



52N02SE9883 63.5263 EARNGEY

010

GEOPHYSICAL AND STRIPPING REPORT ON THE
EARNGEY TOWNSHIP PROPERTY
FOR ST. JUDE RESOURCES LTD.*

ONTARIO

NTS 52N/2

R. Ken Germundson

R. KEN GERMUNDSON

SUDBURY GEOLOGICAL SERVICES INC.

MAY 10, 1988

0M88-1-C-011

* Similar geophysical report can be found in Toronto file #2.11240
R.O.W. #W8802.103.



52N025E9883 63.5283 EARNGEY

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INTRODUCTION

An EDA Omni Plus Magnetometer/VLF EM ground geophysical survey was conducted by Sudbury Geological Services Inc. over twenty claims owned by St. Jude Resources Ltd. between February 15 and April 29, 1988. An Induced Polarization survey over the north grid commenced on March 16 and was completed on April 7, 1988.

A short program of stripping was undertaken between March 28 and 31, 1988 just prior to Spring breakup.

The following report discusses the results of the surveys and relates the same to geological scenarios.

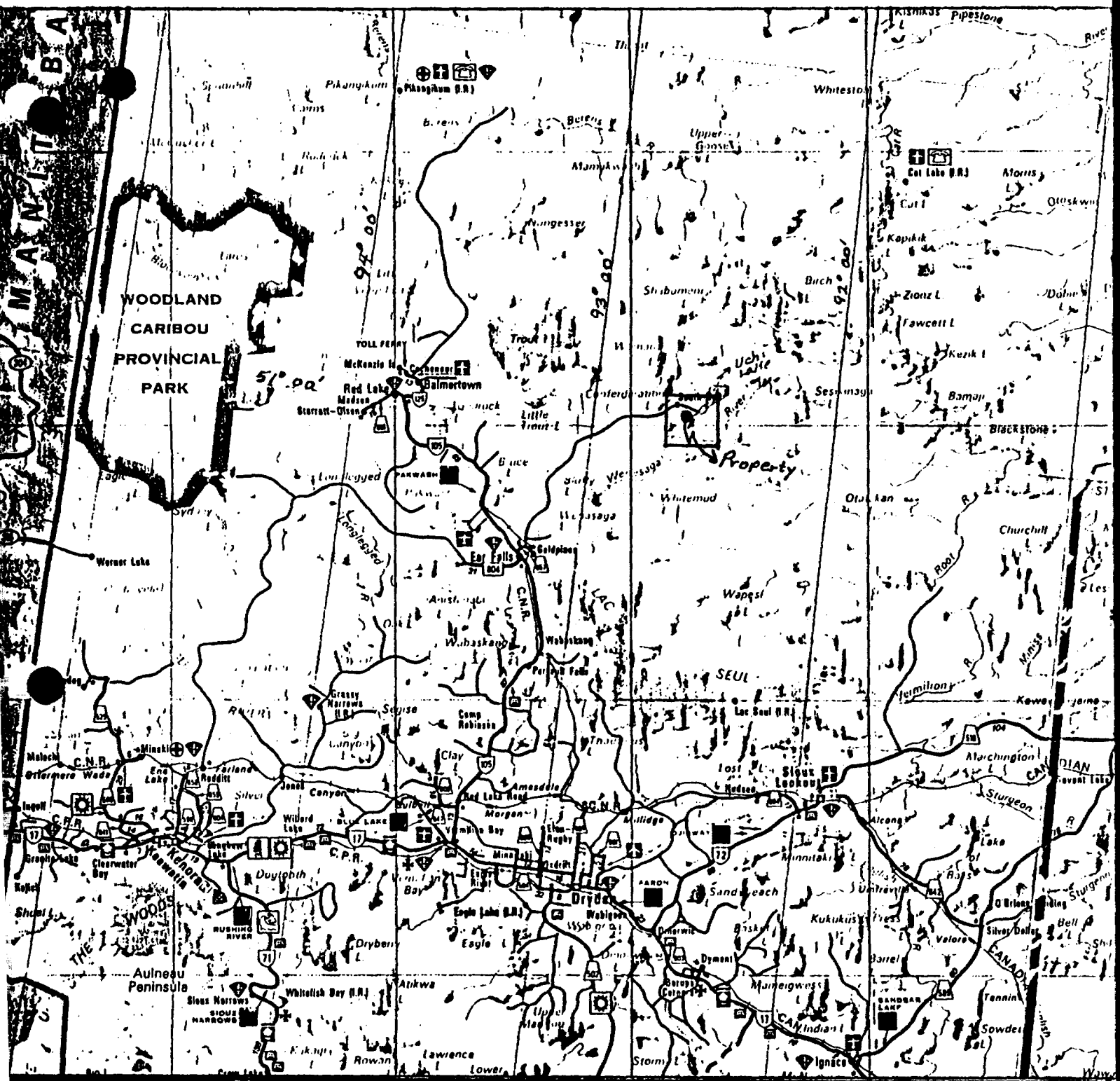
PERSONNEL

The Omni Plus system was operated by Messrs. Bruce Fraser, Peter Bilenki and John Simms, all of Sudbury.

Between March 16 and March 21, both Messrs. Tony Insinna of Sudbury and Bruce Fraser operated the I.P. receiver. The back up crew consisted of Mssrs. Brian Moore, Steve Woods and Wayne Johnston, all students at Cambrian College. Between March 22 and April 7 the I.P. was operated by Mr. Bruce Fraser with Messrs. Peter Belinki (Sudbury), Blaine LaRocque (Ear Falls) and Terry Ocheewasawan (Ear Falls) assisting.

LOCATION AND ACCESS

The property is located in Central Earngy Township immediately west of and over Uchi Lake. An access trail is



ST JUDE RESOURCES LTD.
EARNCEY TOWNSHIP, ONTARIO

LOCATION MAP



April, 1948

NTS 52N/2

usable by bush vehicles from the Uchi Mine which is located about 0.7 or 0.8 miles north of the claims.

Uchi Mine is about 82 km. (51 miles) by road from Ear Falls. The first 72 km. (45 miles) is on an all weather road to within 1/2 mile of South Bay. At this point a trail leads to the Uchi Mine (10 km. or 6 miles).

CLAIMS

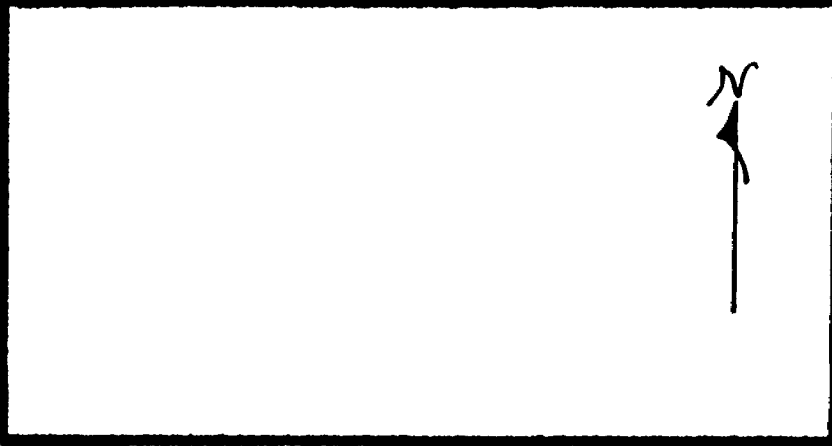
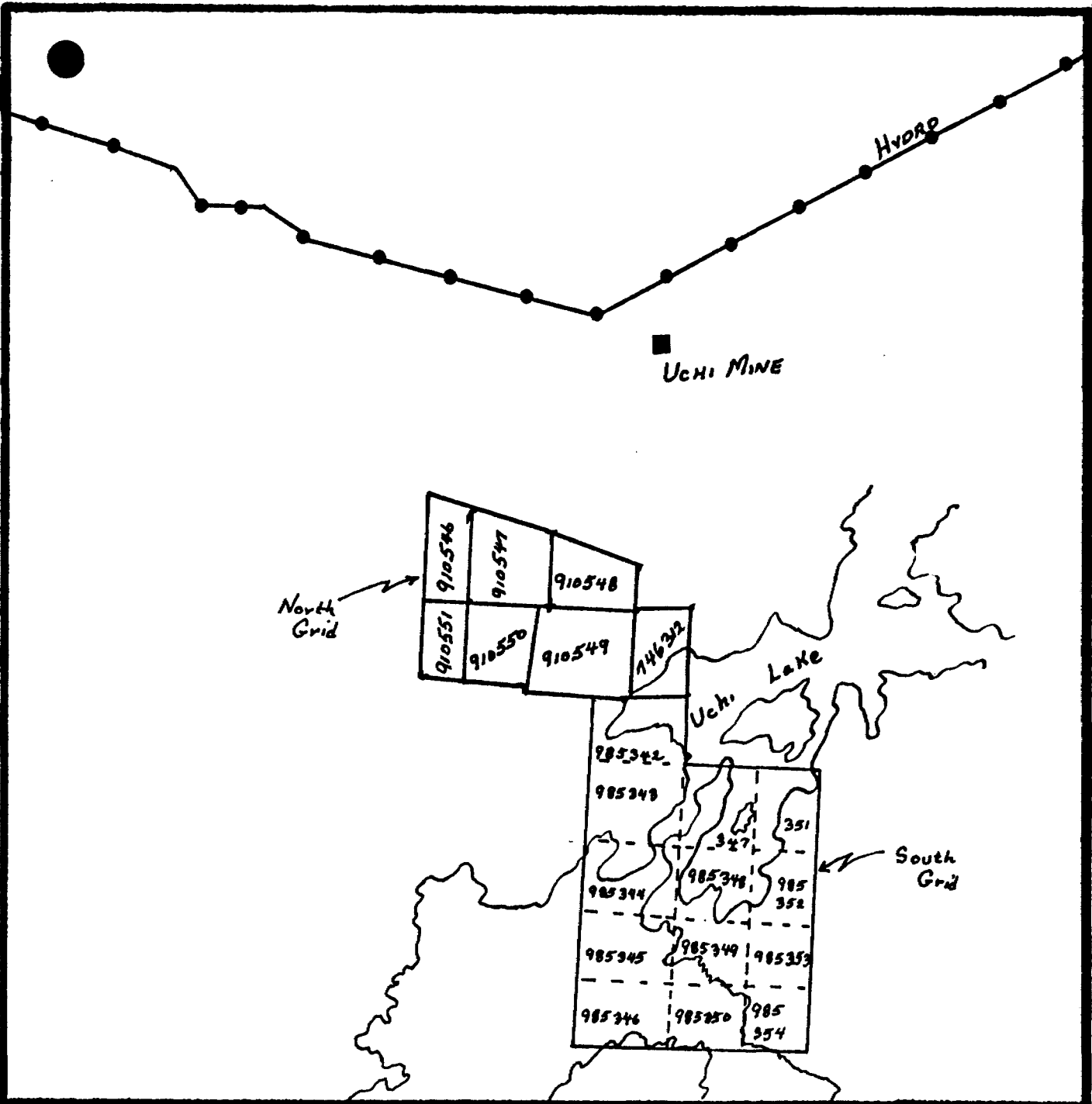
The following twenty claims were geophysically surveyed:

North Grid	South Grid	
746 312	985 342	985 349
910 546	985 343	985 350
910 547	985 344	985 351
910 548	985 345	985 352
910 549	985 346	985 353
910 550	985 347	985 354
910 551	985 348	

These claims are in the Red Lake Mining Division registered with the Mining Recorder's Office at Red Lake.

TOPOGRAPHY

Much of the property is flat and is covered by marshes and swamp. Low hills or ridges occur. Most of the timber was logged during the period of production for the Uchi Mine. Forty percent of the south grid is over Uchi Lake.



ST JUDE REBOURCES LTD.
 EARNGEY TOWNSHIP, ONTARIO

CLAIMS MAP

1" = 1/2 mile

R. Ken Germundson
 April, 1988

NTS 52N/2

GENERAL GEOLOGY

Earngay Township is underlain by a series of acid to mafic volcanic flows and pyroclastics; rocks composed of diorite can represent either an intrusive or an extrusive genesis. Sedimentary rocks are not common and restricted, from mapping, to a few trends adjacent to parts of Uchi Lake.

