REPORT ON AN

AIRBORNE MAGNETIC AND VLF-EM SURVEY

SWAYZE AND DORE TOWNSHIPS

PORCUPINE MINING DIVISION, ONTARIO

for

CHARET SYNDICATE

by: ***TERRAQUEST LTD.***
Toronto, Canada
June 16, 1988

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF MAPS IN JACKET

Note: The survey area is divided into four map sheets, therefore there are four of each of the above listed maps.

1. Introduction

This report describes the specifications and results of a geophysical survey carried out for Charet Syndicate of 1500-145 King Street West, Toronto, Ontario, M5H 2J3 by Terraquest Ltd., 240 Adelaide Street West, Toronto, Canada. The field work was performed between March 31 and April 10, 1988 and the data processing, interpretation and reporting from April 11 to June 16, 1988.

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 survey area is located in Swayze and Dore townships, in the Porcupine Mining Division of Ontario about 60 kilometres east of the town of Chapleau. The claims lie in two blocks: one extending from Cree Lake north to Brett Lake and east into Dore Township, and the second in the southeast corner of Dore Township. The claims can be accessed by bush roads.

The average latitude and longitude are 47 degrees 48 minutes, and 82 degrees 37 minutes respectively, and the N.T.S. references are 41O/15 and /16.

The outline of the survey area and the claim numbers are shown in figure 2.

3. Geology

Map References

1. Map 43B: Swayze Gold Area. Scale 1:63,360. O.D.M. 1934.
2. Map 51F: Cunningham-Garnet Area. Scale 1:63,360. O.D.M. 1942.
3. Map 2070: Swayze and Dore Townships. Scale 1:31,680. O.D.M. 1965.
4. Map 2221: Chapleau-Foyelet, Geological Compilation Series. Scale 1:253,440. O.D.M. 1976.
5. Map 2352: Chapleau. Scale 1:250,000. O.D.M. 1976.

Private Report: Geological Report on the Exploration Potential of the Swayze Township Property. Northern Resources Inc. August 1987, by L.D.S. Winter.

The survey area is underlain predominantly by east trending mafic to felsic Archean metavolcanics and minor associated clastic sedimentation. Narrow komatiitic flows occur within the mafic metavolcanics along the southern half of the main survey block.

The older geological maps, specifically Map 51F shows considerably greater rock differentiation than the newer maps.

The rocks have been interpreted to be folded about an east-west trending synclinal axis that passes through the centre of the large survey block, and is displaced by a northwest trending fault. A parallel anticlinal fold axis passes through the northwest corner of the smaller Dore Township property.

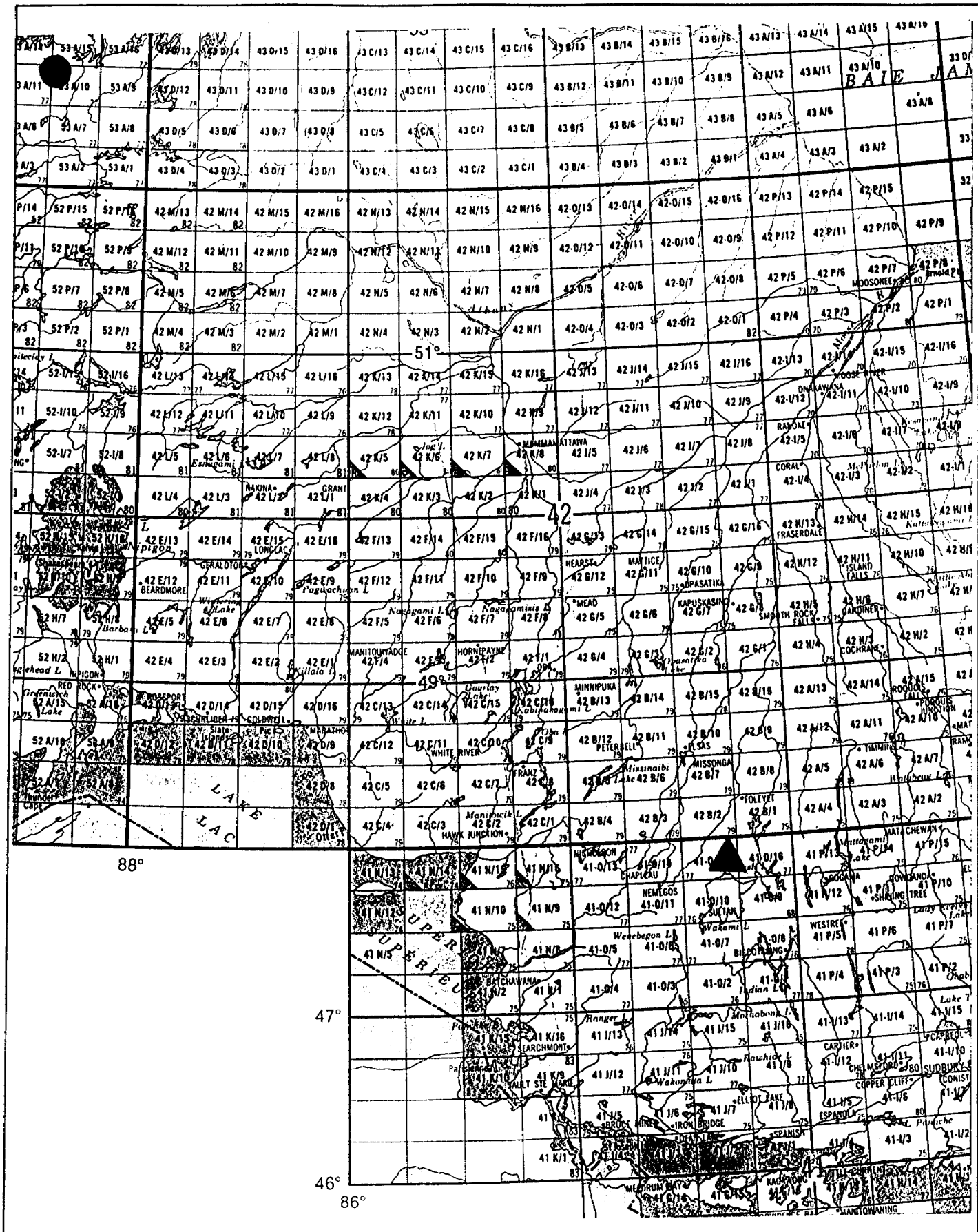

FIGURE 1. General Location

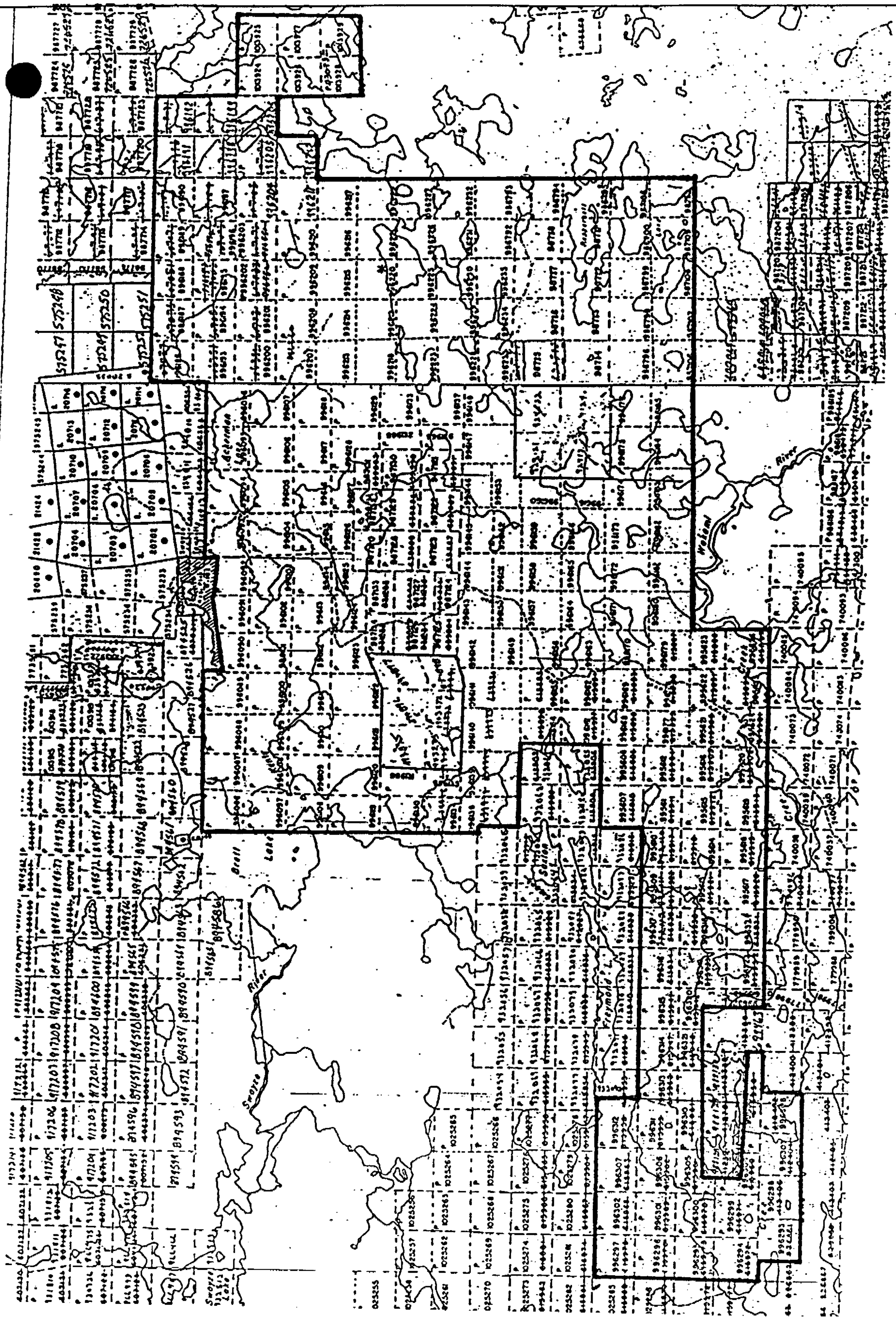

FIGURE 2a Claim Location Map
(exact locations not certified)

