 (19) See "Mining Claims Assessed" column	
Geological ____ days	
Geochemical ____ days	
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

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

828 (85/12)

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 ______

Ontario | Ministry of Northern Development and Mines

Geophysical-Geological-Geochemical Technical Data Statement

File ______

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

Type of Survey(s) Geophysical-Airborne VLF EM & Mag.
Township or Area Boon Township
Claim Holder(s) Gallo Exploration Services Inc.
148 Allanhurst Drive, Islington, Ontario M9A 4K7
Survey Company Terraquest Ltd.
Author of Report Charles Barrie, 240 Adelaide St West
Address of Author Toronto, Ont. M5H 1W7
Covering Dates of Survey March 26-May 5, 1989 (linecutting to office)
Total Miles of Line Cut ______

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	
–Magnetometer	
–Radiometric	
–Other	
Geological	
Geochemical	

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

Magnetometer 40 Electromagnetic 40 Radiometric ______ (enter days per claim)

DATE: May 23, 1989 SIGNATURE: [signature] Author of Report or Agent

Res. Geol. ______ Qualifications 2.8305

Previous Surveys

File No.	Type	Date	Claim Holder
			RECEIVED
			MAY 24 1989
			MINING LANDS SECTION

OFFICE USE ONLY

MINING CLAIMS TRAVERSED
List numerically

(prefix)	(number)
S 1016926	S 1016948
S 1016927	S 1016949
S 1016928	S 1016950
S 1016929	S 1016951
S 1016930	S 1016952
S 1016931	S 1016953
S 1016932	S 1016954
S 1016933	S 1016955
S 1016934	S 1016956
S 1016935	S 1016957
S 1016936	S 1016958
S 1016937	S 1016959
S 1016938	S 1016960
S 1016939	
S 1016940	S 1016981
S 1016941	S 1016982
S 1016942	S 1016983
S 1016943	S 1016984
S 1016944	S 1016985
S 1016945	
S 1016946	
S 1016947	

TOTAL CLAIMS 40

If space insufficient, attach list

837 (85/12)

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations ______ Number of Readings ______
Station interval ______ Line spacing ______
Profile scale ______
Contour interval ______

MAGNETIC

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

ELECTROMAGNETIC

Instrument ______
Coil configuration ______
Coil separation ______
Accuracy ______
Method: ☐ Fixed transmitter ☐ Shoot back ☐ In line ☐ Parallel line
Frequency ______ (specify V.L.F. station)
Parameters measured ______