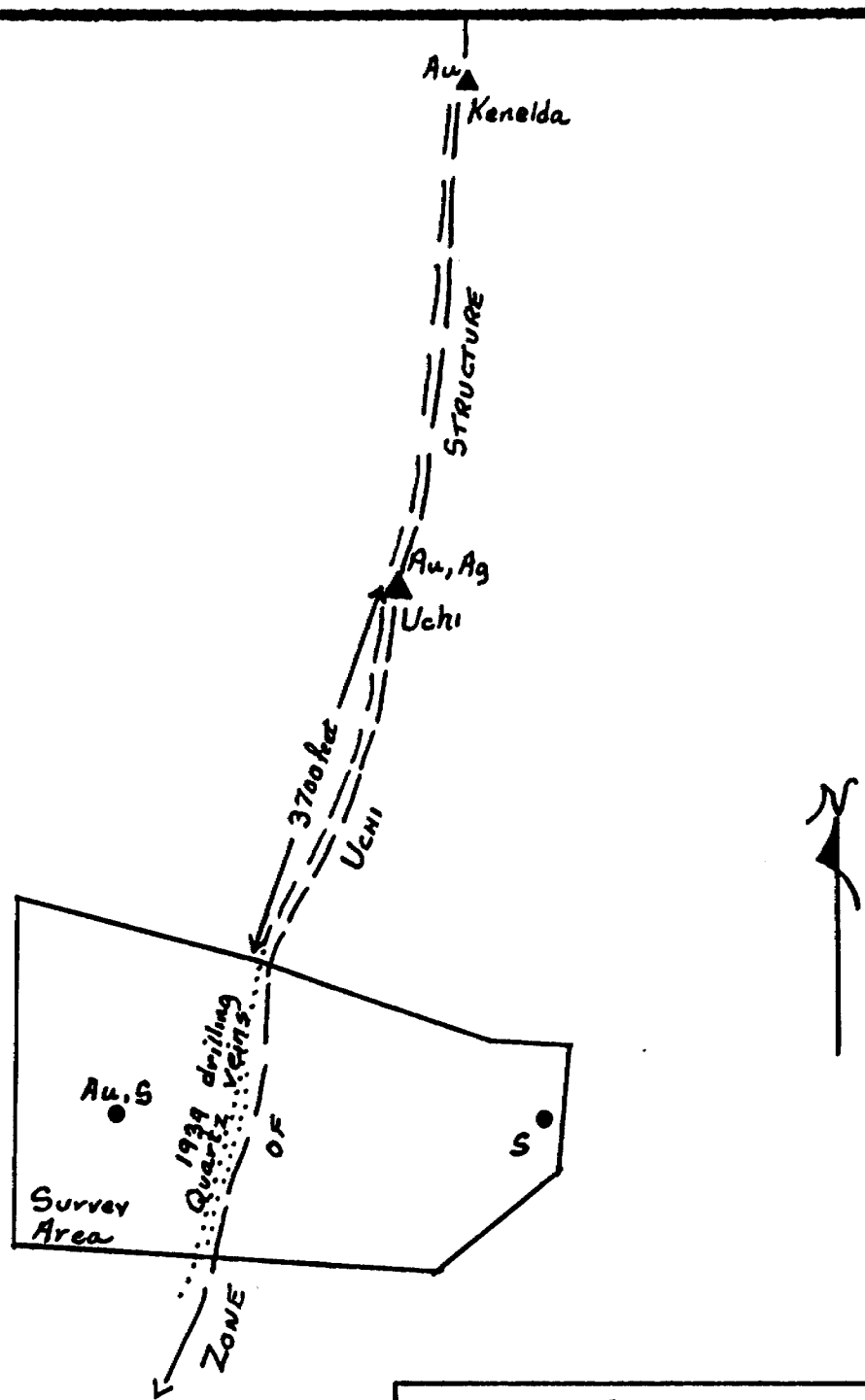
All rock units in northwestern Earngay Township, west of Uchi Lake have a primarily north-south trend; trends are northeasterly within the rest of the township (south grid).

Economic minerals, specifically gold, are known to occur within several parts of Earngay Township. Gold is generally associated with quartz veins and networks in mafic-felsic trends and within shearing. Gold in rhyolite breccias is less common.

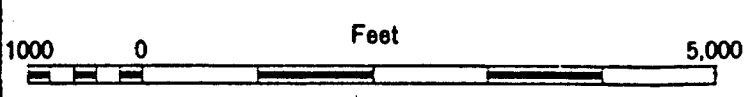
The Uchi structure as defined by Chester Kuryliw from mapping during 1968 is pertinent to the St. Jude Resources Ltd. property. It is a north-south trending band of shearing and quartz veins which can be projected both to the north and south of the Uchi Mine.

The structure is depicted in the diagrammatic presentation for that part of Earngay Township extending from the Kenelda (1938) property through to the Uchi Mine and southwards across the central portion of the north grid.

The Kenelda mineralization is located 8600 feet north of the northern boundary of the survey area. It was developed by trenching and drilling (ca 1937, 1938). Several quartz vein systems are known to contain gold.



ST JUDE RESOURCES LTD.	
EARNGEY TOWNSHIP, ONTARIO	
Diagrammatic Presentation of the Uchi Structure	
R. K. Germundson	
APRIL, 1986	NTS 52N/2



Up to 1943 some 114,467 ounces of gold and 14,345 ounces of silver were mined from the Uchi deposits. The trend from the Uchi Mine was established in the present survey area in 1939 and defined by 9 drill holes. Sparse gold mineralization and iron sulfides were noted; however, the Uchi deposits rake south and a general opinion is that an equivalent gold-bearing system would underly the survey area at depth.

Other north-south trending gold-bearing systems are present in Earngey Township.

PROPERTY GRID

Two separate base lines were cut to establish the grid over the northern claims (base lines 1 and 2). The south grid ties onto the north grid. East-west cross lines were cut every 200 feet and stations marked each 100 feet.

DISCUSSIONS OF GEOPHYSICAL SURVEYS

MAGNETOMETER SURVEY

56,000 was subtracted from each magnetometer reading to obtain the data point values on the maps.

NORTH GRID

Magnetic susceptibility variations over the north grid trend in a north-south direction and parallel the strike of the volcano-stratigraphic rock units. No cross-cutting features such as dykes have been noted; any evidence within the data for local faulting is interpretive rather than

distinct.

The survey area can be divided into two magnetic realms. A broad magnetic low in claim 746 312 is flanked to the east by a narrow magnetic high with magnetic intensities ranging from 1000 to 7000 gammas. The data from the remainder of the grid portrays an intermingling of parallel and narrow high and low magnetic trends.

The most auspicious combination of narrow trends is centred on line 10 + 00 E, base line 1 between 0 + 00 and 20 + 00 N. Here the north-south trending Uchi structure is located. The magnetic trend weakens towards the southern part of the property.

The best evidence for a local fault lies along a line extending from 0 + 00 E and 8 + 00 S, base line 1 to 13 + 00 W and 6 + 00 N. There is offset of the magnetic trends in the vicinity of 4 + 00 E and 4 + 00 N. There is disruption of magnetic style as the feature is traced towards the northwest from 4 + 00 E.

SOUTH GRID

The most pronounced magnetic feature within the south grid in part lies under Uchi Lake. A folded rock sequence is present and is outlined by rocks containing a relatively high amount of magnetic minerals. There is evidence that an east-west trending structure cuts the southwestern arm between 24 + 00 and 26 + 00 S.

The axis of the fold follows the trace of the Uchi Lake

Fault. Local magnetic trends tend to parallel the fault as it is followed across the claims.

Other areas of high magnetic susceptibility occur. The high in claim 985 342 trends into claim 746 312 (north grid).

In general the magnetic intensity of rocks lying between magnetic highs has minimal character.

VLF EM SURVEYS

North Grid

Note that the north side of the lines is positive for the north grid and negative for the south grid. One map contains data using Cutler Maine as the transmitter.

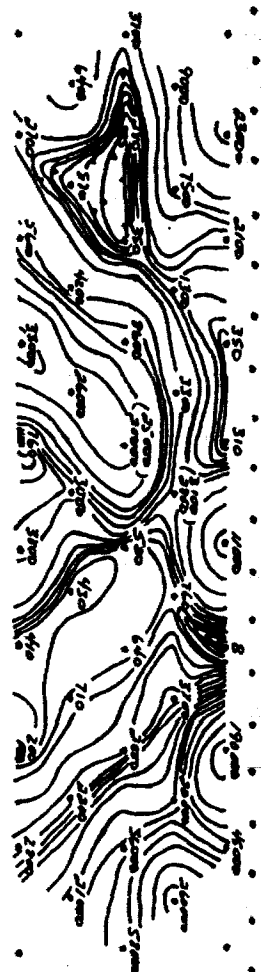
VLM EM cross overs, with Cutler, Maine as the transmitter, parallel magnetic trends in two areas of the survey. The first begins at 16 + 00 N at 6 + 00 E and extends in a sinuous fashion southward to 6 + 00 N at 8 + 00 E (both locci located from base line 2). The southern limits of this conductive trend is at the northwestern end of the postulated fault. This series of cross overs follows a magnetic high/low trend in part and is therefore felt to be related to bed rock.

The second magnetic related VLM EM anomaly trends from 8 + 00 S at 4 + 00 E to 6 + 00 S at 7 + 25 W (base line 1) and parallels a trend of high magnetic susceptibility.

Marked cross overs are located on lines 18 + 00 N and 20 + 00 N just west of base line 2. These intersect the magnetic trend in this part of the grid. A weak VLF EM response crosses claim 746 312 in a northerly direction from

18000 17000 16000 15000 14000 13000 12000 11000 10000 9000 8000 7000 6000 5000 4000

Contour Interval: 1000 ohm-m



18000 17000 16000 15000 14000 13000 12000 11000 10000 9000 8000 7000 6000 5000 4000

Contour Interval: 5 msec



Chargeability (msec)

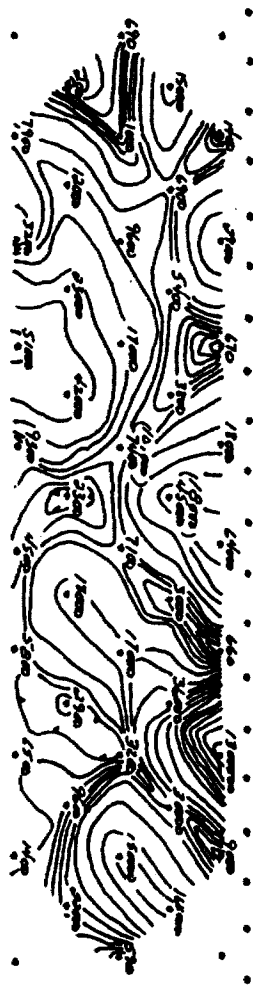
Apparent Resistivity (ohm-m)

Project : ST. JUDES EXPLORATION
 Area : UCHI LAKE
 Name : T. INSINNA

Line : 10+00 N
 Spacing : 100 ft
 Date : 18/03/88

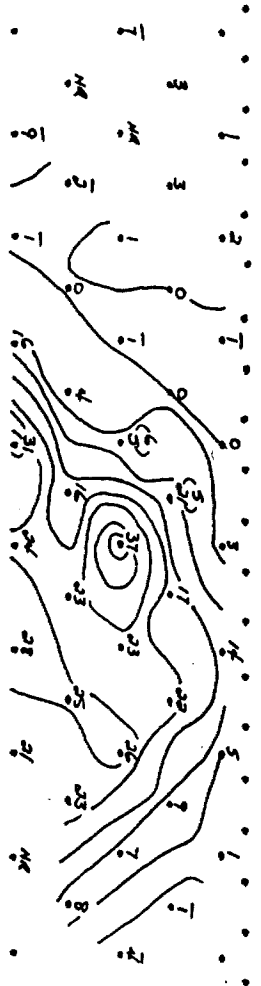
1700 1700 1600 1500 1400 1300 1200 1100 1000 900 800 700 600 500 400 5

CONTOUR INTERVAL: 100 FEET (30-M)



1700 1700 1600 1500 1400 1300 1200 1100 1000 900 800 700 600 500 400 5

CONTOUR INTERVAL:



Chargeability (msec)

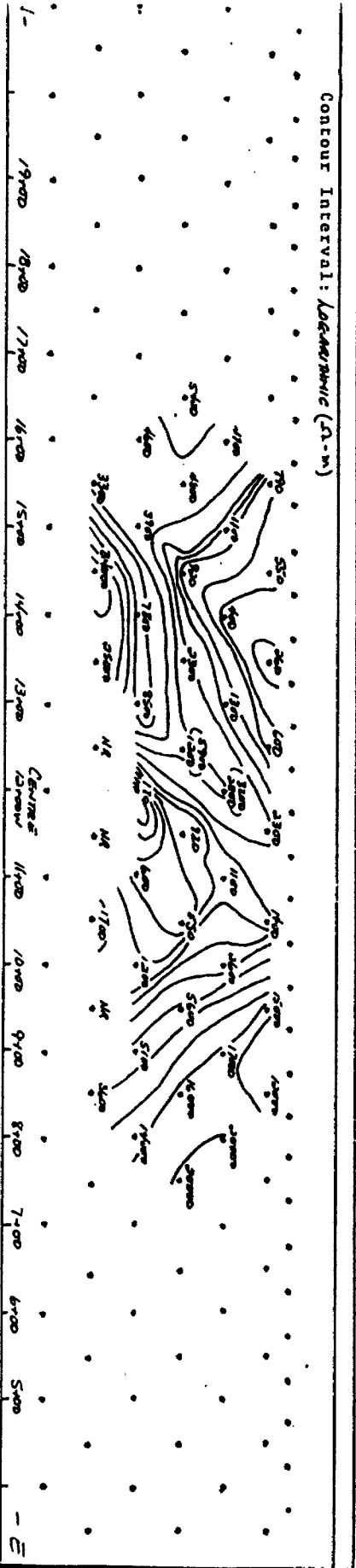
Apparent Resistivity (ohm-m)

Project : ST. JUDES EXPLORATION
 Area : UCHI LAKE
 Name : T. INSINNA

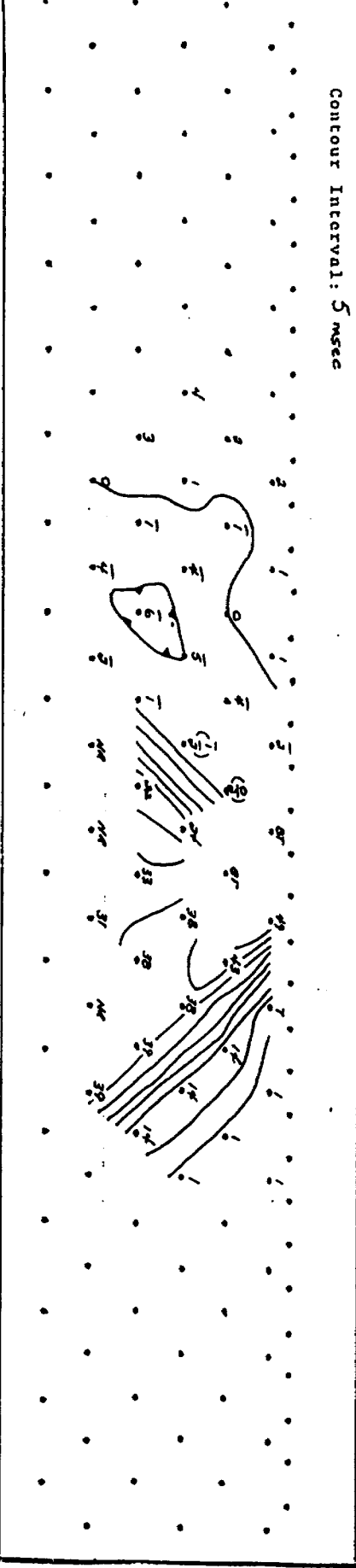
Line : 6400 N
 Spacing : 100 ft
 Date : 19/03/88

1- 1900 1800 1700 1600 1500 1400 1300 1200 1100 1000 900 800 700 600 500 - 2

CONTOUR INTERVAL: 100 OHM-M



CONTOUR INTERVAL: 5 msec



Chargeability (msec)

Apparent Resistivity (ohm-m)

Project : ST. JUDES RESOURCES
 Area : UCHI LAKE
 Name : T. INFINNA

Line : 14100 N
 Spacing : 100 ft
 Date : 16/03/88

6 + 00 S at 7 + 75 E to 2 + 00 N at 6 + 50 E (base line 1).
Other cross overs generally are restricted to one line.