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

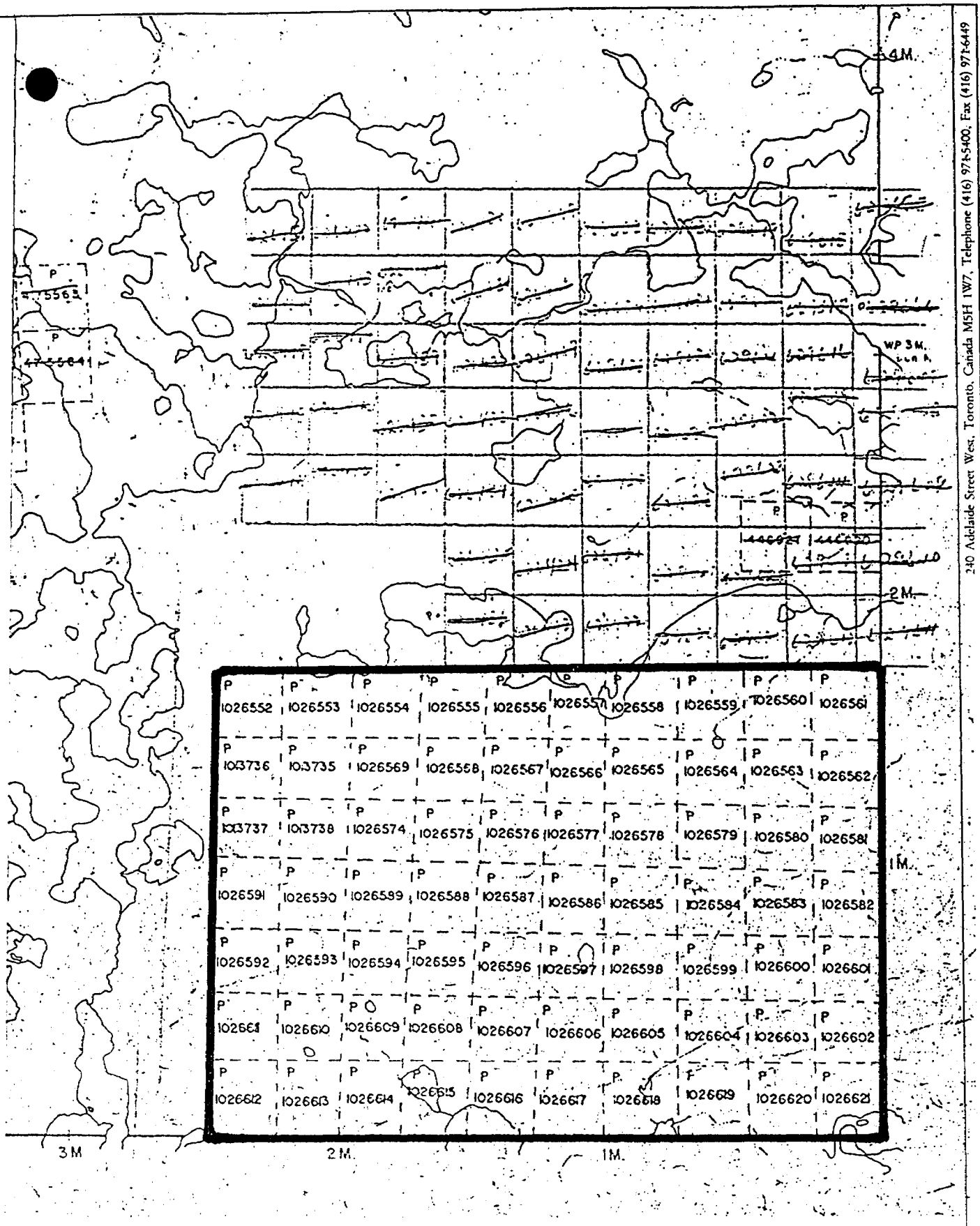

FIGURE **2b** Claim Location Map
(exact locations not certified)

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

Three important gold discoveries occur in the map area: the Flint Rock Mines Ltd. showing at the east end of Cree Lake, the Kenty Mine just north of Ackerman Lake, and Annie Kenty occurrence approximately 1 kilometre east of the Kenty Mine. Mineralization is associated with quartz veining and carbonatized alteration, primarily within the mafic to intermediate metavolcanics.

4. Survey Specifications

4.1 Instruments

The survey was carried out using a Cessna 182 aircraft, registration C-FAKK, which carries a magnetometer and a VLF electromagnetic detector.

The magnetometer is a proton precession type based on the Overhauser effect. The Overhauser effect allows for polarization of a proton rich liquid of the sensor by adding a "free radical" to it and irradiating it by RF magnetic field. Strong precession signals are generated with modest RF power. The sensor element is mounted in an extension of the right wing tip. It's specifications are as follows:

Model:	GSM-9BA
Manufacturer:	GEM Systems Inc., 105 Scarsdale Rd., Don Mills, Ontario, M3B 2R5
Resolution:	0.5 gamma
Accuracy:	0.5 gamma
Cycle time:	0.5 second
Range:	20,000 ~ 100,000 gammas in 23 overlapping steps
Gradient tolerance:	Up to 5,000 gammas per metre

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 (Channel 1) that is ideally positioned at right angles to the flight lines, while the ORTHO coil transmitter (Channel 2) should be in line with the flight lines. It's specifications are:

Model:	TOTEM 2A
Manufacturer:	Herz Industries, Toronto
Accuracy:	1%
Reading interval:	0.5 second

The VLF sensor is mounted in the left wing tip extension.

Other instruments are:

- King KRA-10A radar altimeter
- PDAS-1100 data acquisition system with two 3.5" floppy disk drives manufactured by Picodas Group Inc., Richmond Hill, Ontario
- Geocam video camera and recorder for flight path recovery, manufactured by Geotech Ltd., Markham, Ontario.
- PBAS-9000 portable field base station with a 3.5" floppy disk drive and an analog print out manufactured by Picodas Group Inc., Richmond Hill, Ontario, coupled with a GSM-8 proton magnetometer manufactured by Gem Systems Inc., Toronto, Ontario.

4.2 Lines and Data

Line spacing:	100 metres
Line direction:	360 degrees
Terrain clearance:	100 metres
Average ground speed:	156 km/hr.
Data point interval:	
Magnetic:	27 metres
VLF-EM:	27 metres
Tie Line interval:	2 kilometres
Channel 1 (LINE):	NAA Cutler, 24.0 kHz
Channel 2 (ORTHO):	NSS Annapolis, 24.0 kHz
Line km over total survey area including overrun:	733 line km
Line km over claim groups:	
Magnetic survey totals:	594 line km
VLF-EM survey totals:	594 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.