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

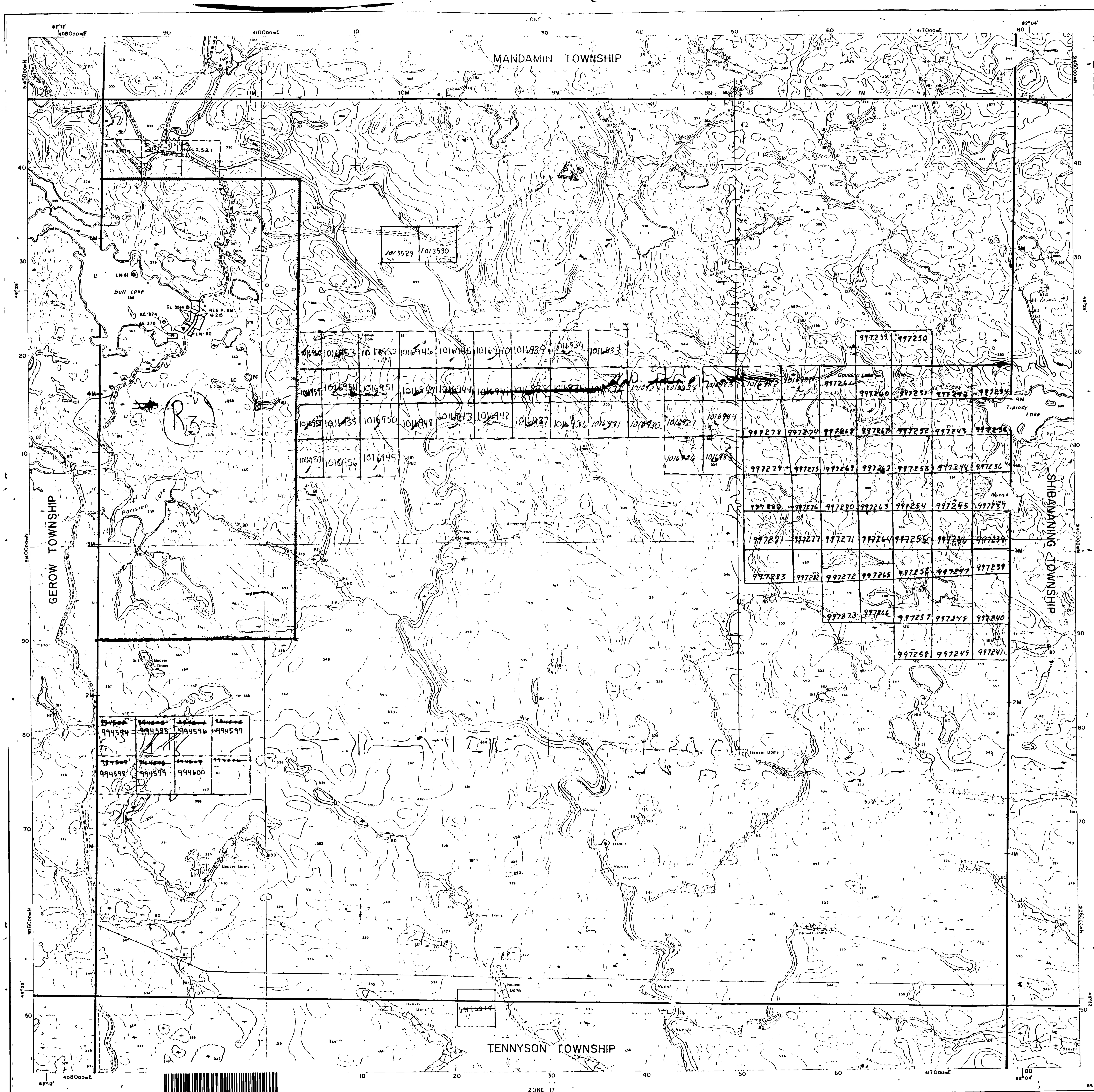
Instrument ______
Values measured ______
Energy windows (levels) ______
Height of instrument ______ Background Count ______
Size of detector ______
Overburden ______ (type, depth – include outcrop map)

OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

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

AIRBORNE SURVEYS

Type of survey(s) VLF Electromagnetic and Magnetometer
Instrument(s) Herz Totem 2A Scintrex BIW 2321H8 Proton Precession (specify for each type of survey)
Accuracy 1% 0.001 Gamma (specify for each type of survey)
Aircraft used Cessna 182
Sensor altitude 100 meters
Navigation and flight path recovery method King KRA-10A radar altimeter, Picodas PMAG 3000 Magnetometer processor, Picodas PDAS 100 Data Acquisition system, Urtec UDAS-100 data processor with digital 9 track recorder & Geotech Geocam Video Camera.
Aircraft altitude 100 meters Line Spacing 100 meters
Miles flown over total area approx. 155 km Over claims only approx. 58 km



Ministry of Natural Resources
Ministry of Northern Affairs and Mines
Ontario

January 1986

INDEX TO LAND DISPOSITION

PLAN
G-3180

TOWNSHIP
BOON

M.N.R. ADMINISTRATIVE DISTRICT
ESPANOLA

MINING DIVISION
SUDBURY

LAND TITLES/REGISTRY DIVISION
ALGOMA

Scale 1:20 000

1000 Metres 0 1000 2000 Metres

1000 Feet 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10 000 Feet

Contour Interval 10 Metres

AREAS WITHDRAWN FROM DISPOSITION

MRO - Mining Rights Only
SRO - Surface Rights Only
M + S - Mining and Surface Rights

	Description	Order No.	Date	Disposition	File
~~(R)~~	~~SEC 36/80~~	~~W-3/87~~	~~7/8/81~~	~~M & S~~	~~188514~~ - 0-89/86,
(R)	SEC 36/80	W.2/83	31/3/83	S.R O	77094