South Grid

The weak VLF EM response in claim 746 312 (north grid) shows meagre continuity onto the south grid (claim 985 342) where it lies off of the flank of a magnetic high.

A northeasterly trending VLF EM response trends from 2 W + 6 S to 16 W + 18 S across a realm of lower magnetic intensity in claims 985 342 and 985 343.

Unusual VLF EM fluctuations occur on line 26 south between one and five west. There may be a relationship between this and a possible east-west trending fault (see magnetic data).

Much of the rest of the grid contains local VLF EM responses.

INDUCED POLARIZATION

North Grid Only

Induced Polarization chargeability data have a direct correlation to the magnetic zone over the eastermost part of the survey. The general area of high chargeability staddles the low/high magnetics; the boundary between the two zones of magnetism is in part paralleled by a subzone of low chargeability.

The projected Uchi Structure is flanked and paralleled by a discontinuous trend of moderately high chargeability and trends southward through the central part of the survey.

The moderate to high chargeability over the western 1/4 of the survey is made up of generally discontinuous and irregular features. However, the eastern boundary of this realm does parallel the general geologic and magnetic trends.

The chargeability trend within the eastern part of claim 910 548 has unknown relationships with structures or stratigraphy.

RESISTIVITY

North Grid Only

A resistivity high zone in the western part of the survey correlates with the zone of high chargeability. There is a north-south alignment in the area where the Uchi structures crosses the property.

CLAIM GEOLOGY COMPARED TO GEOPHYSICS

North Grid

The property was mapped by C. Kuryliw in 1968.

The broad magnetic low trending northwards through claim number 746 312 is underlain by rhyolite and rhyolite tuff. The eastern contact is with a belt of diorite which is outlined by a marked increase in magnetic intensity. Dacitic pyroclastics lie to the east of the diorite and are represented by a decrease in magnetism.

A thin band (less than 100 feet wide) of diorite or gabbro is in contact with part of the western side of the rhyolite. No magnetic expression is apparent for the

diorite.

The remainder of the survey area is underlain by andesites some of which have been dioritized. The magnetic quality of the andesitic domain is characterized by narrow and north-south magnetic trends.

The Uchi Structure has been projected 3700 feet southward from the Uchi Mine and crosses through the central portion of the claims. It is noteworthy that this projection lies on the flank of a high/low magnetic trend and follows a zone of moderately high chargeability.

One northwesterly trending fault has been predicted from magnetic data, (as shown on the magnetic map). Gold in quartz is noted from about 4 + 00 N and 2 + 00 E (base line 2).

South Grid

Much of the south grid not covered by water is underlain by intermediate to mafic volcanics. Faults (including the Uchi Lake Fault) mapped by the Ontario Geological Survey are shown on the magnetic map. A quartz feldspar porphyry dyke is shown on line 34 S between 00 and 6 S.

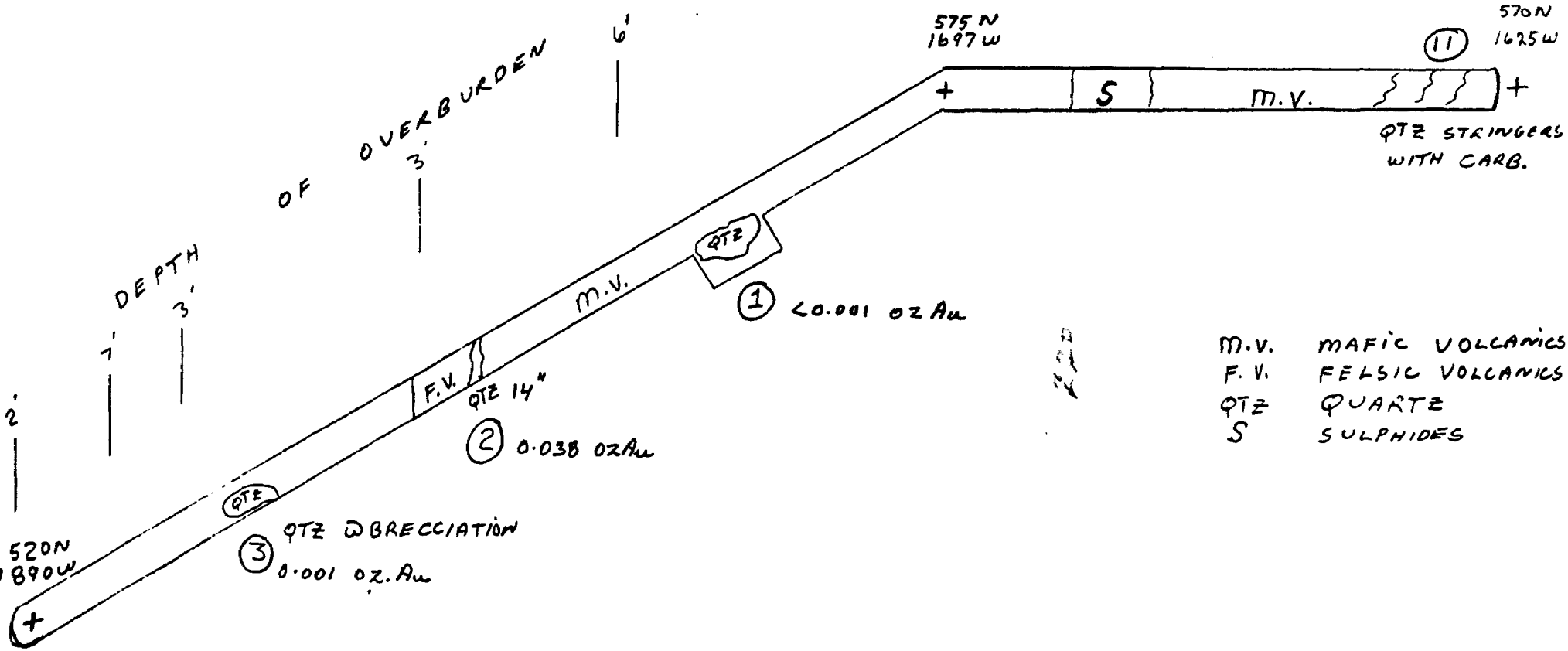
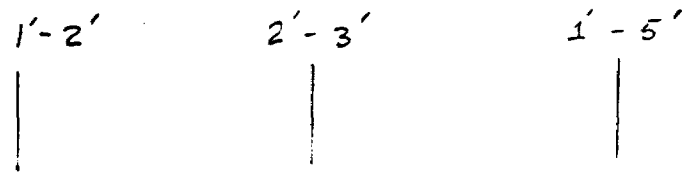
POWER STRIPPING

Between March 28 and 31, 1988, a series of trenches were dug. Stripping was done with a Komatsu D-85 Bulldozer; and trenching with a Hitachi UH-122 Backhoe with a 1 1/2 cubic yard bucket.

Trench 1: 220 feet long between 5 + 70 N at 16 + 25 W to 5 + 20 N at 18 + 90 W (base line 1). Highlights: quartz



DEPTH OF OVERBURDEN



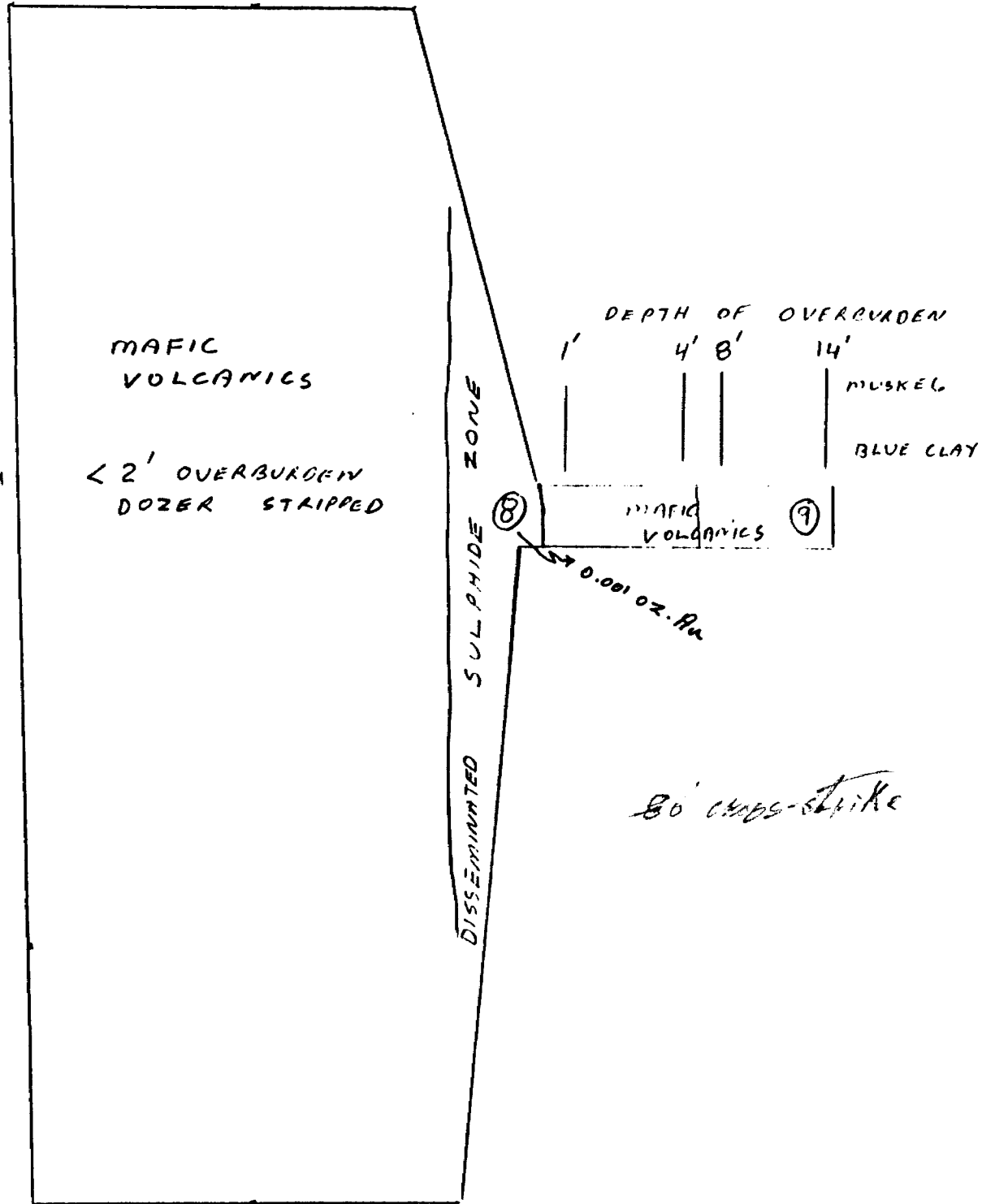
M.V. MAFIC VOLCANICS
 F.V. FELSIC VOLCANICS
 QTZ QUARTZ
 S SULPHIDES

ST. JUDE RESOURCES
 TRENCH # 1
 UCHI LAKE PROPERTY

SCALE: 1 INCH = 20 FEET

SUDBURY GEOLOGICAL
 SERVICES INC.

APRIL, 1988

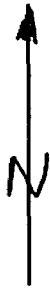


(BL 48) + 1800 N
2000 W

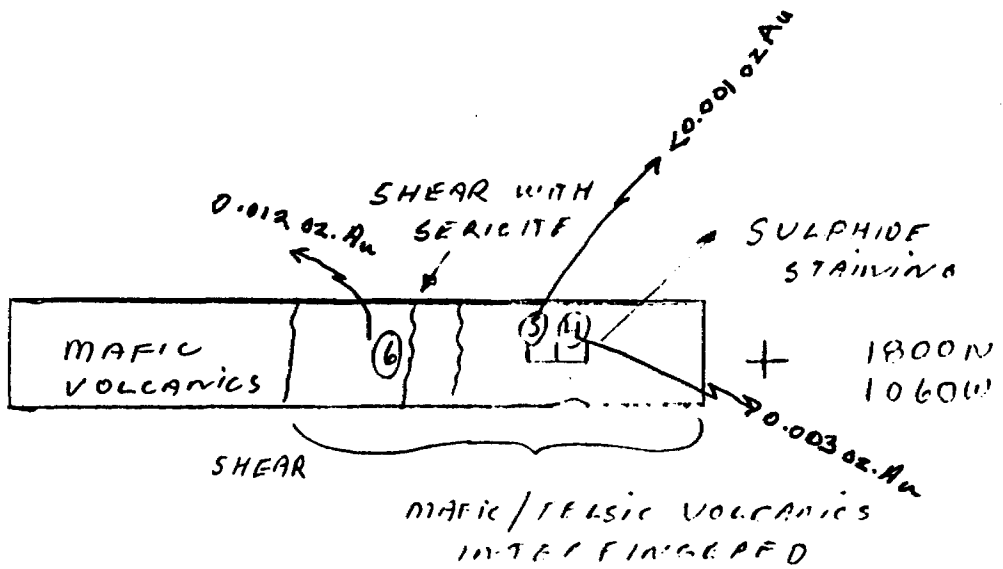
ST. JUDE RESOURCES
TRENCH # 2
UCHI LAKE PROPERTY

SCALE: 1 INCH = 20 FEET

SUBBURY GEOLOGICAL
SERVICES INC.