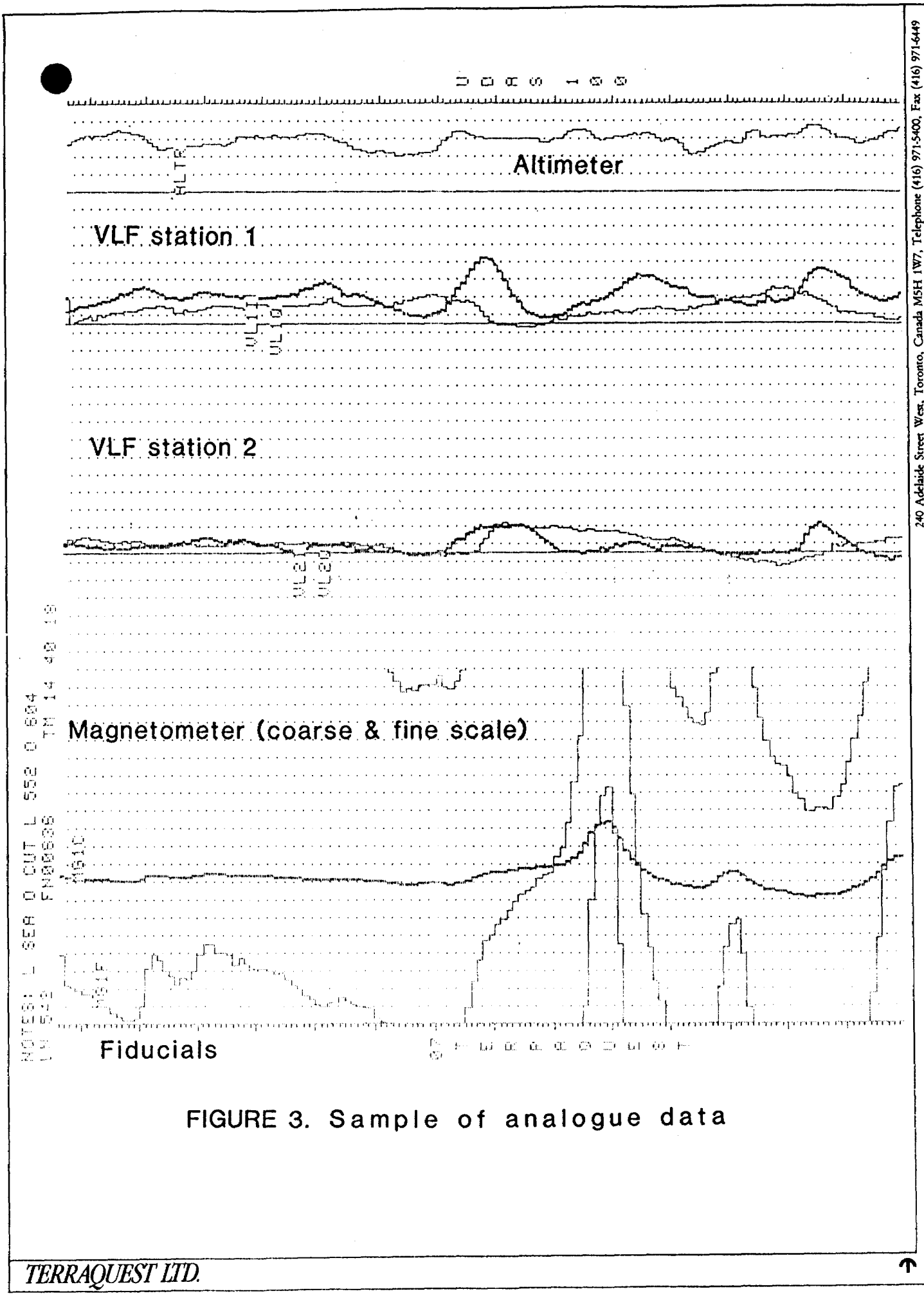

FIGURE 3. Sample of analogue data

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Diurnal magnetic variation: Less than twenty gammas deviation from a smooth background over a period of two minutes or less as seen on the base station analogue record.

Manoeuvre noise: Approximately +/- 5 gammas.

4.4 Photomosaics

For navigating the aircraft and recovering the flight path, mosaics of aerial photographs were made from existing air photos.

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 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

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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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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.

The total magnetic field displays considerable detail across the survey area, with a relief of approximately 1,000 gammas. The strongest anomalies occur along the southern half of the main block and the northeastern half of the small block in Dore Township. The vertical magnetic gradient improves the resolution of the magnetic trends and has been used to delineate the stratigraphy and structure.

The strong responses across the southern half of the large survey area correlate well with the komatiitic flows (Unit 1k). The interpreted widths may be somewhat exaggerated due to the overwhelming effect commonly associated with strong susceptibilities. Three distinct horizons have been interpreted. Northwest trending, moderately strong magnetic responses are interpreted as diabase dykes (Unit 9). These responses dominate the northern half of the large survey area.

Most of the remaining responses are interpreted to be derived from the mafic to intermediate metavolcanics (Unit 1) and the felsic metavolcanics (Unit 2). The felsic metavolcanics generally correlate with weaker magnetic responses. Horizons with increased magnetic activity within the mafic to intermediate metavolcanic (Unit 1m) are probably related to more mafic compositions, such as lateral extensions of the komatiite flows, or possibly to increased concentrations of magnetite or pyrrhotite. Most of these horizons trend to the east-west.

The strong magnetic responses to the northeast of the major survey block may be related to the more magnetic members of the mafic metavolcanic suite or possibly to mafic intrusives (Unit 4).

The magnetic units within the smaller survey block in the southeast corner of Dore Township trend to the northwest, parallel to the regional strike of the mafic dykes. It is possible that all these magnetic trends may be related to such dykes. The available geological maps show very little rock differentiation in this area, therefore any interpretation will be inherently subjective.

This interpretation portrays stratigraphic origins for most of the magnetic units. The magnetic anomaly within the southwest corner correlates with a narrow iron formation shown on several older generation geological maps. The moderate strength anomalies are consistent with typical 1m unit horizons. The high magnitude, northwest trending anomaly is similar to those associated with the komatiite flows over the large survey area. Only the narrow north trending anomaly and the wider stronger northeast trending anomaly are interpreted to possess tentative intrusive origins.

Magnetically interpreted faults across both areas trend to the northeast and northwest. An east-west zone of weakness, either faults or shear zones, is interpreted to lie east of Kenty Lake and extend well into the centre of Dore Township.

The geologically mapped north-northwest trending fault correlates well with a prominent topographical lineament. However, the truncations and displacements of the komatiitic flows can best be explained by northeast and northwest trending faults. These may in fact be conjugate sets where the northwest trending set is parallel to the regional trend of the diabase dykes. The north-northwest trending lineament may be related to a) a fault with minimal lateral displacement or b) a recessive zone of weakness such as a joint.

The VLF-EM survey shows numerous east and southeast trending conductor axes. Many of these coincide with lakes and river valleys, commonly indicates conductive overburden. Where the conductivity extends beyond the topographic depression, generally along strike, a stratigraphic or structural origin may be reasonably interpreted.

Several conductor axes coincide with magnetic stratigraphy, either the 1m horizons or the komatiitic flows, and therefore possess potential for bedrock origins such as sulphides or graphite. These should be followed up on the ground using EM or IP methods.

Those conductor axes that are oblique to the magnetic stratigraphy or parallel magnetically interpreted faults are interpreted to possess structural origins, either as faults or shear zones. This type of conductivity may be related to a) minerals such as

sulphides, graphite or gouge along the structure, or b) an ionic effect related to porosity or water within the structure. Structures identified by either magnetic or VLF-EM methods should be investigated for potential epithermal type mineralization.

7. Summary

An airborne combined magnetic and VLF-EM survey has been done on the property at line intervals of 100 metres. The total field and vertical gradient magnetic data, VLF-EM data and interpretation maps are produced 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. A number of VLF-EM conductor axes were found of which some are believed to have potential sulphide origins and have been recommended for additional investigation.

TERRAQUEST LTD.

Dual 2.8305

Charles Q. Barrie, M.Sc.

Geologist

GEOLOGICAL ASSOCIATION OF CANADA
CHARLES Q. BARRIE
FELLOW

W8806.172 | 1660

41015SE0047 2.11349 DORE

900

Type of Survey: Airborne Magnetometer VLF/EM survey

Claim Holder(s): W. B. Vaughan, in trust for the Charet Syndicate

A 43152

Address: Suite 1500, 145 King Street West, Toronto, Ontario

2.11349

Survey Company: Terraquest Ltd.

Date of Survey (from & to): Day 09 Mo 04 Yr 88 / Day 10 Mo 04 Yr 88

Total Miles of Line Cut: NIL

Name and Address of Author (of Geo-Technical report): Report from Terraquest Ltd. to come by May 30, 1988

Credits Requested per Each Claim in Columns at right

Special Provisions

For first survey: Enter 40 days. (This includes line cutting)

For each additional survey using the same grid: Enter 20 days (for each)

Man Days: Complete reverse side and enter total(s) here

Airborne Credits: Note: Special provisions credits do not apply to Airborne Surveys.

	Days per Claim
Geophysical	
- Electromagnetic	
- Magnetometer	
- Radiometric	
- Other	
Geological	
Geochemical	
Electromagnetic	40
Magnetometer	40
Radiometric	

Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
	See Schedules "A" and "B" attached for list of claims on Sweyze and Pore Townships respectively	

ONTARIO GEOLOGICAL SURVEY
ASSESSMENT FILES OFFICE
JUL 22 1988
RECEIVED

RECORDED
APR 26 1988

Total number of mining claims covered by this report of work: 311

Expenditures (See reverse side for further details)

Type of Work Performed:

Performed on Claim(s):

Calculation of Expenditure Days Credit

Total Expenditures: $ 0 ÷ 15 = Total Days Credits

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

For Office Use Only

Total Days Cr. Recorded: 24880

Date Recorded: April 28/1988

Date Approved as Recorded: 20 July 88

Approved by: W. Klein

Date: April 26, 1988

Signature of Author of Report or Agent: [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 Address of Person Certifying

Terraquest Ltd. Report will be available by May 30, 1988

240 Adelaide Street West, Toronto, Ontario M5H 1W7

Date Certified: May 25/88

Certified by: [signature] Howard Barrie

TOTAL P.02

Schedule "A"

MINING CLAIMS IN SWAYZE TOWNSHIP
DISTRICT OF SUDBURY PORCUPINE MINING DIVISION
TO ACCOMPANY REPORT OF WORK DATED APRIL 26, 1988

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Schedule "B"

MINING CLAIMS IN DORE TOWNSHIP
DISTRICT OF SUDBURY PORCUPINE MINING DIVISION
TO ACCOMPANY REPORT OF WORK DATED APRIL 26, 1988

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Ontario

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) Airborne Magnetic and VLF-EM Survey

Township or Area Swayze and Dore Townships

Claim Holder(s) W. S. Vaughan, in trust for the Charet Syndicate Lic. No. A43152

Survey Company Terraquest Ltd.

Author of Report Charles O. Barrie, M.Sc.