(R3) ORDER NO W 96/86-NEK
SURFACE + MINING RIGHTS WITHDRAWN
FROM STAKING. RSO 1980 SEC 36

SYMBOLS

Boundary
- Township, Meridian, Baseline
- Road allowance, surveyed
  - shoreline
- Lot/Concession, surveyed
  - unsurveyed
- Parcel, surveyed
  - unsurveyed
- Right-of-way, road
  - railway
  - utility
- Reservation
- Cliff, Pit, Pile
- Contour
  - Interpolated
  - Approximate
  - Depression
- Control point (horizontal)
- Flooded land
- Mine head frame
- Pipeline (above ground)
- Railway, single track
  - double track
  - abandoned
- Road, highway, county, township
  - access
  - trail, bush
- Shoreline (original)
- Transmission line
- Wooded area

DATE OF ISSUE
MAR 02 1989
SUDBURY
MINING RECORDER'S OFFICE

DISPOSITION OF CROWN LANDS

Patent
- Surface & Mining Rights
- Surface Rights Only
- Mining Rights Only

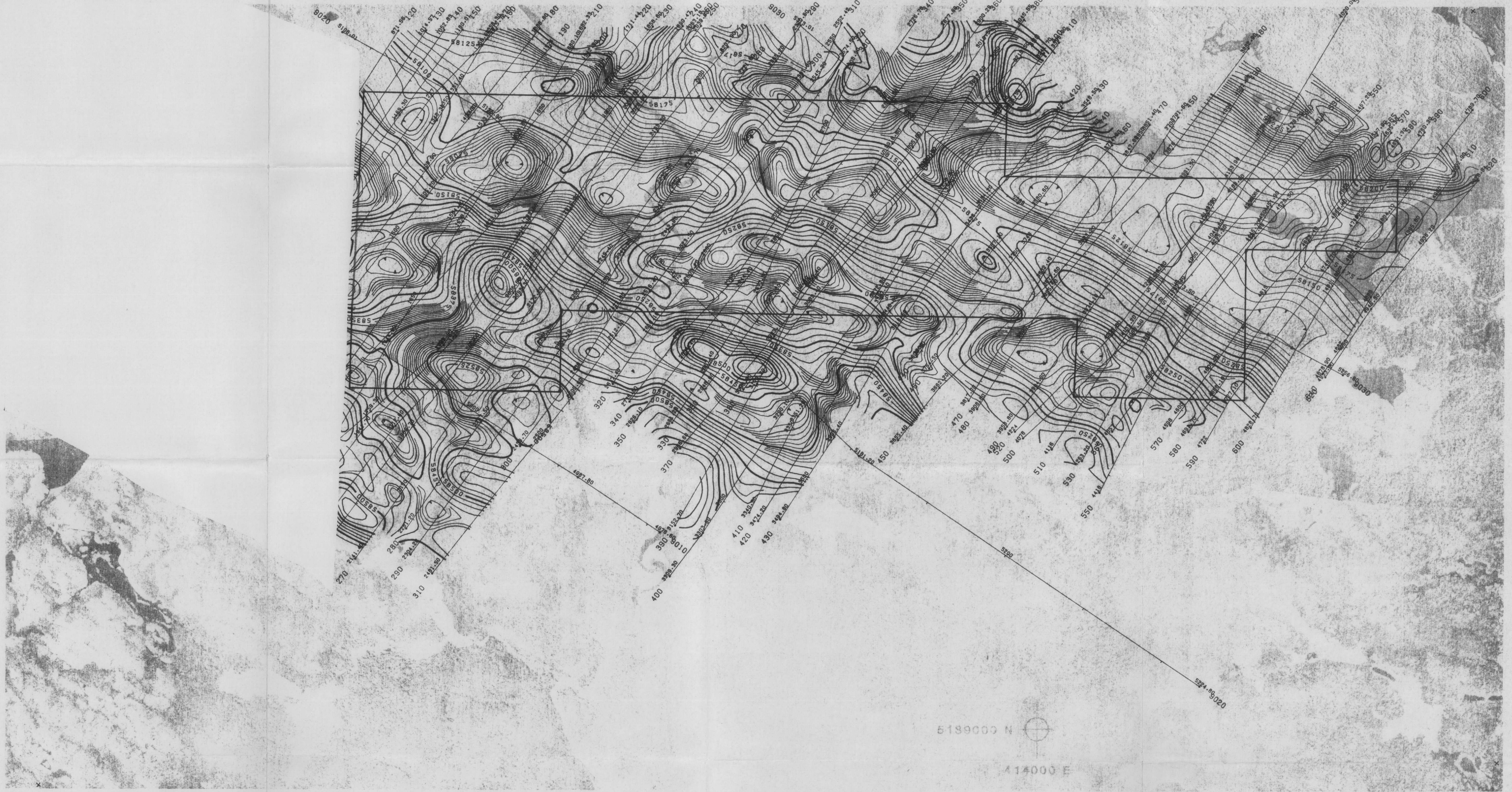
Lease
- Surface & Mining Rights
- Surface Rights Only
- Mining Rights Only