1800N+
1150W



← 0/B SANDY LOAM 2' - 4' - →

125

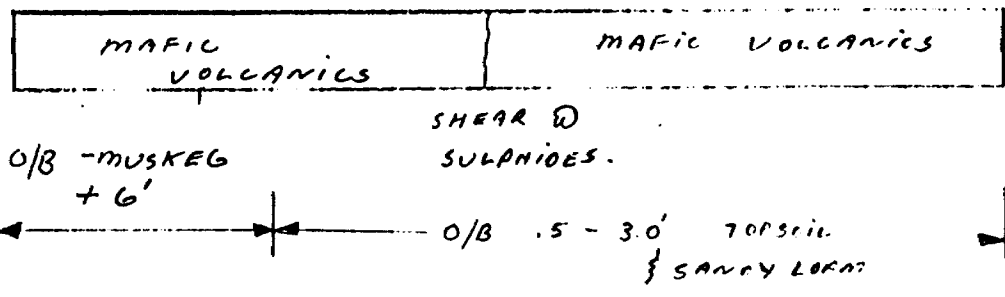
ST. JUD'S RESOURCES
TRENCH # 3
UCHI LAKE PROPERTY

SCALE: 1 INCH = 20 FEET

SUPPLY GEOLOGICAL
SERVICES INC.



+
1250N
1200W



+
1250N
1050W

100'

ST. JUDE RESOURCES
TRENCH # 4
UCHI LAKE PROPERTY
SCALE: 1 INCH = 20 FEET
SUPPLY GEOLOGICAL
SERVICES INC.



SHEARS WITH
PYRITE & CARBONATE

200S +
950W



+ 200S
850W

7' MUSKEG

(10)

< 0.001 oz. Au

1/3 8'

GR BK SILTY CLAY

1'-2' SAND

45

ST. JUDE RESOURCES
TRENCH #5
UCHI LAKE PROPERTY

SCALE: 1 INCH = 20 FEET

SUBURBY GEOLOGICAL
SERVICES INC.

carbonite stringers, 11 foot zone with sulphides and scattered quartz veins in mafic volcanics.

Trench 2: Stripped area extends from 18 + 00 N at 20 + 00 W (base line 1) for 150 feet to the north and averages 60 feet in width. A 40 foot side trench extending to the east helps define a zone containing disseminated sulfides. Rock type is mafic volcanics.

Trench 3: From 18 + 00 N at 10 + 60 W (base line 2) the trench was dug to the west for 70 feet. Mafic volcanics contain weak shearing and sulphide staining.

Trench 4: The trench is 100 feet long in an E-W direction between lines 10 + 00 W and 12 + 00 W at 12 + 50 N (base line 2). A weak shear occurs in mafic volcanics.

Trench 5: A sixty foot long E-W trench between 8 + 50 W and 9 + 50 W at 2 + 00 S (base line 1). Shearing with pyrite and carbonate occurs in mafic volcanics. Assay values for gold are shown on the trench plans in ounces per ton.

SUMMARY AND CONCLUSIONS

The geophysical surveys have aided in defining the trace of the Uchi Structure which is related to the gold mineralization at the Uchi Mine. The mine produced gold until 1943.

Narrow intermingling of high/low magnetic intensities over the western 2/3 to 3/4 of the north grid contain sulphide zones and at least one gold-quartz showing away from the Uchi Structure.

Previous shallow diamond drilling of the Uchi Structure returned weak gold mineralization in quartz. The rake of the mineralization at the Uchi Mine is to the south, and a potential for greater gold-quartz content exists at depth within the survey area.

The reason for the higher chargeability character over the western portion of the north grid has yet to be determined. The same is true for a similar increase in chargeability corresponding to a trend of high magnetic susceptibility over the eastern side of the survey area.

There is a correlation between the Uchi Lake Fault, axial trace of a fold and magnetics within the south grid.

A further program of exploration aimed at defining geological reasons for various geophysical attributes is recommended.

RECOMMENDATIONS AND ESTIMATED COSTS

1) a. Prospecting and detailed mapping.		
Trenching in areas of shallow overburden where there is target definition; sample collection.		\$25,000
b. Assay and report.		3,000
2) Geochemical rock and soil survey (trenching has shown that overburden is relatively thin over parts of the property). 600 samples at \$25.00 per sample, including sample collection and analyses: \$15,000		
Report and maps:	3,000	18,000
3) Diamond drilling 5000 feet at \$30.00 per foot (approx) including drill and geologist:		150,000.00
4) Geophysics: down-the-hole and surface surveys		22,000.00

sub-total		\$218,000.00
Supervision and administration at 10%		21,800.00

total		\$239,000.00

CERTIFICATE

I, Robert, Kenneth Germundson, do hereby declare that I:

1. Have a MSc (Geology) from the University of Alberta (1958).
2. Received a PhD (Geology) from the University of Missouri (1965).
3. Have practised my profession in mineral exploration for 22 years.
4. Have no interest nor do I intend to hold any interest in St. Jude Resource Ltd.
5. Presently reside at 110 Hyland Drive, Sudbury, Ontario P3E 1R6.

R. K. Germundson

R. K. Germundson

May 10, 1988



52N026E9883 63.5263 EARNGEY

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CHESTER J. KURYLIW, M.Sc., P.Eng.
CONSULTING GEOLOGIST
46 INGALL DR.
DRYDEN, ONTARIO P8N 8B7

R E P O R T

o n

ST. JUDE RESOURCES LTD. PROPERTY
EARNGY TWP., UCHI LAKE AREA
DISTRICT OF KENORA, ONTARIO

June 27, 1988

Chester J. Kuryliw, M.Sc., P.Eng.
Consulting Geologist

0488-1-C-011



52N025E9883 63.5263 EARNGEY

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Consent	
List of References	

CHESTER J. KURYLIW, M.Sc., P.ENG.
CONSULTING GEOLOGIST
46 INGALL DR.
DRYDEN, ONTARIO P8N 8B7

List of Plans and Sections (Bound in this Report)

- | | |
|---|----------------|
| (1) Location Map | 1" = 200 miles |
| (2) Property Claim Map | 1" = 1/2 mile |
| (3) Regional Geologic Map
showing Superior Province
and Uchi Sub-Province | 1" = 200 miles |
| (4) General Geology of Uchi Lake Area | 1" = 5 miles |
| (5) Geology of St. Jude Resources
Property | 1" = 1/2 mile |
| (6) Plan "A", 300 ft. level of Uchi
Mine | 1" = 40' |
| (7) Plan "B", 300 ft. level of Uchi
Mine | 1" = 40' |
| (8) Cross section Uchi No. 1 shaft | 1" = 100' |

Addendum

Magnetometer Survey - North Grid

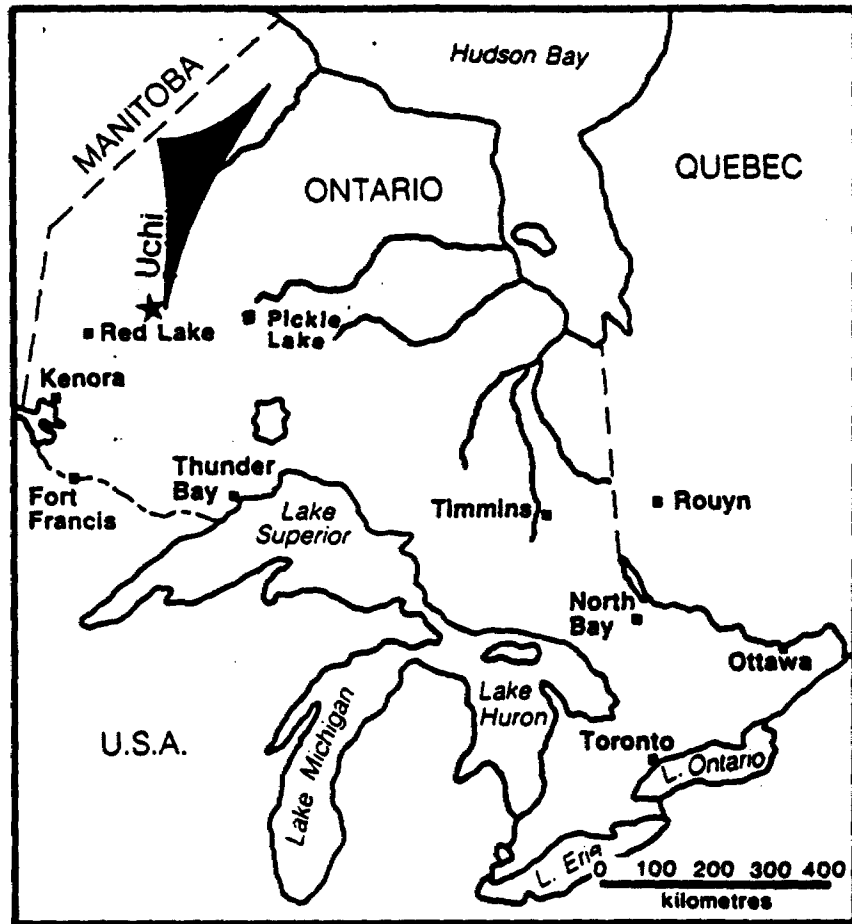
Magnetometer Survey - South Grid

V.L.F. Survey - North Grid

V.L.F. Survey - South Grid

I.P. Survey - Chargeability, North Grid

I.P. Survey - Resistivity, North Grid



LOCATION MAP
ST. JUDE RESOURCES LTD.
PROPERTY

CHESTER J. KURYLIW, M.Sc., P.Eng.
CONSULTING GEOLOGIST
46 INGALL DR.
DRYDEN, ONTARIO P8N 3B7

SUMMARY

The St. Jude Resources property is well located in the Uchi area. There are significant gold occurrences to the immediate West and Southwest. The Lac Minerals Uchi Mine ore zone projects southwards onto the St. Jude Resources property at depth.

Geophysical surveys carried out in early 1988 indicates what may be significant I.P. anomalies in the northwestern portion of the property. Further exploration is warranted in this area with good potential. The exploration should consist of prospecting followed by stripping of shallow overburden where it occurs over I.P. anomalies and also any quartz veins located by prospecting. These stripped areas should be washed clean, then mapped and sampled in detail. This stage of exploration will be followed by a program of investigative diamond drilling with short drill holes to test encouraging results where obtained.

The total cost of the prospecting, etc. is \$60,000.

The follow-up diamond drilling will consist of 3,500 feet at an estimated cost of \$115,000.

CHESTER J. KURLIWI, M.Sc., P.Eng.
 CONSULTING GEOLOGIST
 46 INGALL DR.
 DRYDEN, ONTARIO P6N 3B7

Page 2

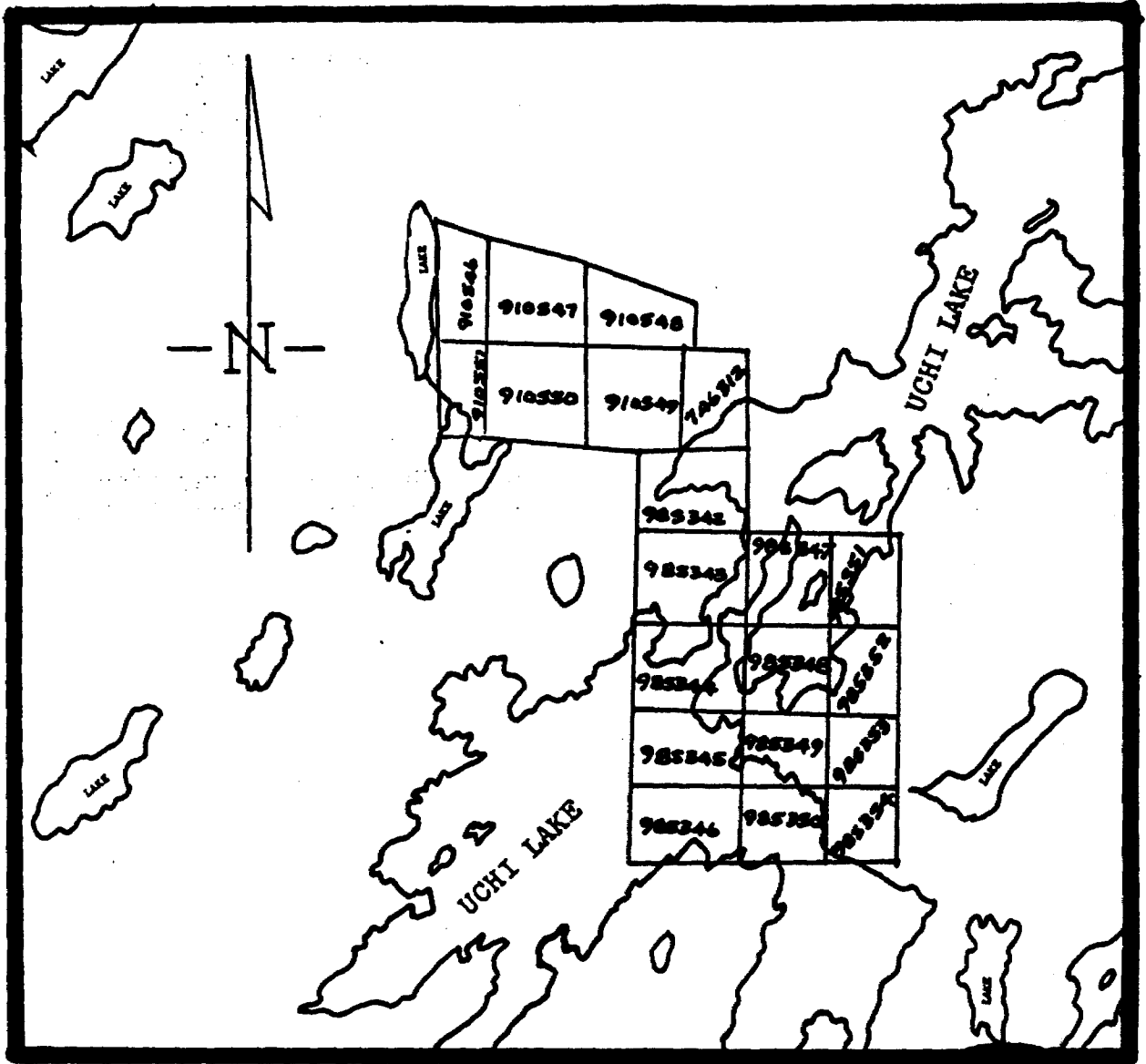
PROPERTY, LOCATION AND ACCESS

The property consists of 20 unpatented mining claims in Earnay Twp., in the mining district of Red Lake, District of Kenora, Ontario.