Address of Author 240 Adelaide St. W., Toronto, Ontario M5N 1W7

Covering Dates of Survey March 31, 1988 to June 16, 1988 (linecutting to office)

Total Miles of Line Cut N/A

MINING CLAIMS TRAVERSED
List numerically

(prefix) (number)

See Schedules "A" and "B" attached for list of claims in Swayze and Dore Townships respectively

If space insufficient, attach list

TOTAL CLAIMS _____

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: June 23, 1988 SIGNATURE: _____
Author of Report or Agent CHARLES O. BARRIE

GEOLOGICAL ASSOCIATION OF CANADA — FELLOW —

Res. Geol. _____ Qualifications _____

Previous Surveys

File No.	Type	Date	Claim Holder

OFFICE USE ONLY

837 (5/79)

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) Airborne Magnetic and VLF-EM Survey

Instrument(s) airborne magnetometer and a VLF electromagnetic detector

(specify for each type of survey)

Accuracy magnetometer - 0.5 gamma and VLF-EM unit - 1%

(specify for each type of survey)

Aircraft used Cessna 182 (registration C-FAKK)

Sensor altitude 100 metres

Navigation and flight path recovery method VISUAL NAVIGATION USING 1:10,000 AIRPHOTO MOSAICS, RECOVERY BY VIDEO ONTO MOSAIC

Aircraft altitude 100 metres Line Spacing 100 metres

Miles flown over total area 594 line kms 733 km Over claims only As nearly as possible 594 km

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_____

Schedule "A"

MINING CLAIMS IN SWAYZE TOWNSHIP
DISTRICT OF SUDBURY PORCUPINE MINING DIVISION
TO ACCOMPANY TECHNCIAL DATA STATEMENT DATED JUNE 23, 1988

987120
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996324

Schedule "B"

MINING CLAIMS IN DORE TOWNSHIP
DISTRICT OF SUDBURY PORCUPINE MINING DIVISION
TO ACCOMPANY TECHNCIAL DATA STATEMENT DATED JUNE 23, 1988

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Ministry of Natural Resources

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

The Mining Act

Instructions: – Please type or print.
– If number of mining claims traversed exceeds space on this form, attach a list.
Note: – Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns on the next claim form.

Type of Survey(s): Airborne Magnetometer VLF/EM Survey

Township or Area: Swayze and Dore Townships

Mining Claim No.: A 43152

Claim Holder(s): W. S. Vaughan, in trust for the Charet Syndicate

Address: Suite 1500, 145 King Street West, Toronto, Ontario

Survey Company: Terraquest Ltd.

Date of Survey (from & to): 09 04 88 (Day | Mo. | Yr.) 10 04 88 (Day | Mo. | Yr.)

Total Miles of line Cut: NIL

Name and Address of Author (of Geo-Technical report): Report from Terraquest Ltd. to come by May 30, 1988

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	
	· Magnetometer	
	· Radiometric	
For each additional survey: using the same grid: Enter 20 days (for each)	· Other	
	Geological	
	Geochemical	

Man Days		Days per Claim
Complete reverse side and enter total(s) here	Geophysical	
	· Electromagnetic	
	· Magnetometer	
	· Radiometric	
	· Other	
	Geological	
	Geochemical	

Airborne Credits		Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	40
	Magnetometer	40
	Radiometric	

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
	See Schedules "A" and "B" attached for list of claims on Swayze and Dore Townships respectively	

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.

Total number of mining claims covered by this report of work: 311

Expenditures (excludes power stripping)

Type of Work Performed:

Performed on Claim(s):

Calculation of Expenditure Days Credits

Total Expenditures: $ ÷ 15 = Total Days Credits

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

RECEIVED
APR 28 1988

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
	Date Approved as Recorded	Mining Inspector

Date: April 26, 1988

Recorded Holder or Agent (Signature): H. Barrie for

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: Terraquest Ltd. Report will be available by May 30, 1988

240 Adelaide Street West, Toronto, Ontario M5H 1W7

Date Certified: May 25/88

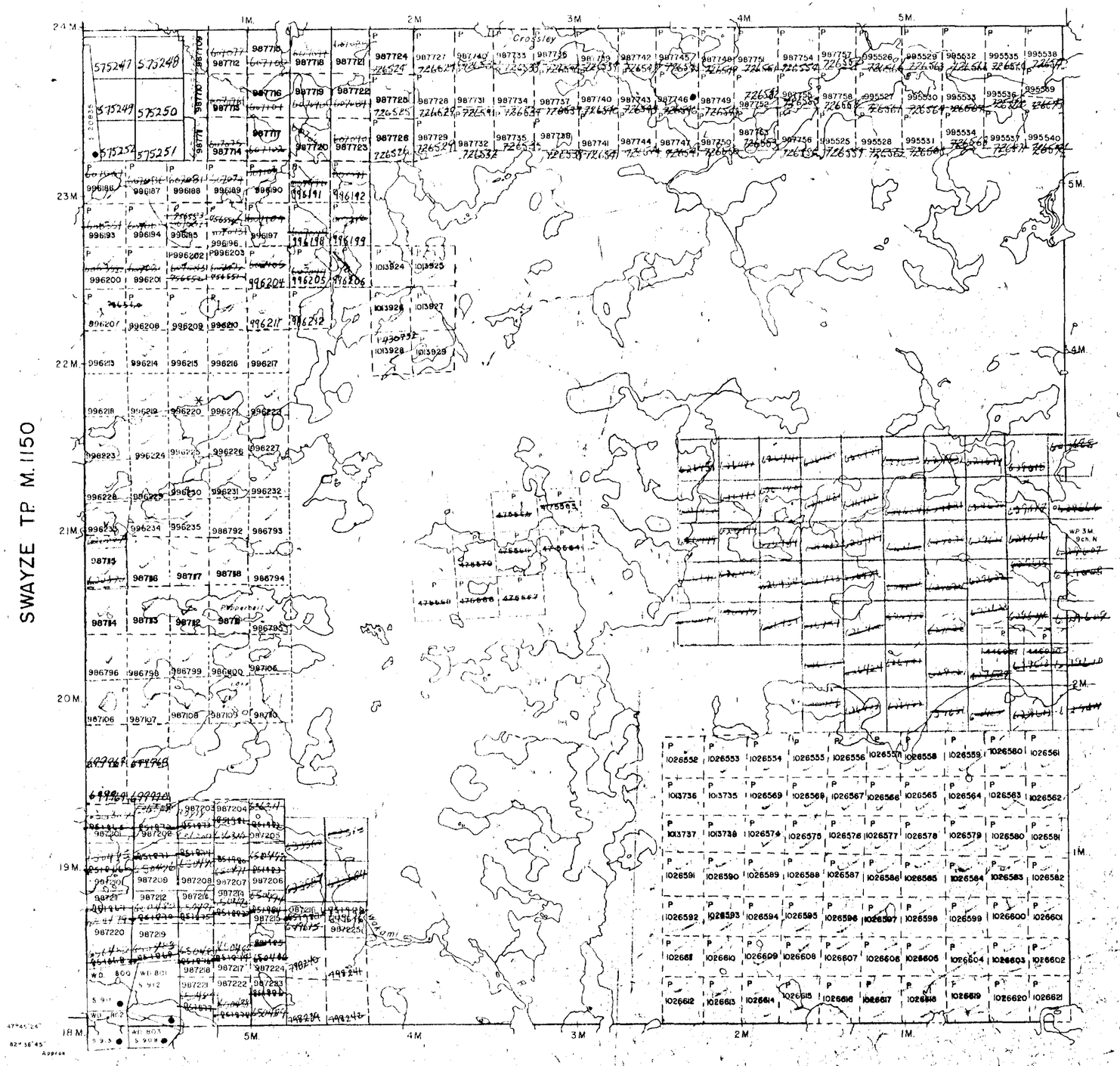
Certified by (Signature): Howard Barrie

1983 (81/8)

NOTES

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

COPPELL TP.



LEGEND

- HIGHWAY AND ROUTE No.
- OTHER ROADS
- TRAILS
- SURVEYED LINES
  - TOWNSHIPS, BASE LINES, ETC.
  - LOTS, MINING CLAIMS, PARCELS, ETC.
- UNSURVEYED LINES
  - LOT LINES
  - PARCEL BOUNDARY
  - MINING CLAIMS ETC.
- RAILWAY AND RIGHT OF WAY
- UTILITY LINES
- NON-PERENNIAL STREAM
- FLOODING OR FLOODING RIGHTS
- SUBDIVISION
- ORIGINAL SHORELINE
- MARSH OR MUSKEG
- MINES

DISPOSITION OF CROWN LANDS

TYPE OF DOCUMENT	SYMBOL
PATENT, SURFACE & MINING RIGHTS	●
SURFACE RIGHTS ONLY	◓
MINING RIGHTS ONLY	◒
LEASE, SURFACE & MINING RIGHTS	■
SURFACE RIGHTS ONLY	◨
MINING RIGHTS ONLY	◧
LICENCE OF OCCUPATION	▼
CROWN LAND SALE	CS
ORDER-IN-COUNCIL	OC
RESERVATION	⊛
CANCELLED	⊗
SAND & GRAVEL	⊜