Licence of Occupation
Order-in-Council
Cancelled
Reservation
Sand & Gravel

Map base and land disposition drafting by Surveys and Mapping Branch, Ministry of Natural Resources.

The disposition of land, location of lot fabric and parcel boundaries on this index was compiled for administrative purposes only

41J08NE0007 2.12512 BOON 200



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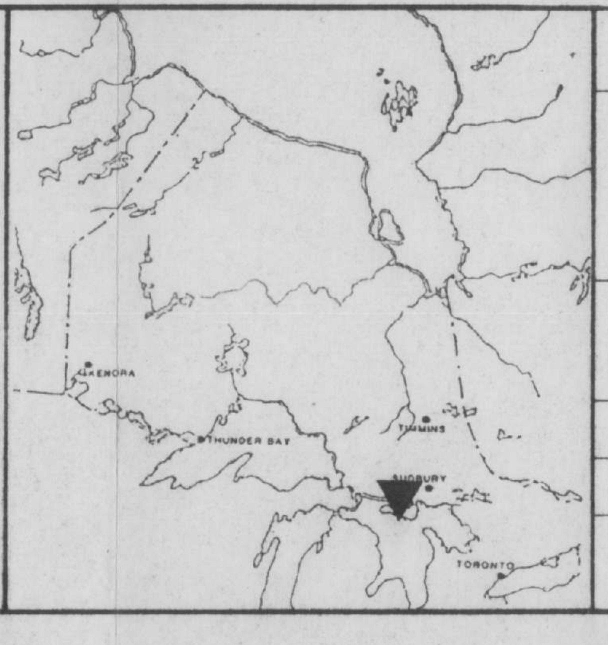


LEGEND

Terrain Clearance .... 100 metres
Line Spacing .... 100 metres
Property Boundary

TOTAL MAGNETIC FIELD
500 gammas
100 gammas
25 gammas
5 gammas

GALLO EXPLORATION SERVICES INC.

AIRBORNE MAGNETIC SURVEY
TOTAL MAGNETIC FIELD

BOON TOWNSHIP PROPERTY
ONTARIO

N.T.S. NO.	41J/8	DRAWING NO.	A-828-1
SCALE:	1:10,000	DATE:	May 1989

TERRAQUEST LTD.
TORONTO, CANADA

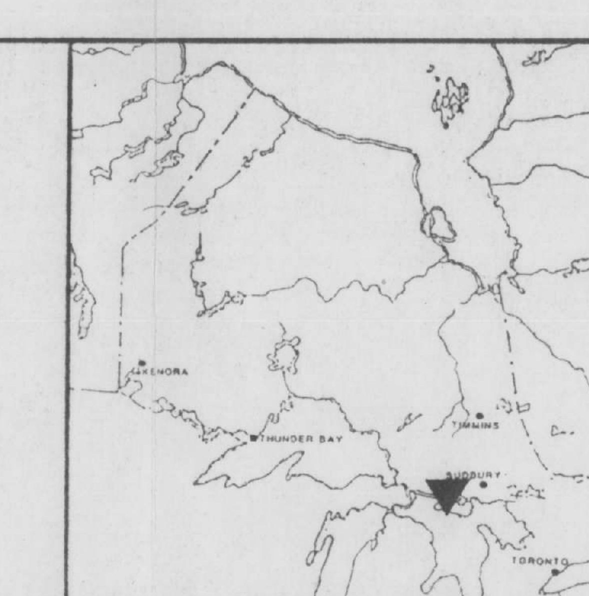
210

2.12512

LEGEND

Terrain Clearance .... 100 metres
Line Spacing .... 100 metres
Property Boundary

VERTICAL MAGNETIC GRADIENT
2.500 gammas/metre
0.500 gammas/metre
0.100 gammas/metre
0.025 gammas/metre



GALLO EXPLORATION SERVICES INC.