The claims are numbered as follows:

KRL 910546	KRL 985345
KRL 910547	KRL 985346
KRL 910548	KRL 985347
KRL 910549	KRL 985348
KRL 910550	KRL 985349
KRL 910551	KRL 985350
KRL 746312	KRL 985351
KRL 985342	KRL 985352
KRL 985343	KRL 985353
KRL 985344	KRL 985354

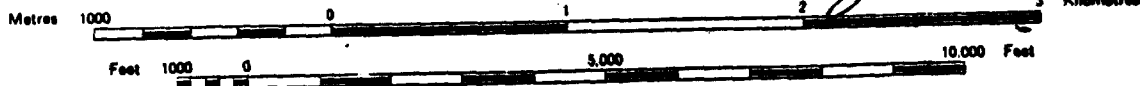
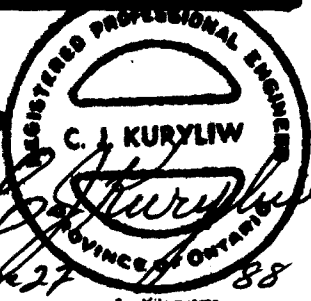
The property is readily accessible by fixed wing aircraft from Red Lake and Ear Falls, a distance of some 50 air miles. It is also readily accessible from the South Bay mines road which extends from Ear Falls to within 3 miles of the Property. Heavy equipment can be moved easily along a winter road or with some difficulty using a combination of barge and tracked vehicles. The topography of the property is relatively flat. Some outcrop ridges rise about 50 feet above the adjoining muskeg and light overburden. The area was timbered out about 30 years ago so only a few isolated patches of timber remain.



CLAIM GROUP
ST. JUDE RESOURCES LTD. PROPERTY

EARNGEY TOWNSHIP
 KENORA DISTRICT
 Ontario

Scale 1:31,680 or 1 Inch to 1/2 Mile



INTRODUCTION

This writer was commissioned by M. A. Terrell, President of St. Jude Resources Ltd., with head office in Edmonton, Alberta, to write this report.

This writer is intimately familiar with the geology of the property and immediate area. In 1968, this writer spent several months mapping in detail all available outcrops. The report of this mapping is on file with the Ontario Department of Mines. This writer also flew out to the property for an updated examination on June 20, 1988. This writer has also updated his knowledge with current data on work done to date.

HISTORY AND WORK CARRIED OUT TO DATE ON THE PROPERTY

Considerable prospecting was done on the property during the 1930's as an extension of the prospecting and exploration carried out at the adjoining Uchi Mine property. In 1938, James E. Thompson of the Ontario Department of Mines mapped the area on a scale of 1" = 800'. On his map (47-C) Thompson indicates that some widely spaced drilling extended the Uchi mine gold zone for over 1/2 mile southwards onto the currently held St. Jude property. He reported that low gold values and a recognizable structure were intersected but, the logs of these drill holes are not available.

This writer carried out detailed geologic mapping and a ground magnetic survey over the area in 1968. (O.D.M. files)

History and Work Carried out to Date on the Property (cont.)

In 1975-76, the Ontario Geological survey carried out field work and in 1984, published map 2493 by P. C. Thurston and Assistants. This survey incorporated the Kuryliw mapping of the property area.

During the winter of 1988, two separate base lines were cut over the property to establish the grid over the northern claims. The south grid ties unto the north grid. East-West cross lines were cut every 200 ft. and stations marked each 100 ft. Sudbury Geological Services Inc. carried out geophysical surveys during March and April, 1988. This consisted of a ground magnetic survey, a V.L.F.-E.M. ground survey, induced polarization and a resistivity survey.

During March and April, Sudbury Geological Services Inc. also carried out some stripping using heavy equipment in the area of the quartz vein located by Kuryliw in 1968 from which a grab sample assayed 2.31 oz's Au. per ton.

The following are the summary and conclusions quoted from R. K. Germundson in his report on the property dated May 10, 1988: (Plans of these surveys are included as an addendum to this Report.)

Summary and Conclusions (Germundson; Report May 10, 1988)

"The geophysical surveys have aided in defining the trace of the Uchi Structure which is related to the gold mineralization at the Uchi Mine. This mine produced gold until 1943.

History and Work Carried out to Date on the Property (cont.)

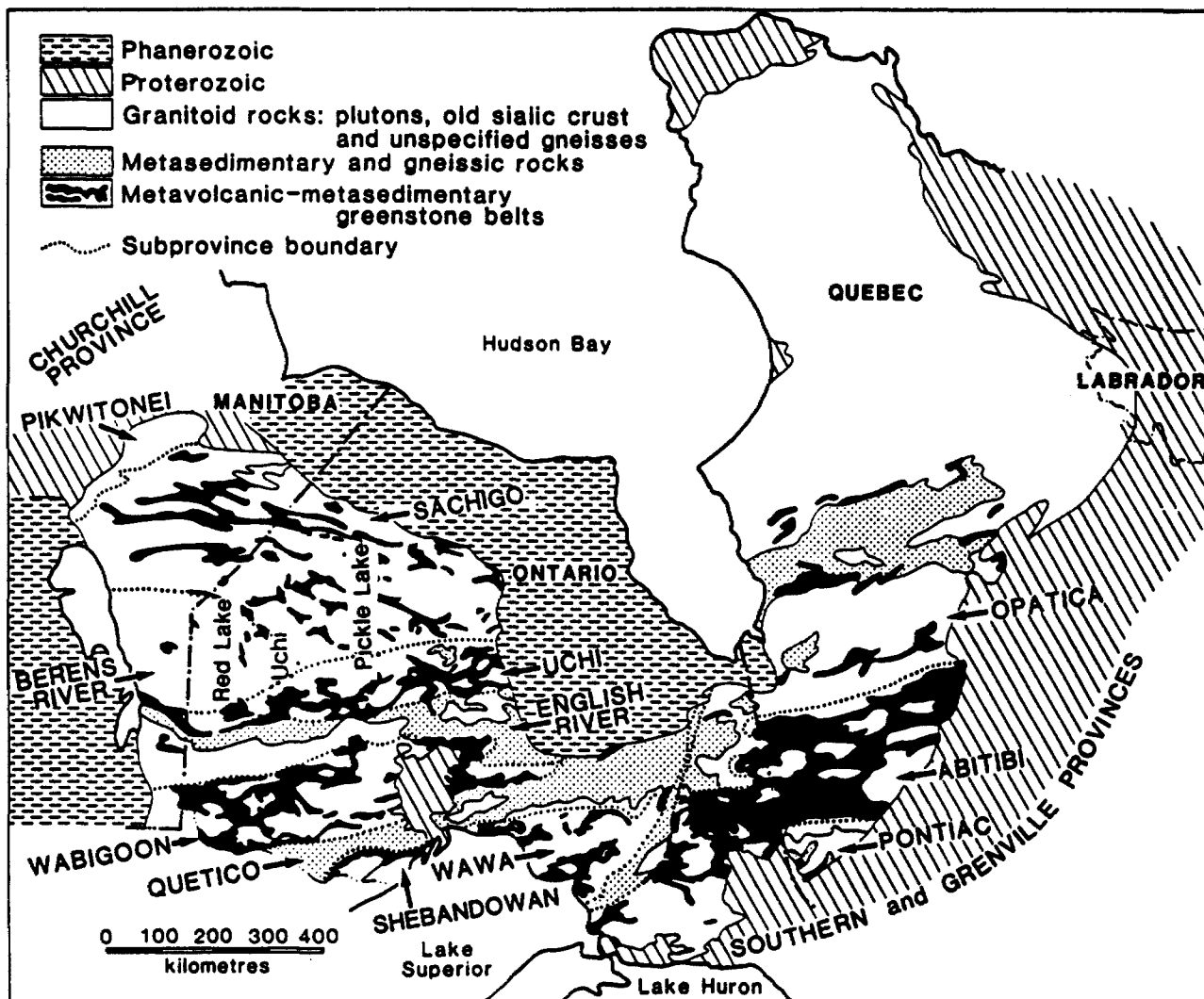
Narrow intermingling of high/low magnetic intensities over the western 2/3 to 3/4 of the north grid contain sulphide zones and at least one gold-quartz showing away from the Uchi Structure.

Previous shallow diamond drilling of the Uchi Structure returned weak gold mineralization in quartz. The rake of the mineralization at the Uchi Mine is to the south, and a potential for greater gold-quartz content exists at depth within the survey area.

The reason for the higher chargeability character over the western portion of the north grid has yet to be determined. The same is true for a similar increase in chargeability corresponding to a trend of high magnetic susceptibility over the eastern side of the survey area.

There is a correlation between the Uchi Lake Fault, axial trace of a fold and magnetics within the south grid.

A further program of exploration aimed at defining geological reasons for various geophysical attributes is recommended. The potential for economic mineralization need not be restricted to the Uchi Structure; however, the correlation of all of the geophysical parameters along the Uchi Structure of the North grid defines a zone which is a high priority target area."



Sketch map of the Superior Province showing major lithologic and subprovince boundaries.

**Ontario Geological Survey
Miscellaneous Paper 132**

1986

REGIONAL, GENERAL GEOLOGY

The Geology of the Precambrian Superior province is subdivided into several sub-provinces (Please refer to the accompanying plan of the Geology of the Superior Province.)

Three of the Superior sub-provinces are recognized as containing numerous gold camps and gold deposits. Some of the occurrences were past producers, some are currently in production and some are being developed as gold mines. These Sub-Provinces are the Abitibi, Uchi, and Wawa.

The Uchi sub-province includes several gold camps; the Bissett area of Manitoba, the Rich Red Lake Camp, the Pickle Lake Camp and the Uchi Area.

The following abstract by P.C. Thurston of the Ontario Geological Survey aptly describes the Uchi Area, this is included on the following page.

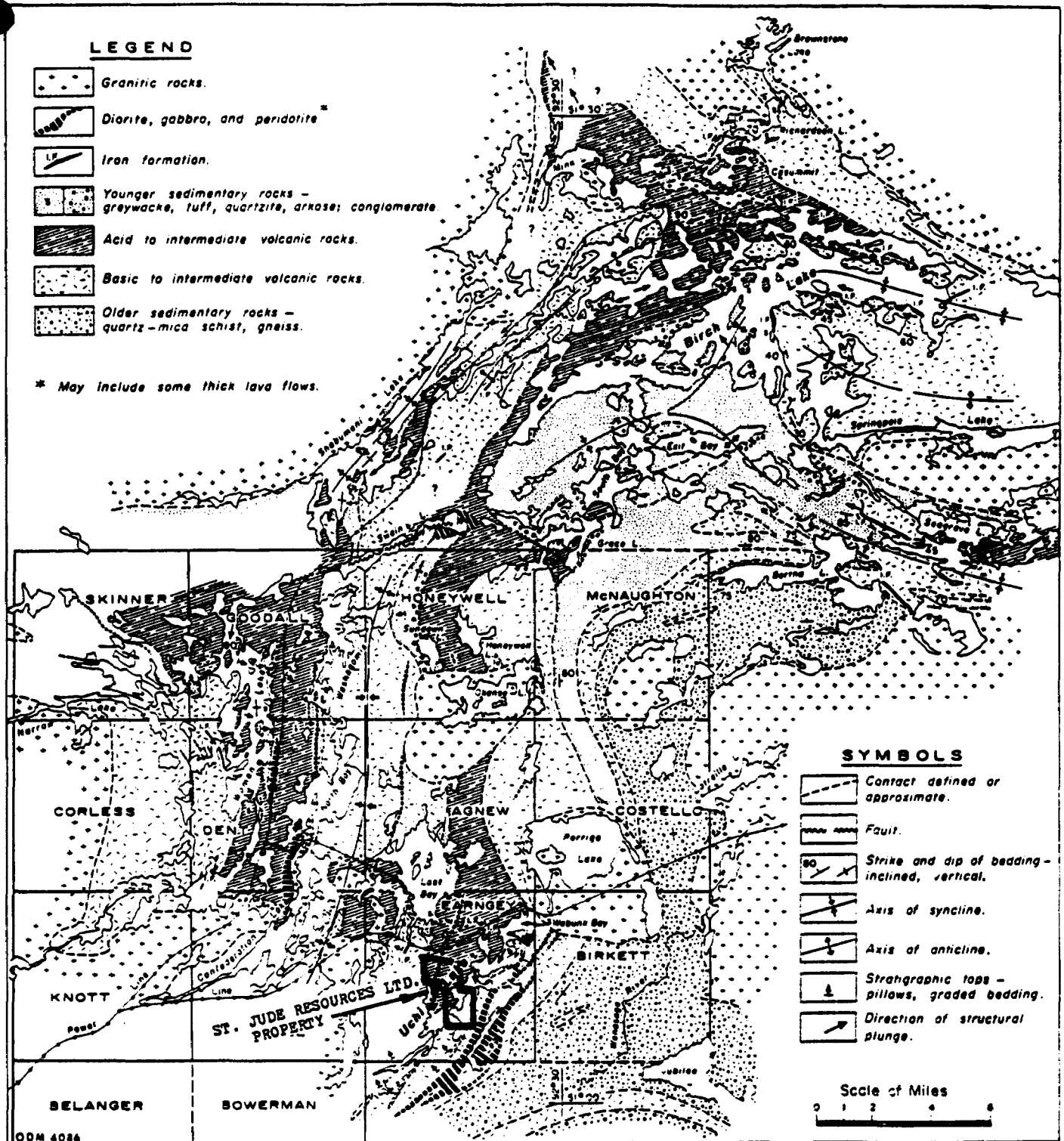


Figure 2 - General geology of the Birch-Uchi Lakes Area.