* LAND USE PERMIT

Received Jan 4/88

SCALE: 1 INCH 40 CHAINS

FEET 0 500 1000 2000 4000 6000 8000

METRES 0 200 400 600 800 1 KM 2 KM

ACRES	HECTARES
40	16

TOWNSHIP

DORE

DISTRICT

SUDBURY

MINING DIVISION

PORCUPINE

RECEIVED
MAY 3 1988

Ministry of Natural Resources
Ontario — Surveys and Mapping Branch

Date April 27th, 1973

Whitney Block
Queen's Park, Toronto

Plan No.
M. 763

REFERENCES

AREAS WITHDRAWN FROM DISPOSITION

M.R.O. – MINING RIGHTS ONLY

S.R.O. – SURFACE RIGHTS ONLY

M.+S. – MINING AND SURFACE RIGHTS

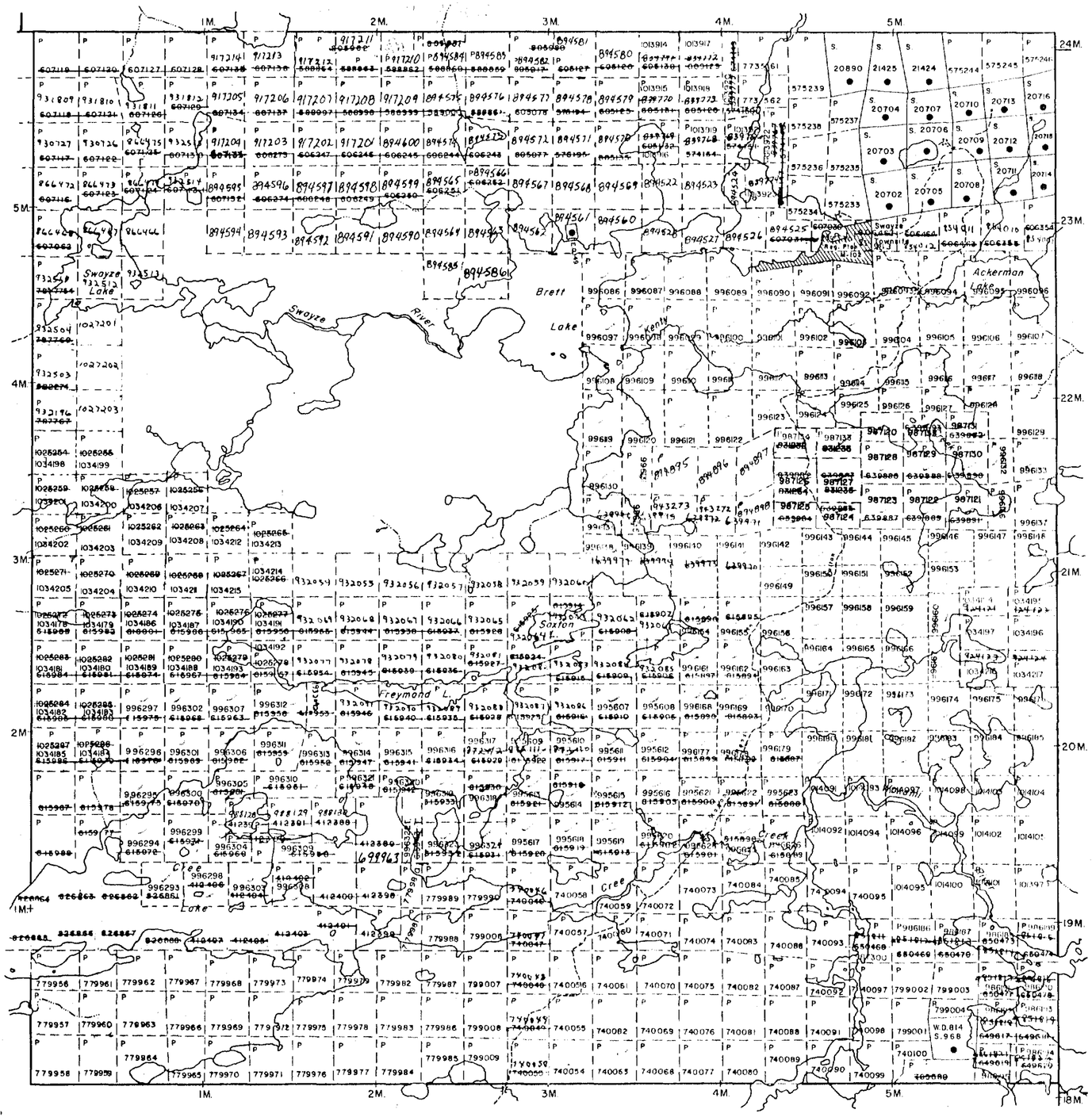
Description	Order No.	Date	Disposition	File

Rollo Twp.

Denyes Twp.

Dore Twp.

Cunningham Twp.



LEGEND

- HIGHWAY AND ROUTE No.
- OTHER ROADS
- TRAILS
- SURVEYED LINES:
  - TOWNSHIPS, BASE LINES, ETC.
  - LOTS, MINING CLAIMS, PARCELS, ETC.
- UNSURVEYED LINES:
  - LOT LINES
  - PARCEL BOUNDARY
  - MINING CLAIMS ETC.
- RAILWAY AND RIGHT OF WAY
- UTILITY LINES
- NON-PERENNIAL STREAM
- FLOODING OR FLOODING RIGHTS
- SUBDIVISION OR COMPOSITE PLAN
- RESERVATIONS
- ORIGINAL SHORELINE
- MARSH OR MUSKEG
- MINES
- TRAVERSE MONUMENT

DISPOSITION OF CROWN LANDS

TYPE OF DOCUMENT	SYMBOL
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	OC
RESERVATION	
CANCELLED	
SAND & GRAVEL	

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MA[illegible] 1913, VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT R.S.O. 1970, CHAP. 380, SEC. 63, SUBSEC.

SCALE: 1 INCH = 40 CHAINS

FEET 0 1000 2000 4000 6000 8000

METRES 0 200 1000 2000 (1 KM) (2 KM)

TOWNSHIP

SWAYZE

M.N.R. ADMINISTRATIVE DISTRICT

CHAPLEAU

MINING DIVISION

PORCUPINE

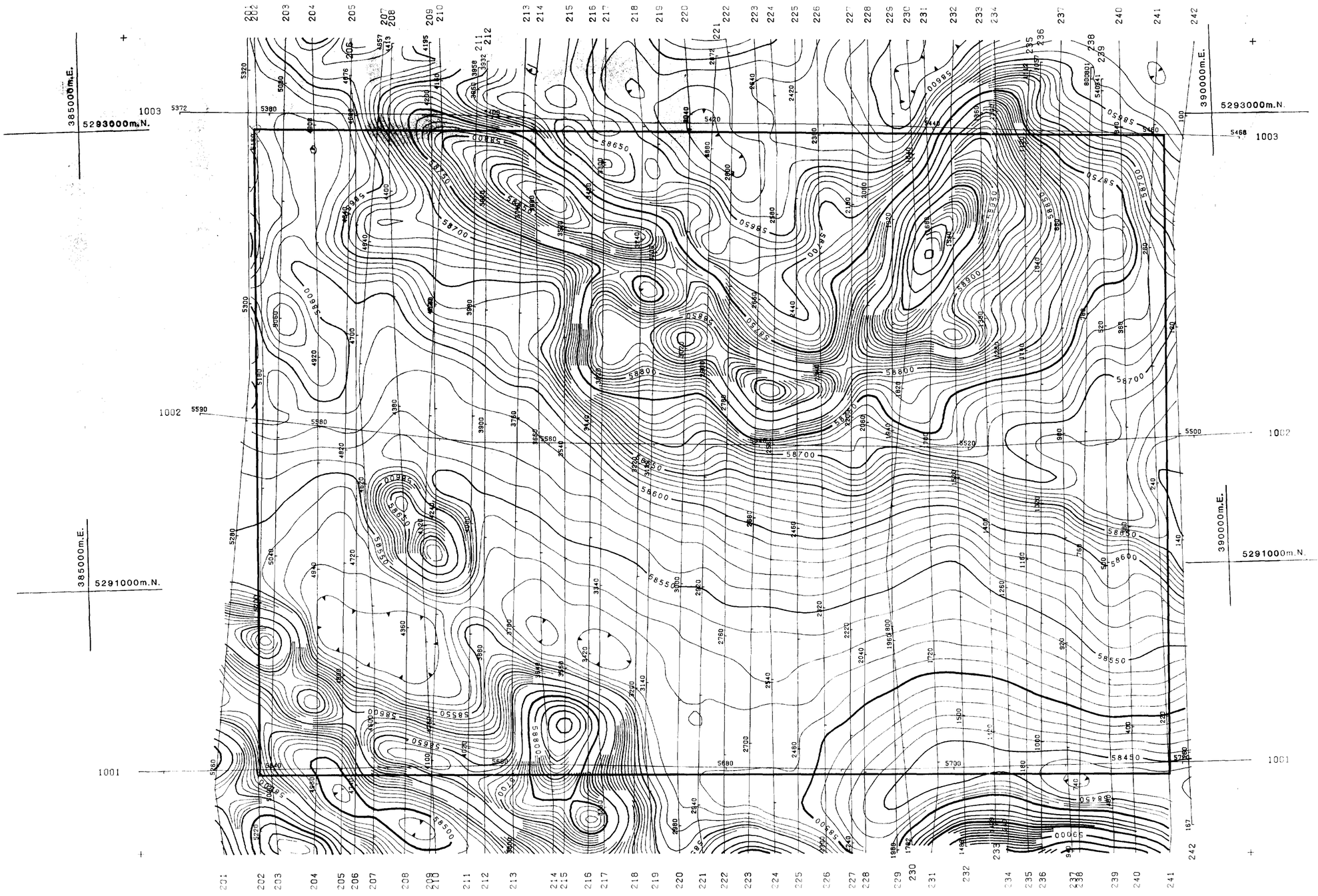
LAND TITLES / REGISTRY DIVISION

SUDBURY

Ontario Ministry of Natural Resources — Land Management Branch

Date MARCH, 1985

Number G-3249



LEGEND

Terrain Clearance	100 meters
Line Spacing	100 meters

TOTAL MAGNETIC FIELD

1000 gammas	
250 gammas	
50 gammas	
10 gammas	

CHARET SYNDICATE

AIRBORNE MAGNETIC SURVEY
TOTAL MAGNETIC FIELD

DORE TOWNSHIP PROPERTY
ONTARIO

JOB NO.	410/15,16	DRAWING NO.	A 761.1-1
SCALE	1:10,000	DATE	May 1988

TERRAQUEST LTD.