AIRBORNE MAGNETIC SURVEY

VERTICAL MAGNETIC GRADIENT
Calculated From Total Field

BOON TOWNSHIP PROPERTY
ONTARIO

N.T.S. NO.	41J/8	DRAWING NO.	A-828-2
SCALE:	1:10,000	DATE:	May 1989

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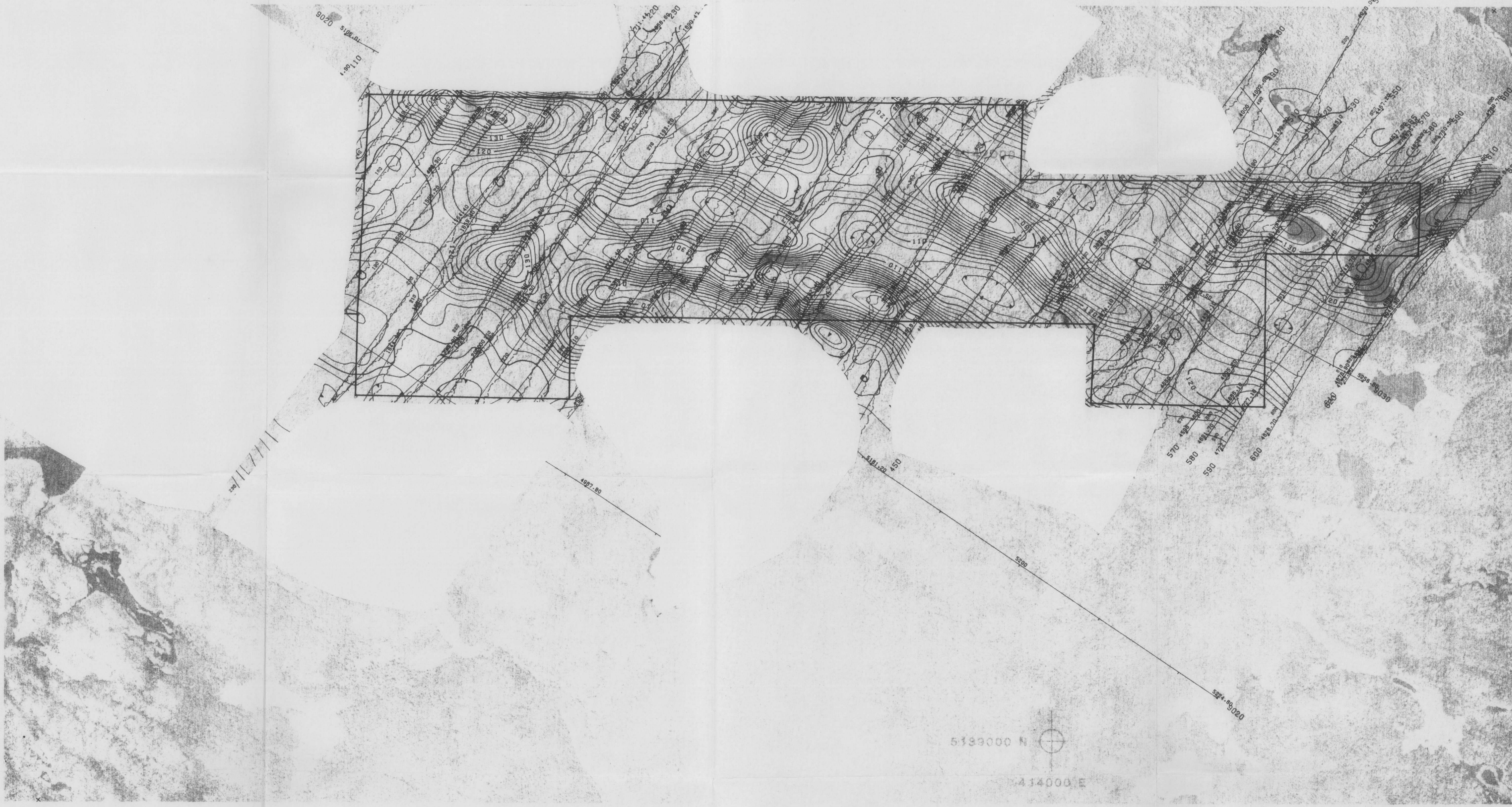