District of Kenora Ontario

ST. JUDE RESOURCES LTD.
PROPERTY

The Earngey-Costello map area comprises the four townships of Earngey, Birkett, Agnew and Costello, a total of 400 km², and lies about 90 km east of Red Lake. It is in the northern part of the Superior Province of the Canadian Shield and is part of the Birch-Uchi metavolcanic-metasedimentary belt, a north-trending portion of the generally east-west trending Uchi Sub-province, a belt of Early Precambrian metavolcanics and metasediments surrounded by granitic batholiths. The Birch-Uchi belt portion of the sub-province has a length of 64 km and a width of 32 km.

The belt is folded about a regional, central synclinal axis, and consists of three mafic to felsic volcanic cycles, comprising a total thickness of about 8460 m. The eastern portion of the area is complicated by the repetition of the metavolcanics of cycle I about a regional anticlinorium and numerous small flanking isoclinal folds which repeat the stratigraphy of cycle I and II rocks numerous times. The sequence consists of 56 percent mafic flows and hyaloclastites, 35 percent intermediate pyroclastics and flows and 8 percent felsic pyroclastics and rare flows. Metasediments make up but a minor part of the pile except at the top of cycle I where, west of the anticlinorium, 91 to 122 m of sandstones and mudstones are found. East of the anticlinorial axis a substantial thickness of metasediment, principally arenite-wacke couplets with minor argillite that occurs at the top of medium-bedded, graded units, occurs at the top of cycle I.

Cycle I, the stratigraphically lowest cycle, consists of a series of mafic flows and coeval mafic igneous intrusions 1723 m thick, overlain by a minimum of 518 to 534 m of intermediate pyroclastics and re-worked pyroclastics. The base of the cycle is not exposed and the upper portion grades laterally into a thick sequence of metasediments that underlies the eastern part of the area.

Cycle II, structurally complicated by closely-spaced isoclinal folds, consists of an average thickness of 1600 m of metabasaltic flows which are interbedded with thin rhyolitic tuffs and are followed by 488 m of intermediate pyroclastics ranging in composition from andesitic to rhyodacitic. The cycle is capped by a 30 m thickness of oxide facies iron formation. Cycle III consists of 1433 m of metabasaltic flows with some hyaloclastic horizons and a maximum of 1982 m of intermediate flows and pyroclastics capped, in the area of the South Bay Mine, by about 550 m of rhyolitic flows, breccias, and an endogenous dome of quartz-feldspar porphyry.

In the vicinity of Leg Lake, the metavolcanics of cycle I were intruded by three differentiated sills ranging in composition from metaperidotite to metagabbro.

The metavolcanics of cycle III are cut by sills and a stock of pre-metamorphic chloritic granodiorite. Following metamorphism, three batholiths of granitic rocks were intruded into the sequence. The Perrigo batholith consists of at least four phases, ranging from hornblende monzonite to hornblende-biotite granite. The Okanse Lake batholith on the northern margin of the map area and the Allison Lake batholith on the eastern margin, which were examined in reconnaissance fashion, appear to have caused the closely-spaced isoclinal folding found east of the centre of the Birch-Uchi belt. Their intrusion was, therefore, not passive.

The Uchi Gold Mines Limited mine at Uchi Lake produced a total of 114,467 oz of Au and 14,345 oz of Ag from 1938 to 1943. Numerous gold prospects were examined during 1927-1929, with underground development on the Bobjo prospect and the Grassett-Cameron prospect. Further gold exploration occurred during the period 1936-1943. The discovery, in 1968, of the South Bay Mines Limited volcanogenic massive sulphide copper-zinc-silver orebody 800 m west of the map area in Dent Township caused all of Earngey and Agnew Townships to be staked in 1969-1970 in an exploration effort devoted to locating this type of deposit.

LOCAL GEOLOGYIntroduction

In August 1968, this writer carried out a detailed geologic mapping of part of the Uchi Area that now includes the St. Jude property. This mapping on a scale 1" = 400' is on assessment files in Red Lake and has been incorporated in the Ontario geologic survey map 2498, published in 1984 on a scale 1: 50,000.

Table of FormationsPrecambrianIntrusives

- (1) Quartz veins, silicification
- (2) Quartz porphyry, quartz feldspar porphyry
- (3) Diorite
- (4) Gabbro

KeewatinSediments

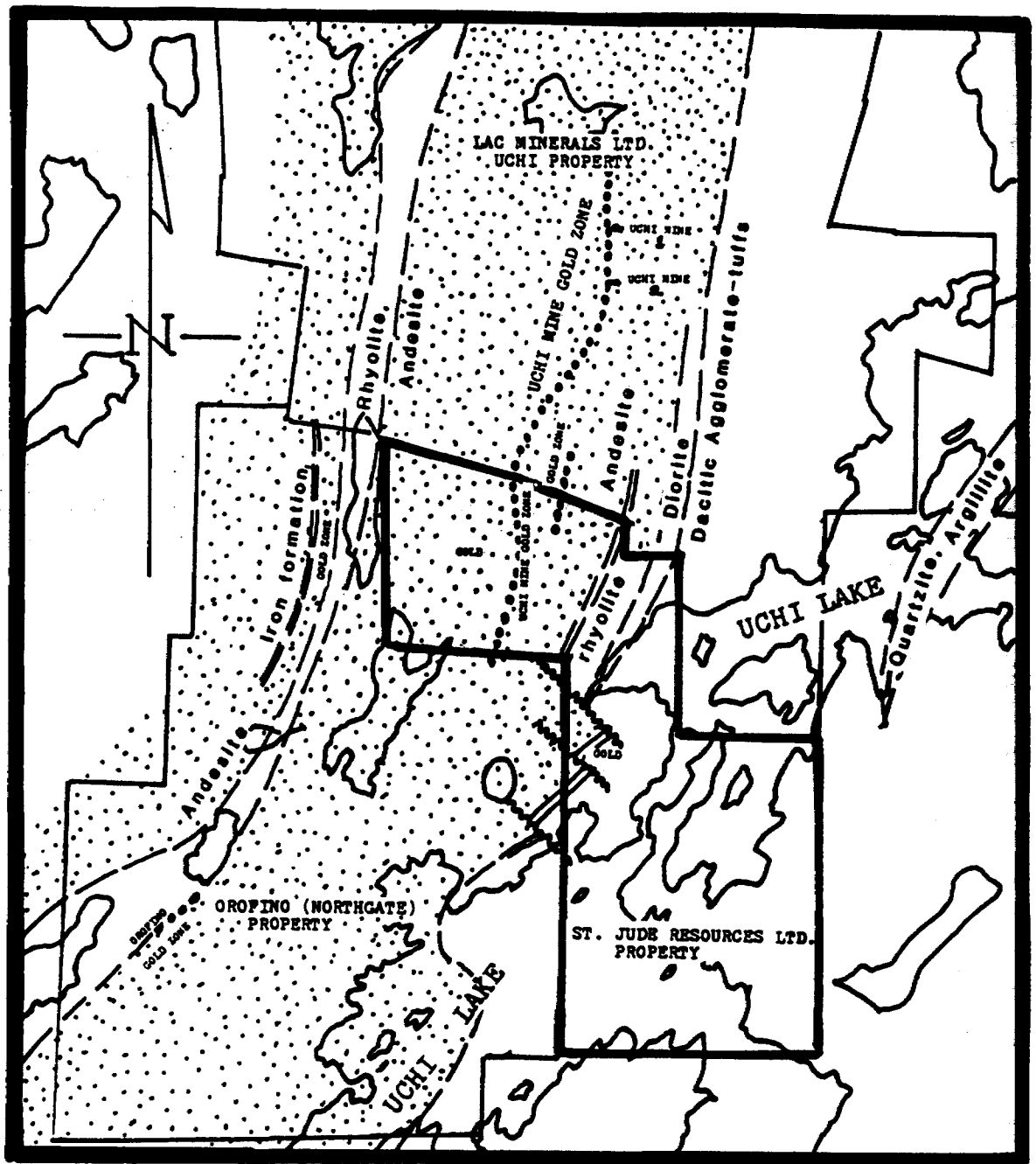
- (5) Quartzite, argillite slates
- (6) Interflow bands of lean iron formation cherts, rhyolitic tuffs

Volcanics

- (7) Rhyolite, rhyolitic tuffs
- (8) Agglomerates and tuffs, dacite to rhyolite
- (9) Andesite to basalt, pillow lavas, massive, dioritized

ROCK TYPESVolcanicsAndesite

Basic andesitic to basaltic lavas form the main rock type of the western half of the property. The andesites most commonly occur as well pillowed structures in andesitic flows but there are variations to fine massive andesites and medium-grained dioritized masses of andesitic flows. In his report of

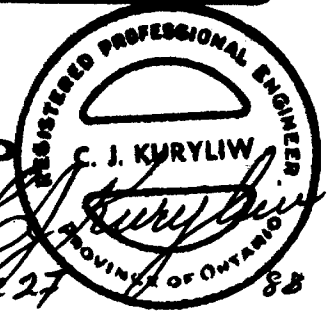


Geology

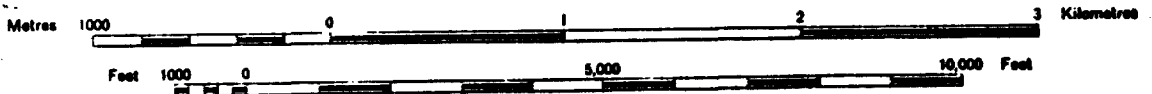
ST. JUDE RESOURCES LTD. PROPERTY

EARNGEY TOWNSHIP

KENORA DISTRICT Ontario



Scale 1:31,680 or 1 Inch to 1/2 Mile



Local Geology (cont.)

1939, Thomson stated that "part of the rock classified as diorite on the accompanying map is really the coarse grained central part of lava flows". In this writer's mapping, it was found that areas previously outlined as diorite by Thomson were commonly found to contain obvious pillow structures and the areas of dioritized andesite noted in this mapping were not found to occur as formations. The andesitic rocks occur in a formation with a width of over 1 mile and it contains several interflow bands of rhyolitic tuffs, iron formation, intrusive gabbro and quartz feldspar porphyry dykes.

Agglomerate-Tuffs

Agglomerate and tuffs of dacite to rhyolite compositions occur as a formation about 4,000 feet wide, to the east of the formation of andesites. It is evident in numerous exposures mapped along the shores of Uchi Lake. Two related rock types occur throughout the formation. The most common is a relatively massive, light greenish-grey rock that, upon close examination, is seen to consist of a highly altered, carbonatized, slightly schistose rock that contains about 5% disseminated granules of black to brown calcitic mineral. This rock has the characteristics of an altered and cemented tuff. The other rock type consists of a rock with a similar altered cemented tuff matrix that contains up to 35% agglomeritic fragments of light to buff coloured rhyolitic fragments. These fragments are elongated parallel to the northerly trend of the formation and most commonly occur as small fragments up to walnut size, although some fragments of buff rhyolitic material were noted to reach the size of a football.

Local Geology (cont.)Interflow Rhyolite and Rhyolitic Tuffs

Two bands of rhyolite were traced by mapping. One rhyolitic band of variable thickness (from 150 to 400 ft.) occurs between the two main formations; the andesitic flows and the agglomerate tuff. The rocks of this rhyolitic band are highly silicious, sericitic, fine grained and of light buff colour.

The other band of rhyolitic tuff occurs near the 68-00 West base line between andesitic flows. The rocks are silicious, sericitic, light buff coloured and may contain indistinct tuffaceous banding. These rocks have been traced for over a mile in length with widths of from 150 to 200 feet.

SedimentsInterflow Bands of Lean Iron Formation and Related Tuffs

Several narrow bands of iron formation were mapped as interflow beds within the volcanics. The exposures are usually found in low-lying outcrops so that tracing the narrow beds by mapping was not successful.

Quartzite, Argillite, Slate

A formation of sediments occurs adjoining to the east of the formation of agglomerate-tuffs along the east shore of Uchi Lake. The sediments consist of a finely banded alternating series of fine quartzites, argillites and slates. The beds are highly contorted.

Local Geology (cont.)IntrusivesGabbro

One large intrusive mass of coarse gabbro to anorthosite occurs along the eastern shore of Uchi Lake off the map area. This appears to be an extensive basic intrusion along the sediments.

Diorite - Gabbro

Three intrusive bodies of dioritic to gabbroic rock occur as modified narrow sill-like bodies that follow the trend of formations. These rocks have a fresh looking equigranular texture, medium to coarse grained with about 50% mafics, largely hornblende with plagioclase and minor quartz.

Quartz Porphyry and Quartz
Feldspar Porphyry Dykes

A dyke, up to 50 feet wide, occurs to the west of the property. It consists of a fine grained feldspathic matrix containing medium grained quartz "eyes". The porphyritic quartz may form up to 5% of the rock.

Local Geology and Structures

In the mapped area, three major Precambrian formations of Keewatin age were traced. In the central portion a formation of agglomerate-tuffs about 4,000 feet wide is bound by andesitic flows at least a mile wide to the west and a formation of sediments to the east. These formations trend northerly and dip steeply eastward in the north half of the mapped area but the formations swing towards the southwesterly direction when traced southwards.

Local Geology (cont.)

An area of intrusive activity occurs in the contact area between the formations of andesitic rocks and agglomerate-tuffs, where a band of rhyolitic tuffs occur bound by dioritic intrusions.

The rocks have been folded gently so that in the mapped area they strike northerly at the northern half and swing gently southwestwards when traced southwards. There is a general change in dip that suggests a steep sided synclinal basin with the axis running along and slightly east of the central trend of the agglomerate tuff formation. East of the agglomerates the rocks dip steeply westward and to the west of the agglomerates the rocks dip steeply eastward.

Numerous quartz veins were noted during mapping by this writer in 1968, over what is currently the St. Jude Resources property. These are in addition to the known gold-bearing structures traced by diamond drilling in the late 1930's.