CHARET SYNDICATE

AIRBORNE MAGNETIC SURVEY
TOTAL MAGNETIC FIELD

SWAYZE AND DORE TWP. PROPERTY
ONTARIO

JOB NO. 410-19 DRAWING NO. A-761.2-1

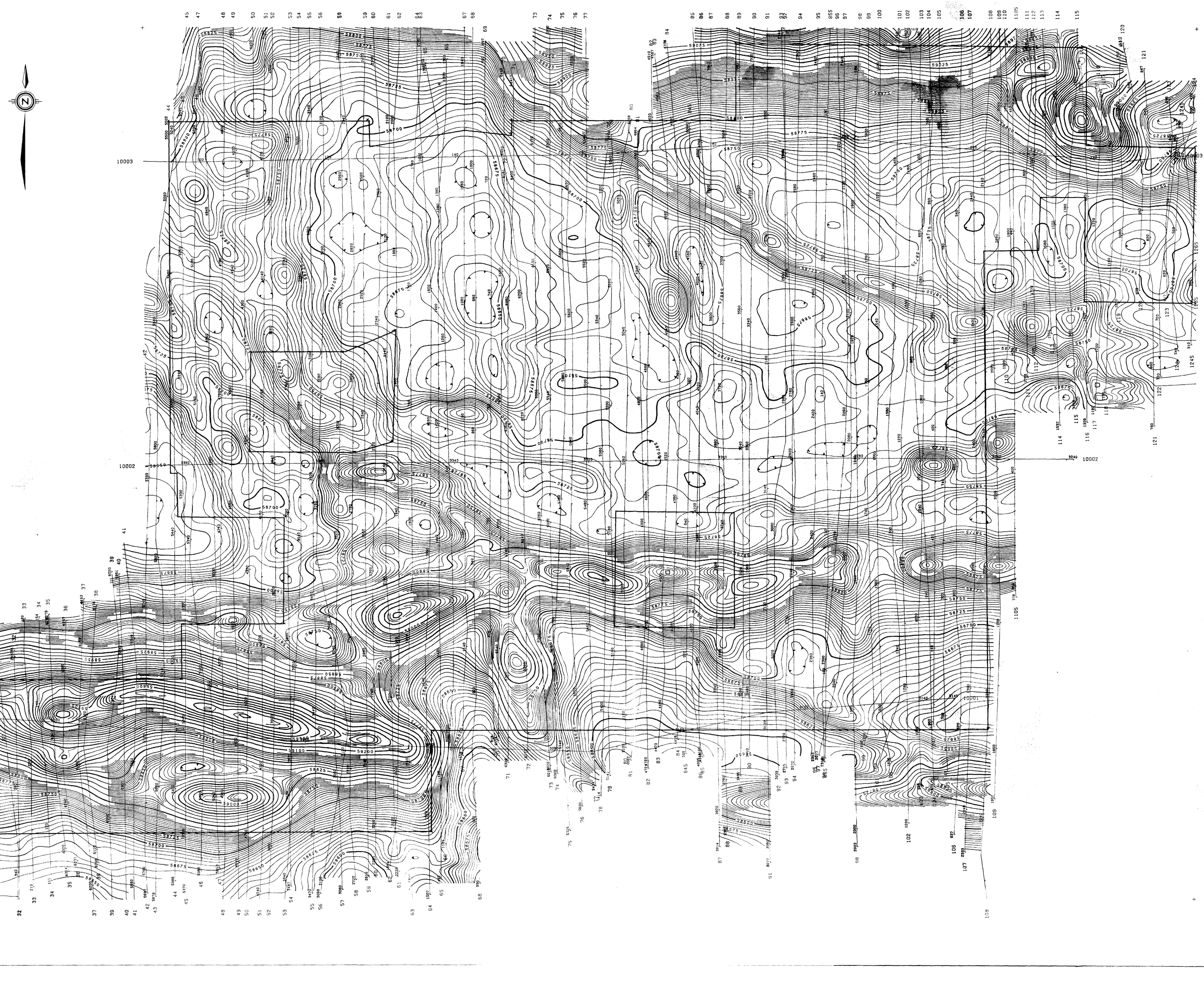
SCALE 1:10,000 DATE June 1988

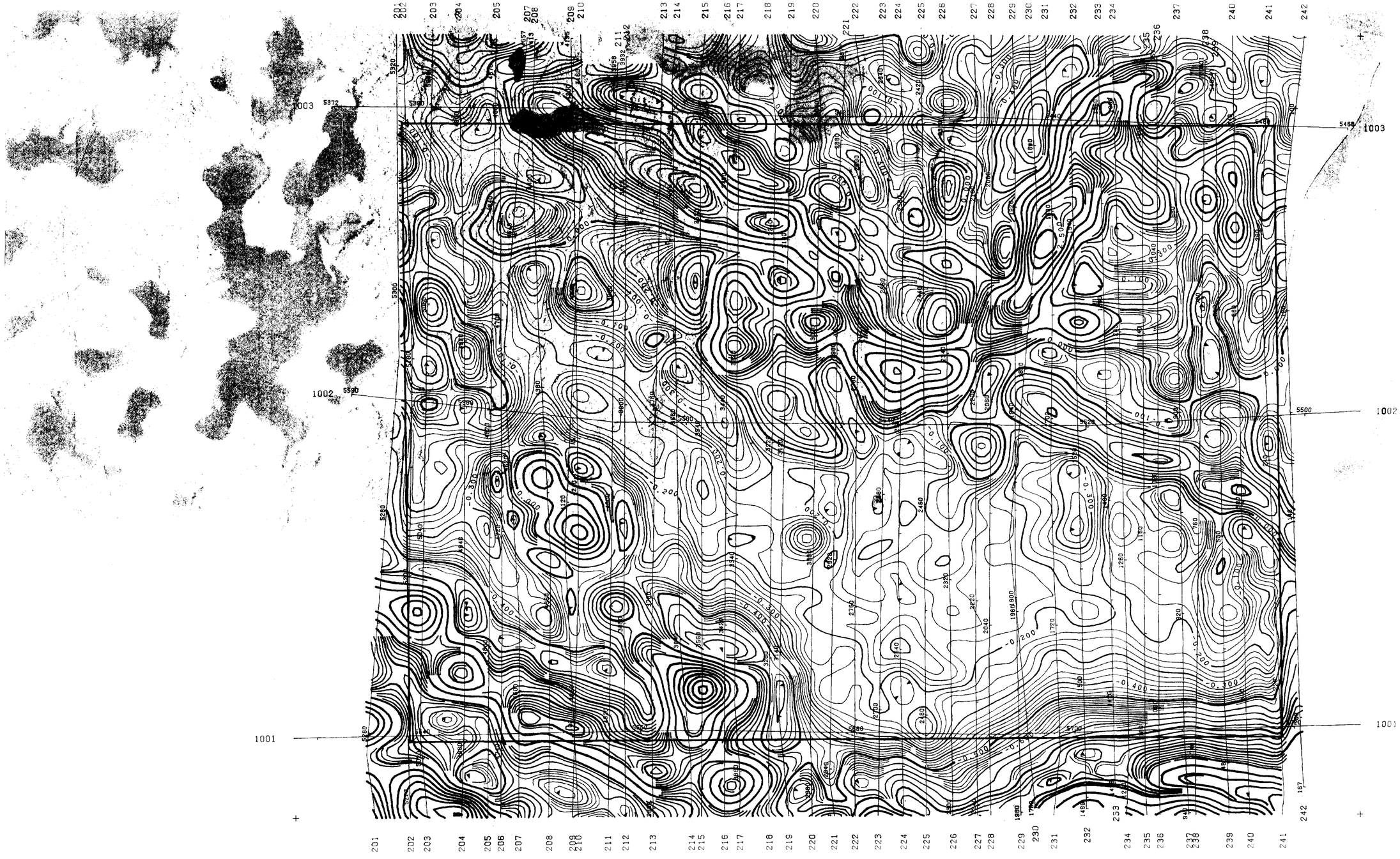
TERRAQUEST LTD.