2.12512

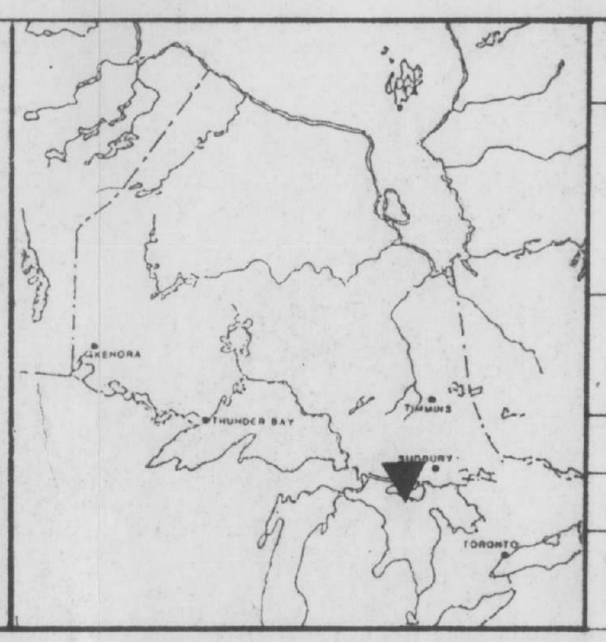
VLF Transmitter
NAA Cutler, 24.0 kHz
Azimuth 094

LEGEND

Terrain Clearance .... 100 metres
Line Spacing .... 100 metres
Property Boundary

TOTAL FIELD STRENGTH (Contours)
50%
10%
2%

QUADRATURE (Profiles Along Flight Lines)
Normal Slope — Reverse Slope
+ 5% / Flight Line / − 5%



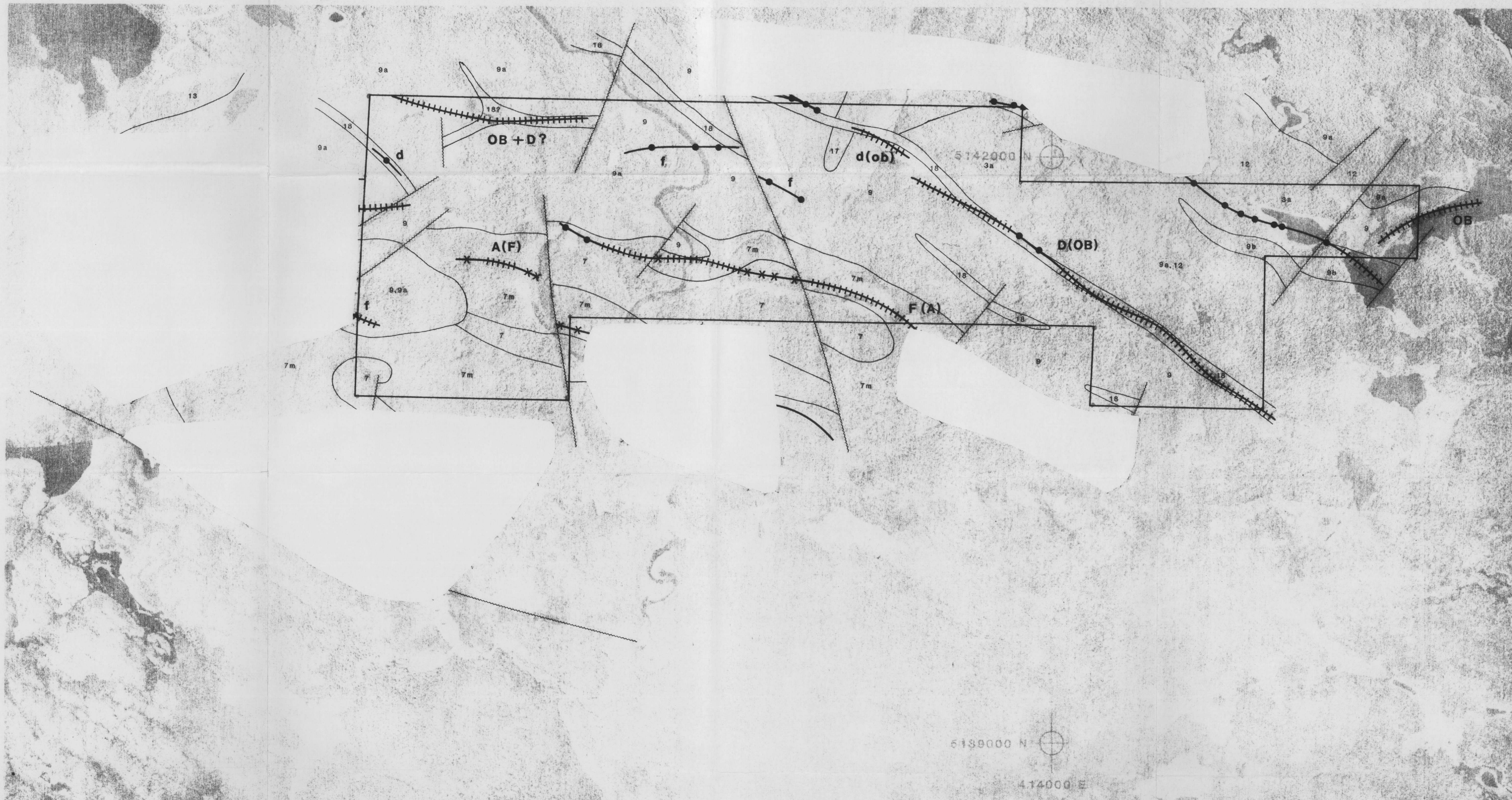
GALLO EXPLORATION SERVICES INC.