Summary of the Uchi Mine Geology

In the vicinity of the mine the rocks consist of a series of narrow formations of interbanded basic lavas, rhyolites and cherty tuffs and of diorite or dioritized basic volcanics.

The main ore zone lies adjacent to the contact between a band of "greenstone" and dioritic rock. The ore bodies consist of a great number of quartz veins and stringers that run in several directions. The ore bodies lie mainly in andesitic to basaltic "greenstones" and to a lesser extent in rhyolite. The fractured zone is reported to have been explored and developed for a distance of 1,800 feet on the Uchi where it has a southerly rake. The zone was traced to the south by diamond drilling on to the wold ground now held by St. Jude Resources. The general strike of the Uchi zone is northeasterly and it dips steeply to the northwest. A No. 2 zone lies about 700 feet northwest of the No. 2 shaft and a No. 3 zone about 1,100 feet to the west of the No. 2 shaft, is reported to have carried gold values over a considerable length.

Grade and tonnage estimates are varied. A report by B. Budgeon and A. G. Hattie, dated August 11, 1938, estimated a tonnage of 500,000 tons of \$10.00 grade at \$35.00 gold. Actual mining later produced muck grades more in the order of half that grade. Communications between this writer and employees who had been at the operation stated that over-enthusiastic large tonnage

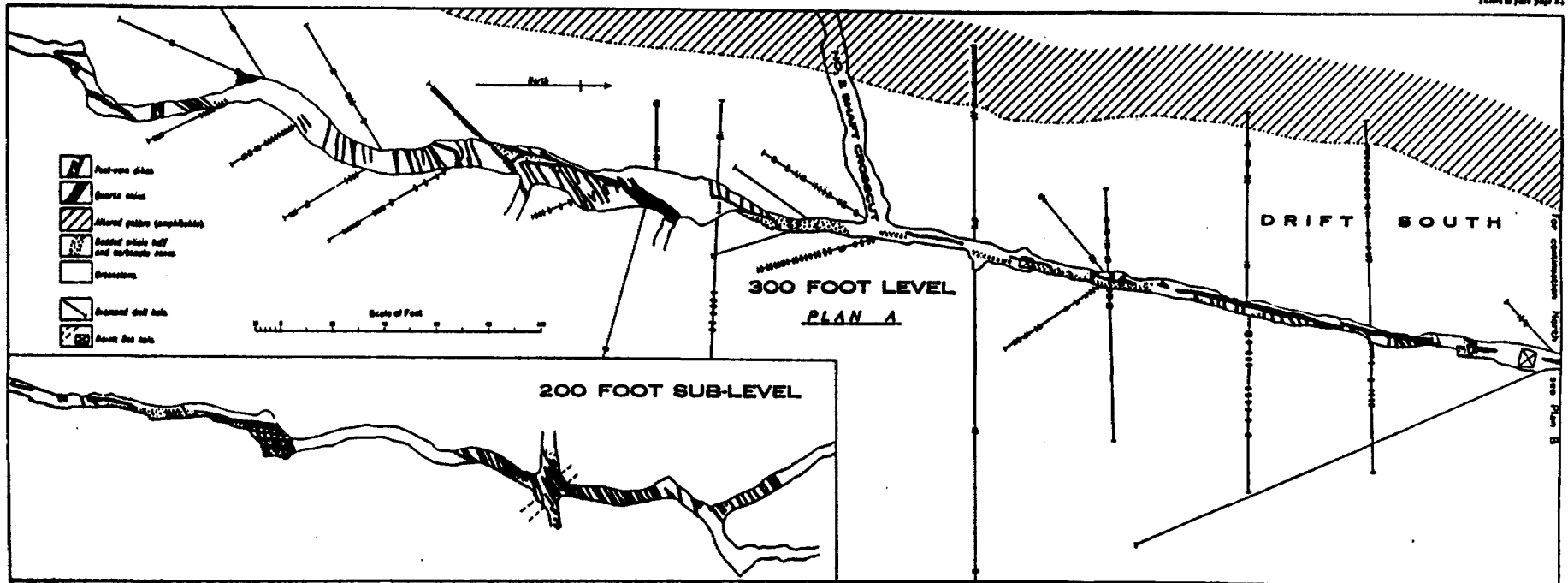


FIG. 6—GEOLOGICAL PLAN (A) OF PARTS OF THE 300-FOOT LEVEL AND THE 200-FOOT SUB-LEVEL, McLURE MINE, OCTOBER 1, 1938.
 (Modified after company plan. The northerly continuation of the 300-foot level is shown on plan B, Fig. 7.)

(From Ont. Dept. of Mines, Vol. XLVIII, 1939)

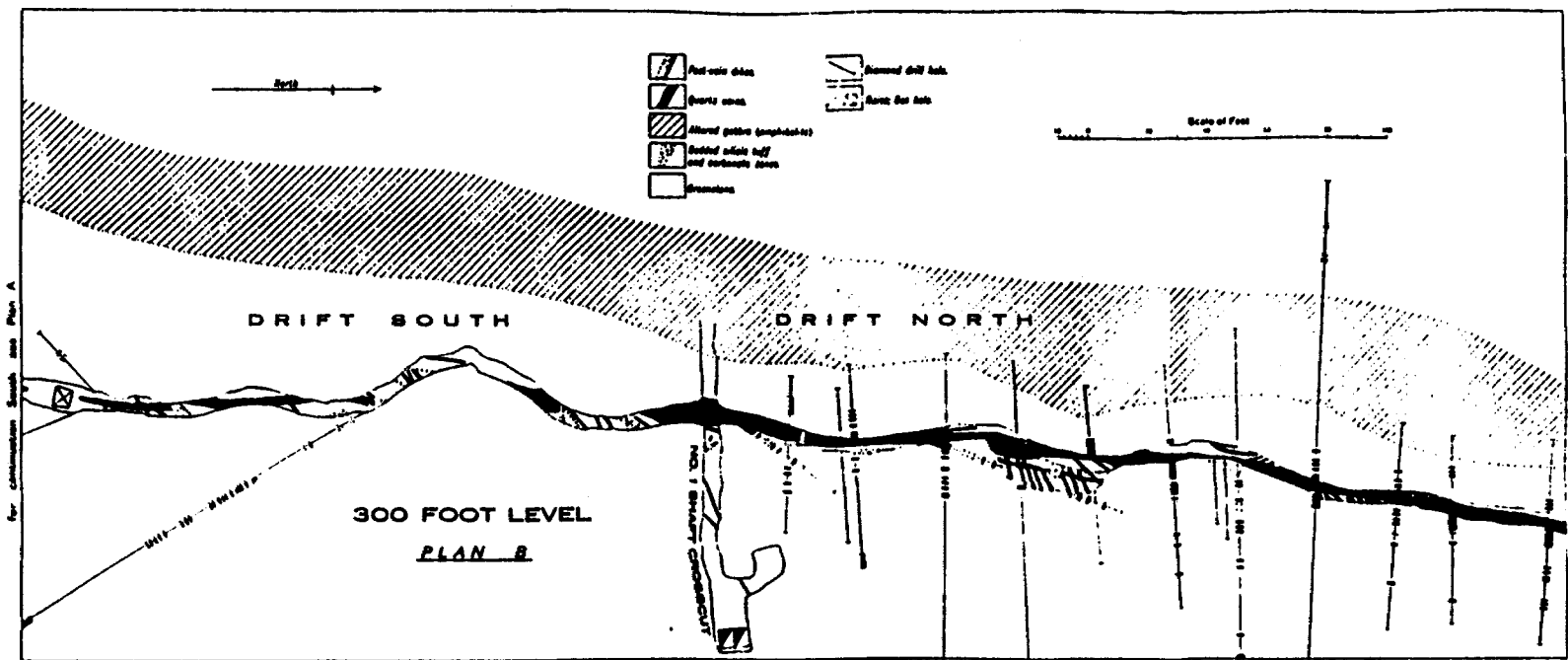


FIG. 7.—GEOLOGICAL PLAN (B) OF PART OF THE 300-FOOT LEVEL, UCHI MINE, OCTOBER 1, 1938.
 (Modified after company plans. The southerly continuation of the 300-foot level is shown on plan A, Fig. 4.)
 (From Ont. Dept of Mines, Vol. XLVIII, 1939)

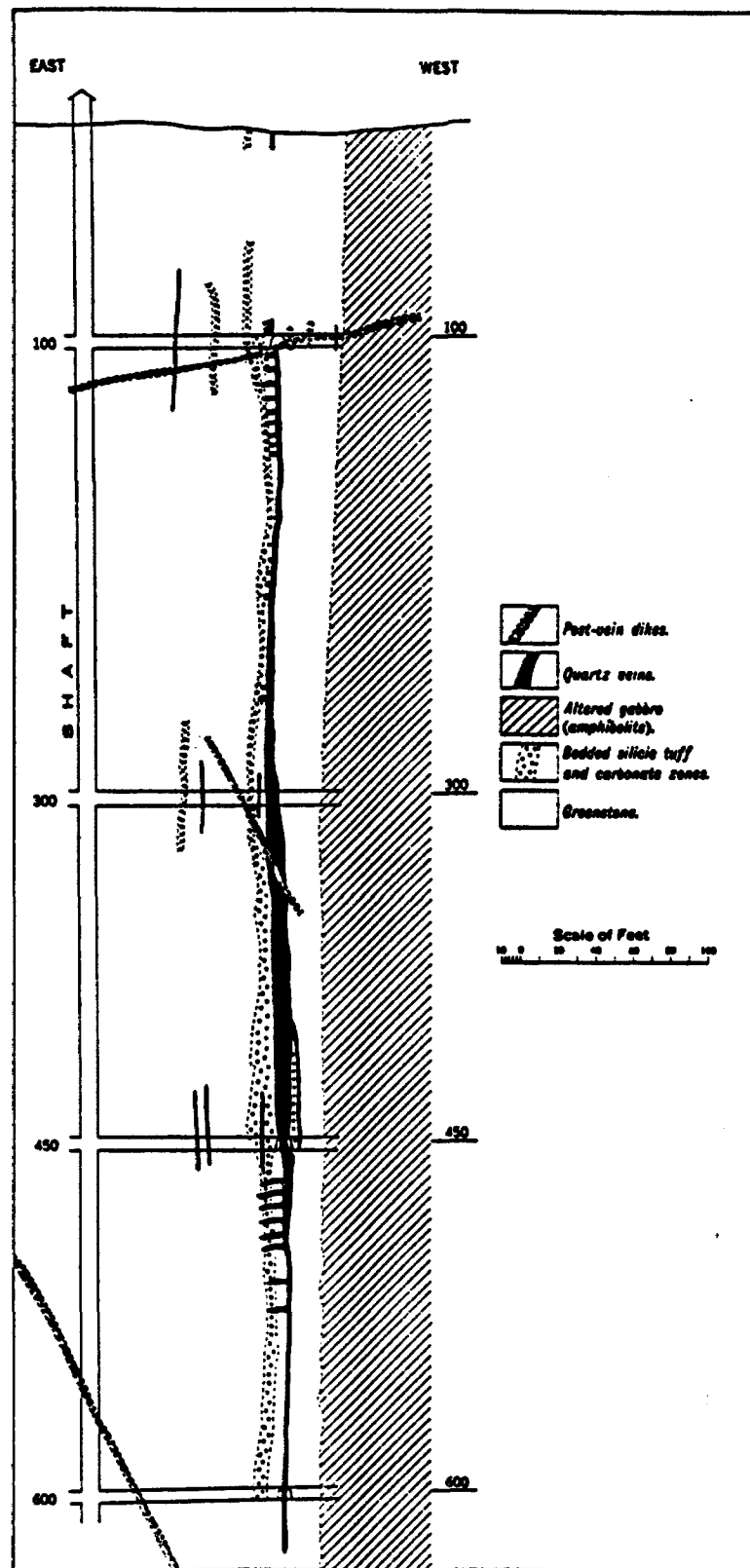


FIG. 9—CROSS-SECTION THROUGH No. 1 SHAFT, UCHI MINE.

(From Ont. Dept. of Mines, Vol. XLVIII, 1939)

Summary of the Uchi Mine Geology (cont.)

methods of mining produced a highly diluted mill feed of unprofitable grade that forced the closing down of the operation.

The Main Uchi Mine Fractured Zone Extension Southwards
Onto The St. Jude Resources Property

According to Thomson, 1939, "During 1937 a vein zone was traced by drilling south from the Uchi boundary (into the East side of present claims KRL 910547, 910550). It was intersected in nine drill holes over a length of about 2,800 feet and consisted of quartz stringers and disseminated sulphides containing a little gold. In some places a broad zone of shearing and mineralization was cut. This zone is considered to be the southern extension of the main "break" of Uchi gold Mines".

The location of the drill holes and of the structure is indicated on the accompanying plan of geology, scale 1" = 1/2 mile. The structure extends under low, swampy or muskeg covered ground. "It has been recognized by the Uchi mine operators that the gold enriched portion of the main Uchi structure rakes southwards. Consequently, the structure traced by diamond drilling onto the St. Jude Resources ground can be expected to produce the better gold values at depth along the projected downwards extension of the rake."

Please refer to the following plans and sections of the Uchi Mine which shows the outline and pattern of the veins and zone trends of the Uchi No. 1 Gold Ore Zone.

CONCLUSIONS

The St. Jude Resources Property is well located in the Uchi area. There are significant gold occurrences to the immediate West and to the Southwest. The Lac Minerals Uchi mine Ore Zone projects southwards onto the St. Jude Resources property where it was traced for a distance of 2,800 ft. by shallow diamond drilling. It was recognized at that time that deeper drill holes were necessary to intersect the richer gold mineralization that was mined at the Uchi Mine.

Geophysical surveys carried out in early 1988 indicates what may be significant I.P. Anomalies in the Northwestern portion of the property. Some quartz veins were mapped in this area by this writer in 1968.

In this northwestern portion of the property, the bedrock is largely covered by light overburden except in swampy areas.