LEGEND

Terrain Clearance	100 meters
Line Spacing	100 meters

TOTAL MAGNETIC FIELD
500 gammas
100 gammas
25 gammas
0 gammas





LEGEND

Terrain Clearance ..... 100 meters
Line Spacing ..... 100 meters

VERTICAL MAGNETIC GRADIENT
2.500 gammas/meter
.500 gammas/meter
.100 gammas/meter
.025 gammas/meter

CHARET SYNDICATE

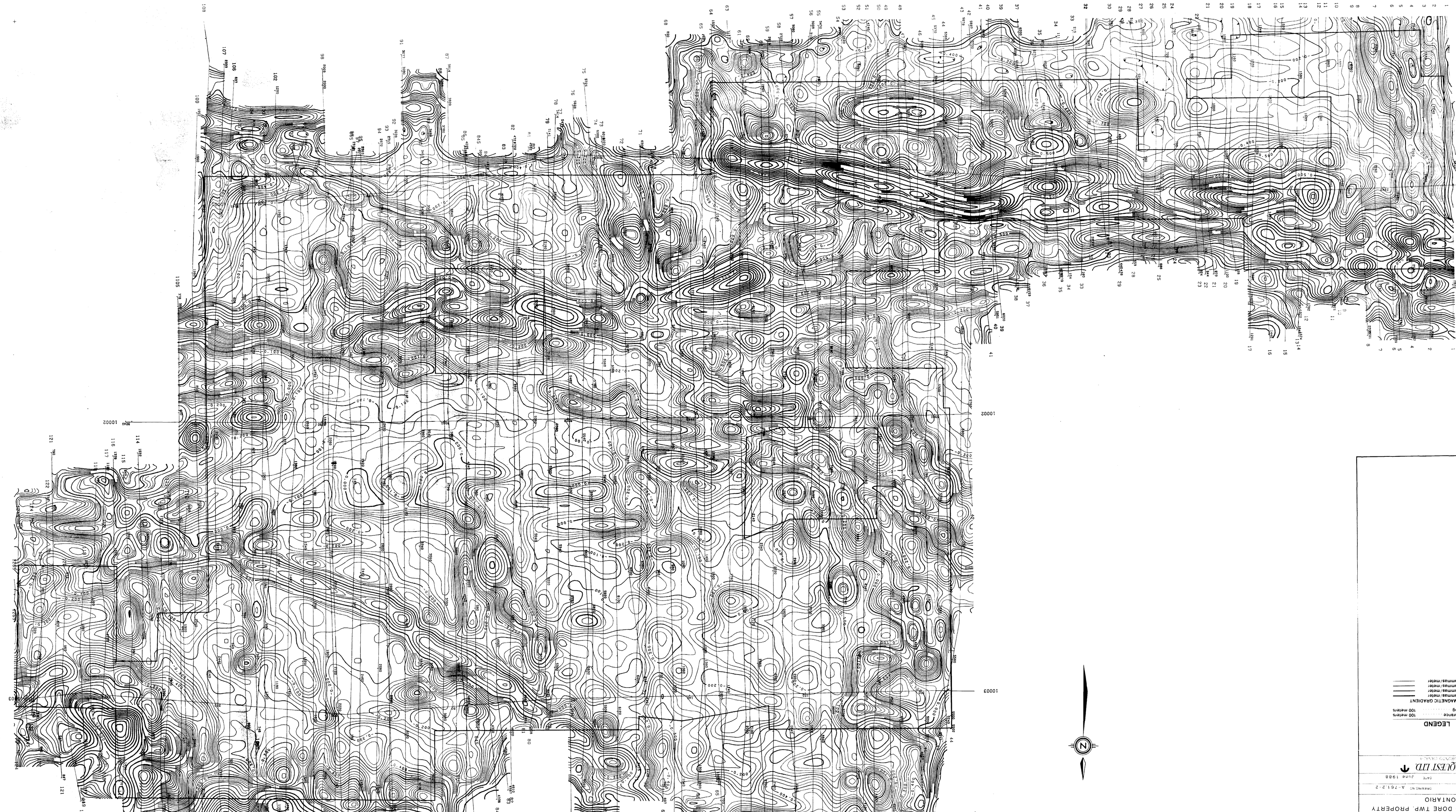
AIRBORNE MAGNETIC SURVEY

VERTICAL MAGNETIC GRADIENT
Calculated From Total Field

DORE TOWNSHIP PROPERTY
ONTARIO

N.T.S. NO. 410/15,16 | DRAWING NO. A-761.1-2
SCALE 1:10,000 | DATE May 1988

TERRAQUEST LTD.
TORONTO CANADA



CHARET SYNDICATE

AIRBORNE MAGNETIC SURVEY
VERTICAL MAGNETIC GRADIENT
Calculated From Total Field

SWAYZE AND DORE TWP. PROPERTY
ONTARIO

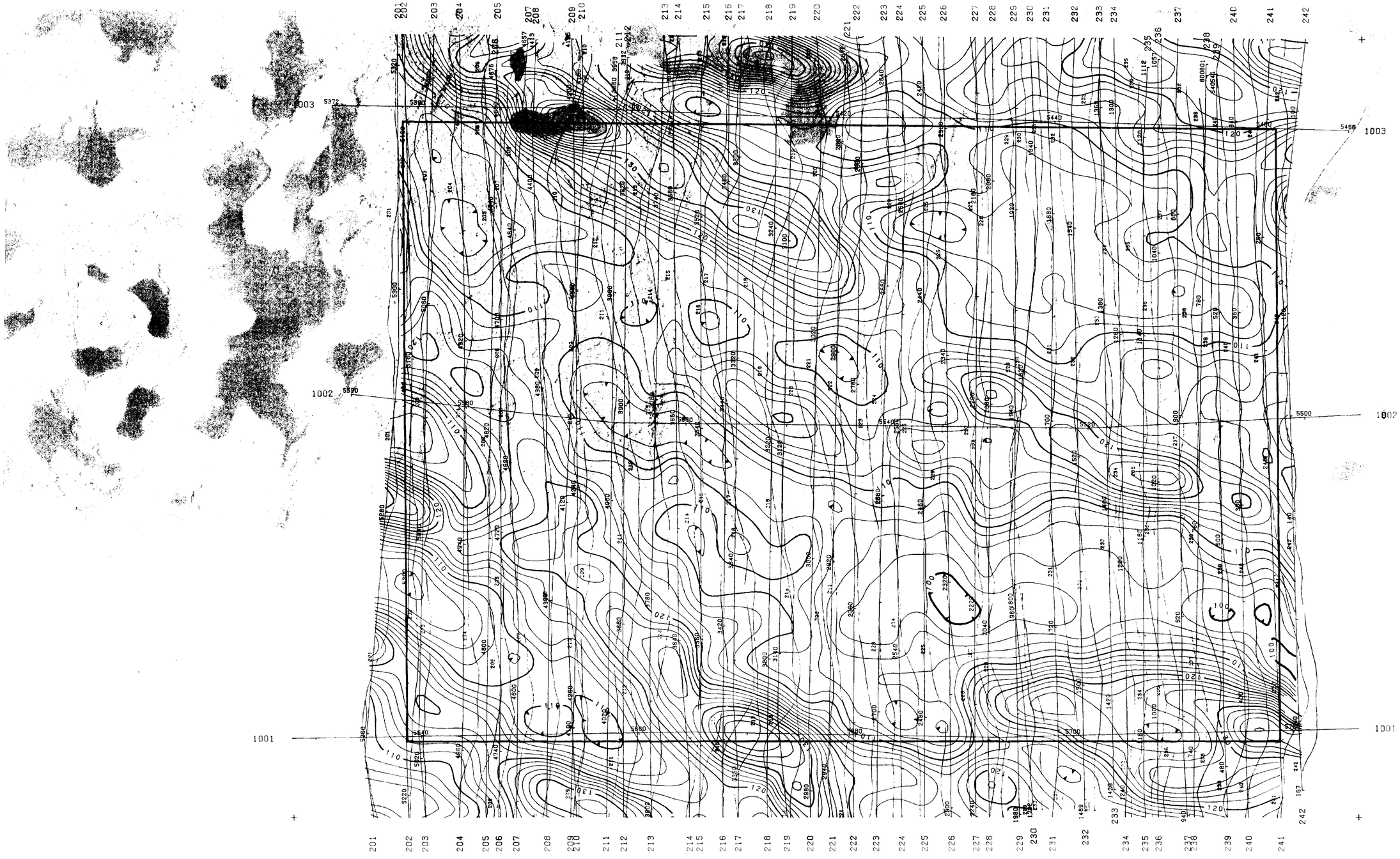
NTS NO 41O/15 DRAWING NO A-7613-2
SCALE 1:10,000 DATE June 1988

TERRAQUEST LTD
CONSULTING GEOPHYSICISTS

LEGEND

Terrain Clearance ..... 100 metres
Line Spacing ..... 100 metres

VERTICAL MAGNETIC GRADIENT
2 500 gammas/meter
500 gammas/meter
100 gammas/meter
.025 gammas/meter