AIRBORNE VLF-EM SURVEY
CONTOURS OF TOTAL FIELD STRENGTH
PROFILES OF QUADRATURE

BOON TOWNSHIP PROPERTY
ONTARIO

N.T.S. NO.	41J/8	DRAWING NO.	A-828-3
SCALE:	1:10,000	DATE:	May 1989

TERRAQUEST LTD.
TORONTO, CANADA



2.12512

LITHOLOGY

18	Late Precambrian Diabase Dykes	
17	Nipissing Diabase	
15	Granite	

EAST BULL LAKE GABBRO

13	Massive Gabbro
12	Layered Gabbro
9	Anorthosite to Leucogabbro
9a	Leucogabbro
9b	Nodular Anorthositic Gabbro

PARISIEN LAKE SYENITE

7m	Magnetic unit within 7.
7	Syenite
3a	Fine-grained granodiorite

units in parentheses may occur at depth

VLF Transmitter
NAA Cutler, 24.0 kHz
Azimuth 094

LEGEND

Terrain Clearance .... 100 metres
Line Spacing .... 100 metres
Property Boundary

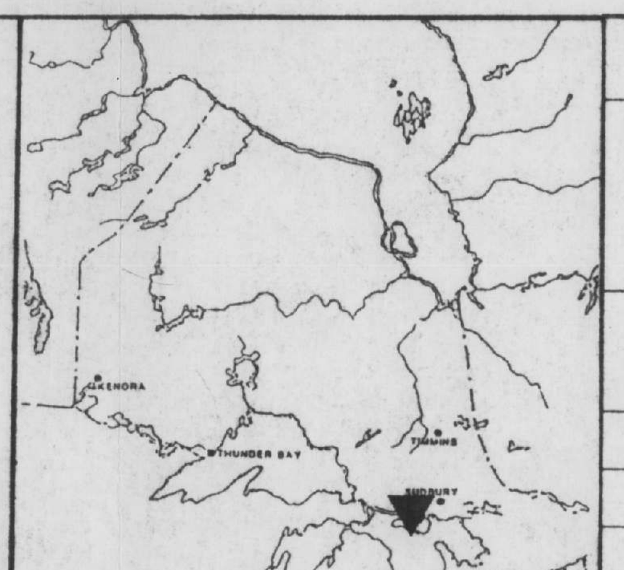
INTERPRETATION

Contact
Fault

VLF-EM Conductor Axes

Normal Quadrature
Reverse Quadrature
Total Field Only

See text for classification of VLF-EM conductor axes



GALLO EXPLORATION SERVICES INC.

INTERPRETATION

BOON TOWNSHIP PROPERTY
ONTARIO

N.T.S. NO.	41J/8	DRAWING NO.	A-828-4
SCALE:	1:10,000	DATE:	May 1989

TERRAQUEST LTD.
TORONTO, CANADA

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