VLF Transmitter
NAA Cutler, 24.0 kHz
Azimuth 101

LEGEND

Terrain Clearance ..... 100 meters
Line Spacing ..... 100 meters

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

QUADRATURE (Profiles)
Normal Slope — Reverse Slope
+10% / −10%

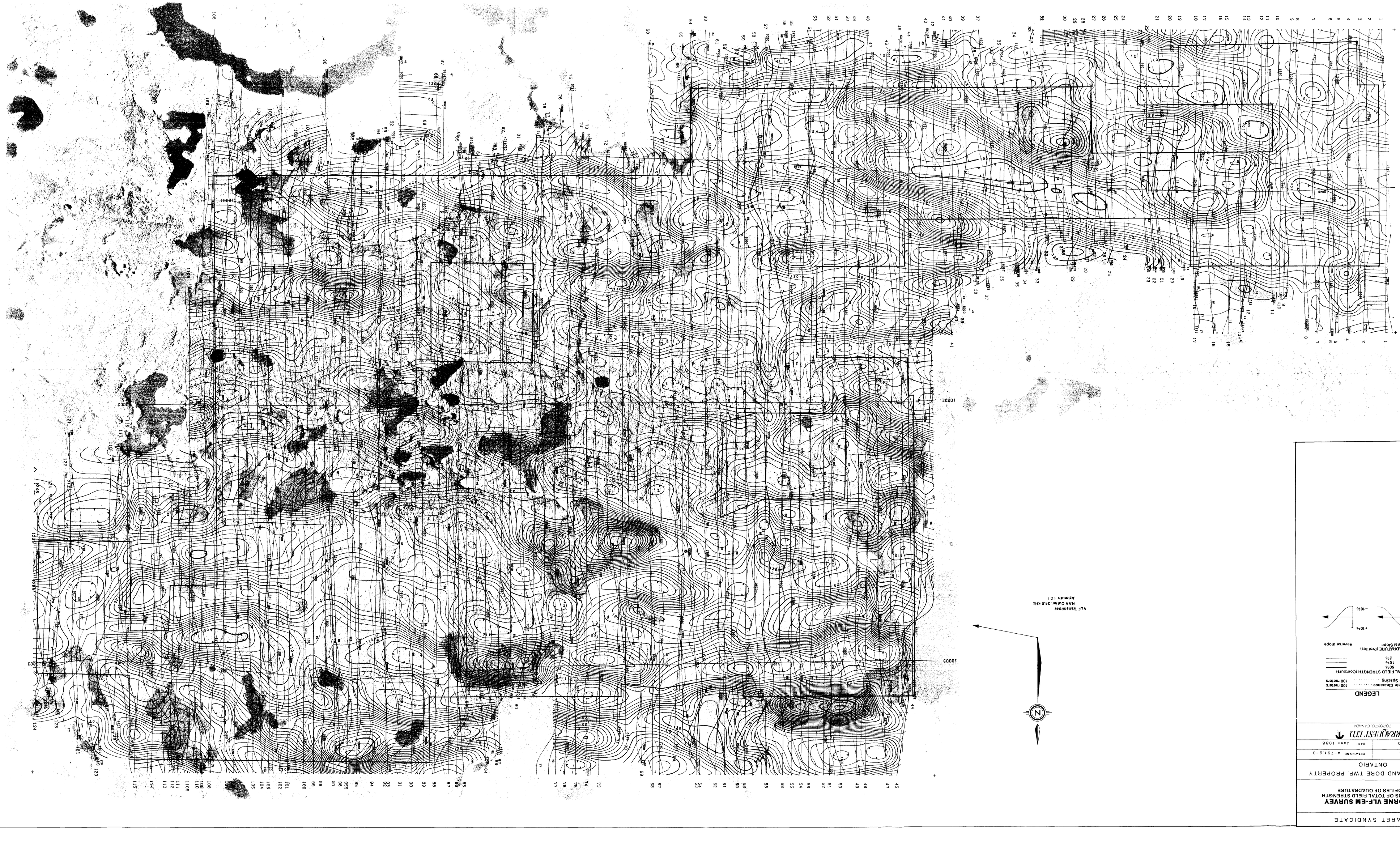
CHARET SYNDICATE

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

DORE TOWNSHIP PROPERTY
ONTARIO

N.T.S. NO. 410/15,16	DRAWING NO. A-761.1-3
SCALE 1:10,000	DATE May 1988

TERRAQUEST LTD.
TORONTO, CANADA



CHARET SYNDICATE

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

SWAYZE AND DORE TWP. PROPERTY
ONTARIO

N.T.S. NO 41O/16	DRAWING NO A-7612-3
SCALE 1:10,000	DATE June 1988

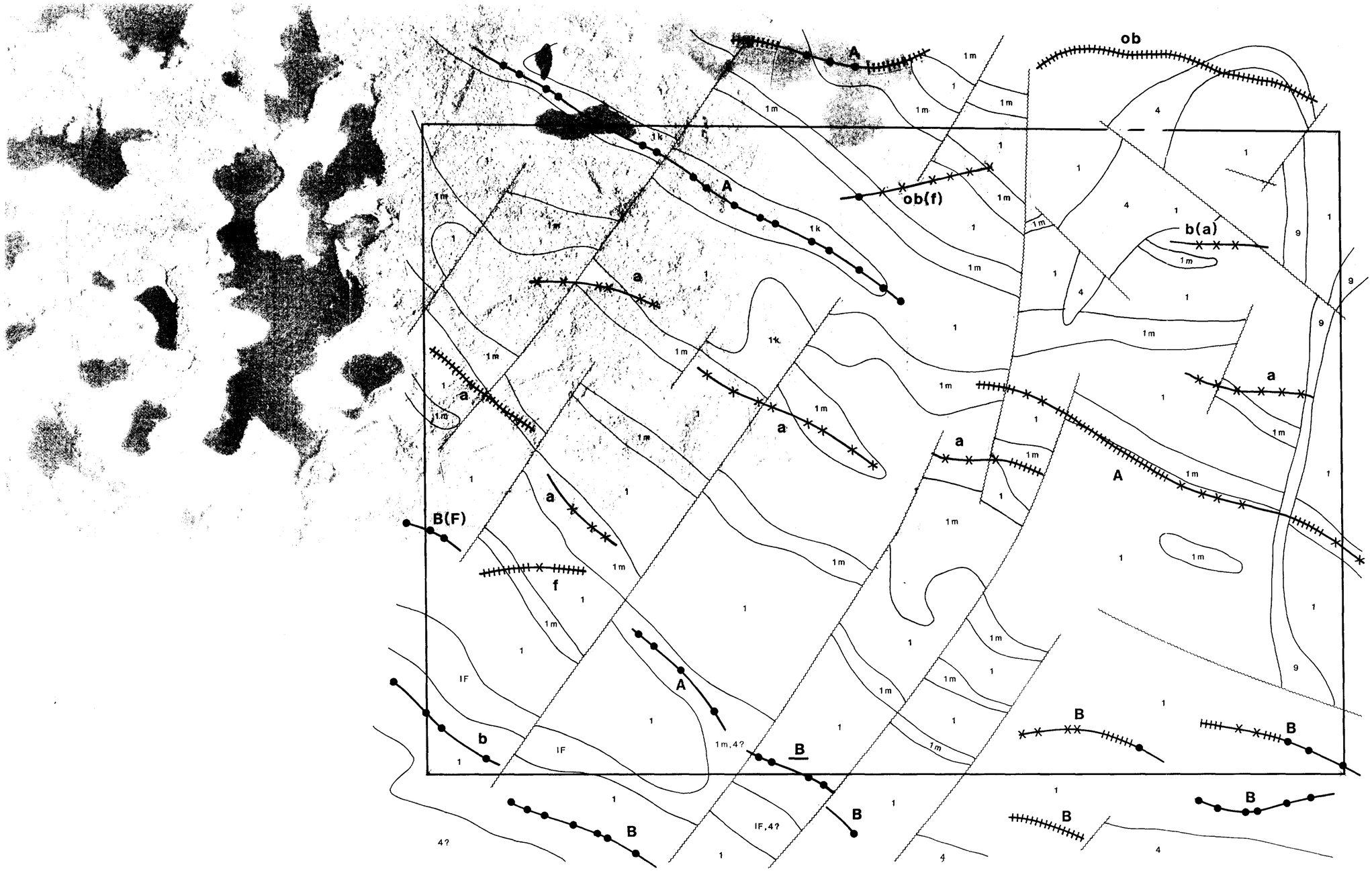
TERRAQUEST LTD
TORONTO CANADA

LEGEND

Terrain Clearance ..... 100 meters
Line Spacing ..... 100 meters

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

QUADRATURE (Profiles)
Normal Slope
+10%
-10%
Reverse Slope
+10%
-10%



N

VLF Transmitter
NAA Cutler, 24.0 kHz
Azimuth 101

LITHOLOGY

9	Diabase Dyke
4	Mafic Intrusives
1k	Komatiites
1m	Magnetic Unit Within 1
1	Mafic to Intermediate Metavolcanics
IF	Iron Formation

LEGEND

Terrain Clearance ..... 100 meters
Line Spacing ..... 100 meters

INTERPRETATION

Contact
Fault
Property Boundary

VLF-EM Conductor Axes

normal quadrature
reverse quadrature
total field only

See text for classification of VLF-EM conductor axes

CHARET SYNDICATE

INTERPRETATION

DORE TOWNSHIP PROPERTY
ONTARIO

N.T.S. NO. 410/15,16 | DRAWING NO. A-761.1-4
SCALE 1:10,000 | DATE May 1988

TERRAQUEST LTD.
TORONTO, CANADA

CHARET SYNDICATE

INTERPRETATION

SWAYZE AND DORE TWP. PROPERTY
ONTARIO

VLF-EM 410/15 DRAWING No. A-7612-4

SCALE 1:10,000 DATE June 1988

TERRAQUEST LTD

LEGEND

Terrain Clearance ..... 100 metres
Line Spacing ..... 100 metres

INTERPRETATION

Contact
Fault
Property Boundary

VLF-EM Conductor Axes

normal quadrature
reverse quadrature
total field only

See text for classification of VLF-EM conductor axes

VLF Transmitter
NAA Cutler, 24.0 kHz
Azimuth 101°

LITHOLOGY

Diabase Dyke
Granitic Rocks
Mafic and Ultramafic Intrusives
Metasediments
Felsic Metavolcanics
Komatiites
Magnetic Unit Within 1
Mafic to Intermediate Metavolcanics