Further exploration is warranted, the first stage of exploration should consist of prospecting, followed by stripping of shallow overburden where it occurs over I.P. anomalies and also any quartz veins located by prospecting. These stripped areas should be washed clean then mapped and sampled in detail. This first stage of exploration should be followed by a program of investigative diamond drilling with short drill holes to test encouraging results obtained from the program of prospecting, sampling and mapping.

Conclusions (cont.)

A second stage of exploration would consist of the drilling of deep holes to test the Uchi Gold bearing zone on the property. Positive results obtained from the Stage 1 drilling would also be pursued by deeper drilling in this second stage.



June 27, 1988

Chester J. Kuryliw, M.Sc., P. Eng.

RECOMMENDATIONS AND COST ESTIMATESStage I (A)Estimated CostsProspecting, stripping and sampling
(a two month program)

1 Geologist @ \$200 per day	\$12,000
1 Prospector @ \$150 per day	9,000
1 Assistant @ \$100 per day	6,000
Camp accommodation and board @ \$50 per day per man	9,000
Transportation, fixed wing aircraft for men and supplies	4,000
Rental Fire Pumps, Hose and Fuel	3,000
Back Hoe and Operator (20 days)	12,000
Assaying	5,000
	<hr/>
TOTAL STAGE I (A)	<u>\$60,000</u>

Stage I (B)Diamond Drilling

(to test discoveries and I.P. anomalies,
this will consist of ten of 200 ft. drill
holes and three of 500 ft. drill holes.)

Contract driller (all inclusive costs) @ \$24 per foot	
Contract Engineering, supervision (all inclusive costs) @ \$5 per foot	
Assaying (estimated at \$1 per foot)	
Total 3,500 feet @ \$30 per foot	\$105,000
Allowance for contingencies	10,000
	<hr/>
TOTAL OF STAGE I (A) AND (B)	<u>\$175,000</u>



June 27, 1988

Chester J. Kuryliw, M.Sc., P.Eng.

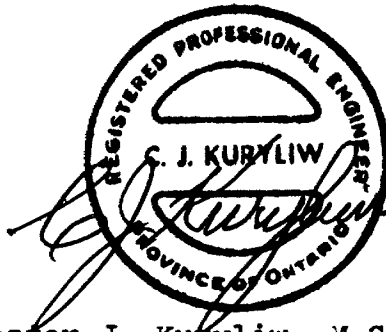
CHESTER J. KURYLIW, M.Sc., P.Eng.
CONSULTING GEOLOGIST
46 INGALL DR.
DRYDEN, ONTARIO P6N 3B7

C E R T I F I C A T E

I, Chester J. Kuryliw, of 46 Ingall Drive, Dryden, Ontario do hereby certify that:

- (1) I am a Professional Engineer and I am currently employed as a Consulting Geologist for several mining companies.
- (2) I am a graduate of:
The University of Manitoba B.Sc. Degree, 1949
The University of Manitoba M.Sc. Degree, 1966
- (3) I am a registered Engineer of the Association of Professional Engineers of Ontario and also Manitoba. I am a fellow of the Geologic Association of Canada, also a member of the Canadian Institute of Mining and Metallurgy.
- (4) I have practiced my profession for over 40 years, most of those years at gold mines, during which time I often planned, supervised and directed underground exploration, development and production.

My report is based upon a recent visit to the property (June 1988) and upon my intimate familiarity with the geology of that area which includes Geologic Mapping and Magnetic Ground Surveys in 1968.



June 27, 1988

Chester J. Kuryliw, M.Sc., P.Eng.

CHESTER J. KURLIWI, M.Sc., P.ENG.
CONSULTING GEOLOGIST
46 INGALL DR.
DRYDEN, ONTARIO P6N 8B7

CONSENT

I, Chester J. Kuryliw, of the Town of Dryden, District of Kenora, Province of Ontario, Professional Engineer, hereby consent to the filing with the Vancouver Stock Exchange my report dated June 27, 1988 relating to the St. Jude Resources Ltd. 20 claim property, Earngy Township, District of Kenora, Ontario.



June 27, 1988

Chester J. Kuryliw, M.Sc., P.Eng.
Consulting Geologist

LIST OF REFERENCES

- Geology of the Uchi-Slate Lakes area by J. D. Bateman, Ontario Department of Mines, Volume XLVIII, Part VIII, 1939
- C. J. Kuryliw, Geologic Report, November 7, 1968 (O.D.M. files)
- Ontario Geological Survey, Miscellaneous Paper, 132, 1986
- Ontario Geological Survey, Geology of the Earngy-Costello Area, 1985
- Company Report (O.D.M. files) C. D. Huston, October 22, 1987
- Company Report, Ken Germundson, Geophysical Report, Sudbury Geological Services Inc., May 10, 1988 (O.D.M. files)
- Company Report. on Earngy Twp. by D. Bubliss for Northgate, 1959 (O.D.M. files)

ADDENDUM

**ST. JUDE
RESOURCES**

**UCHI LAKE & EARNGY
TOWNSHIP ONTARIO,
NTS 52 N/2**

1 - Magnetometer Data
MAG 6218

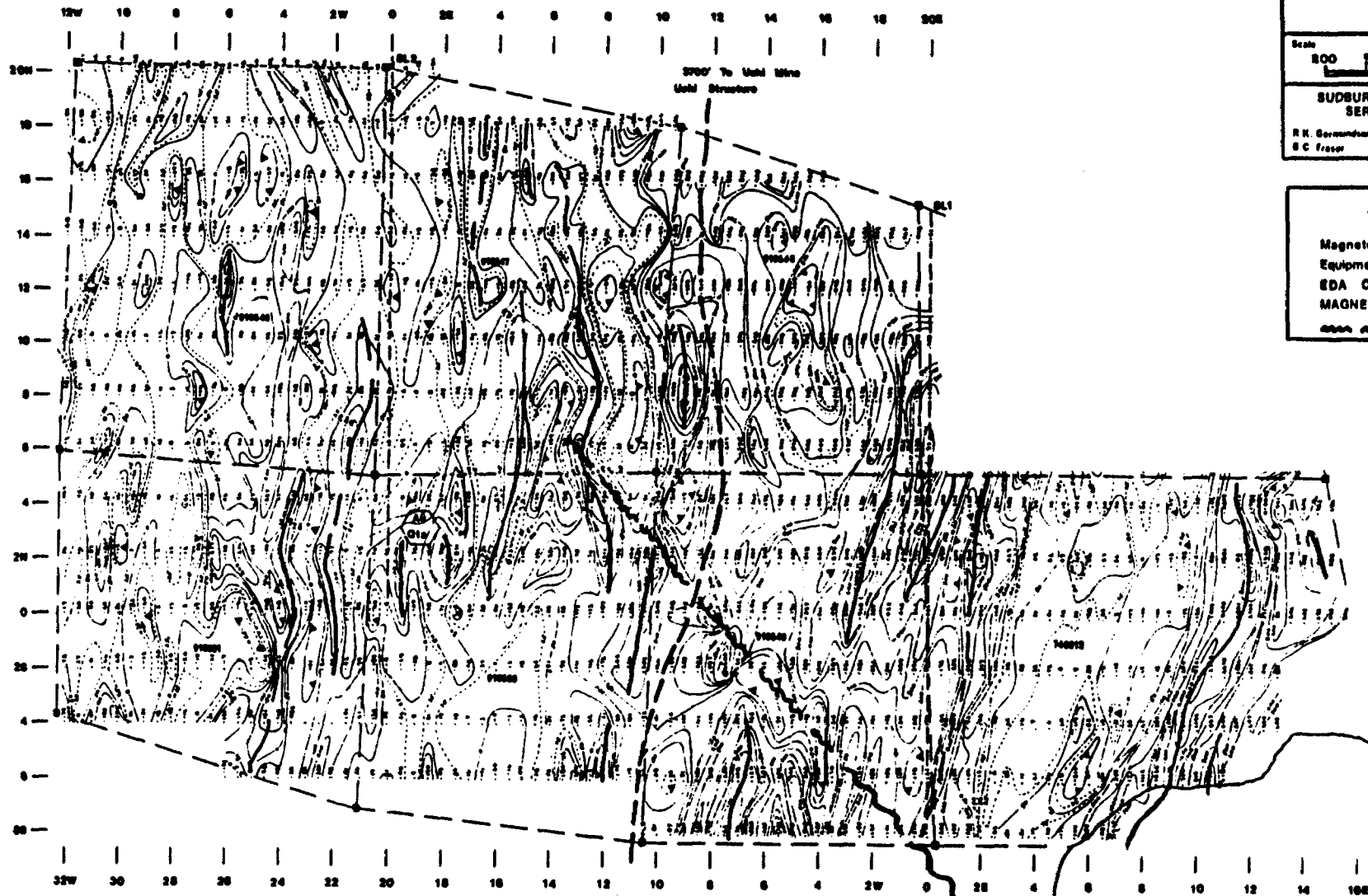
Scale
0 200 400 feet

**SUDBURY GEOLOGICAL
SERVICES INC.**

R. K. Gormandien March, 1990
S. C. Fraser

LEGEND

Magnetometer Survey
Equipment Used
EDA OMNI-PLUS VLF
MAGNETOMETER
Fault



**ST. JUDE
RESOURCES**

UCHI LAKE & EARNGY
TOWNSHIP, ONTARIO,
NTS 52 N/2

MAGNETOMETER SURVEY
SOUTH GRID



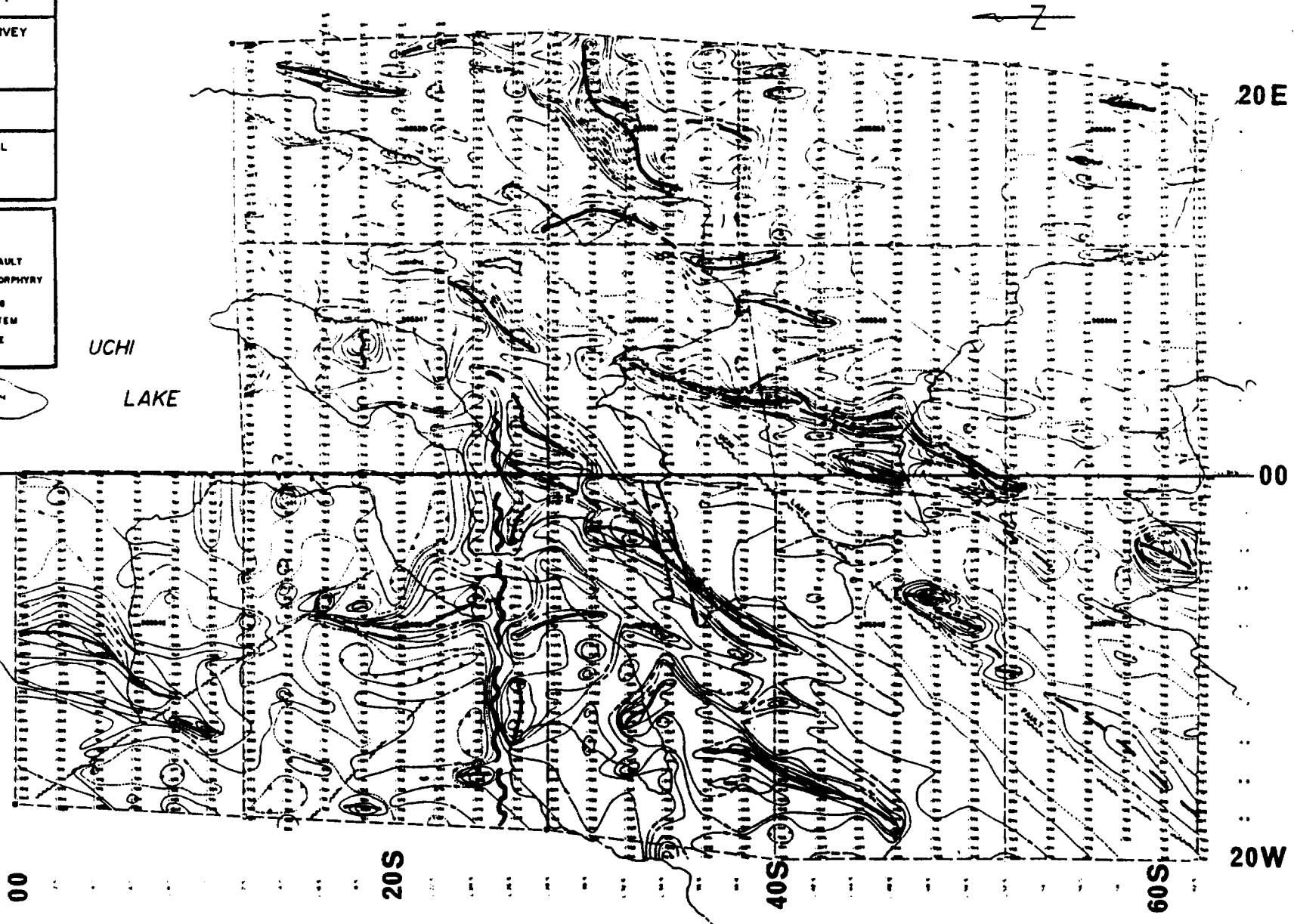
SUDBURY GEOLOGICAL
SERVICES INC.

H. B. GORMAN
M. C. FRISCH

Mar. 1988
J. S. BRYAN

LEGEND

- MAPPED FAULT
- QUARTZ FELDSPAR PORPHYRY
- INSTRUMENT: EDA OMNI PLUS
MAG-VLF SYSTEM
- CONTOUR INTERVAL VARIABLE
- BASE READING 86000







LEGEND

INSTRUMENT: EDA OMNI PLUS
MAG-VLF SYSTEM

STATION: CUTLER, MAINE (1840 KM)

SCALE: 1" = 50'

IN-PHASE: 
QUADRATURE: 
NEGATIVE 90 QUADRATURE: 
POSITIVE 90 IN-PHASE: 

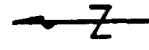
**ST. JUDE
RESOURCES**

UCHI LAKE & EARNGY
TOWNSHIP, ONTARIO,
NTS 52 N/2

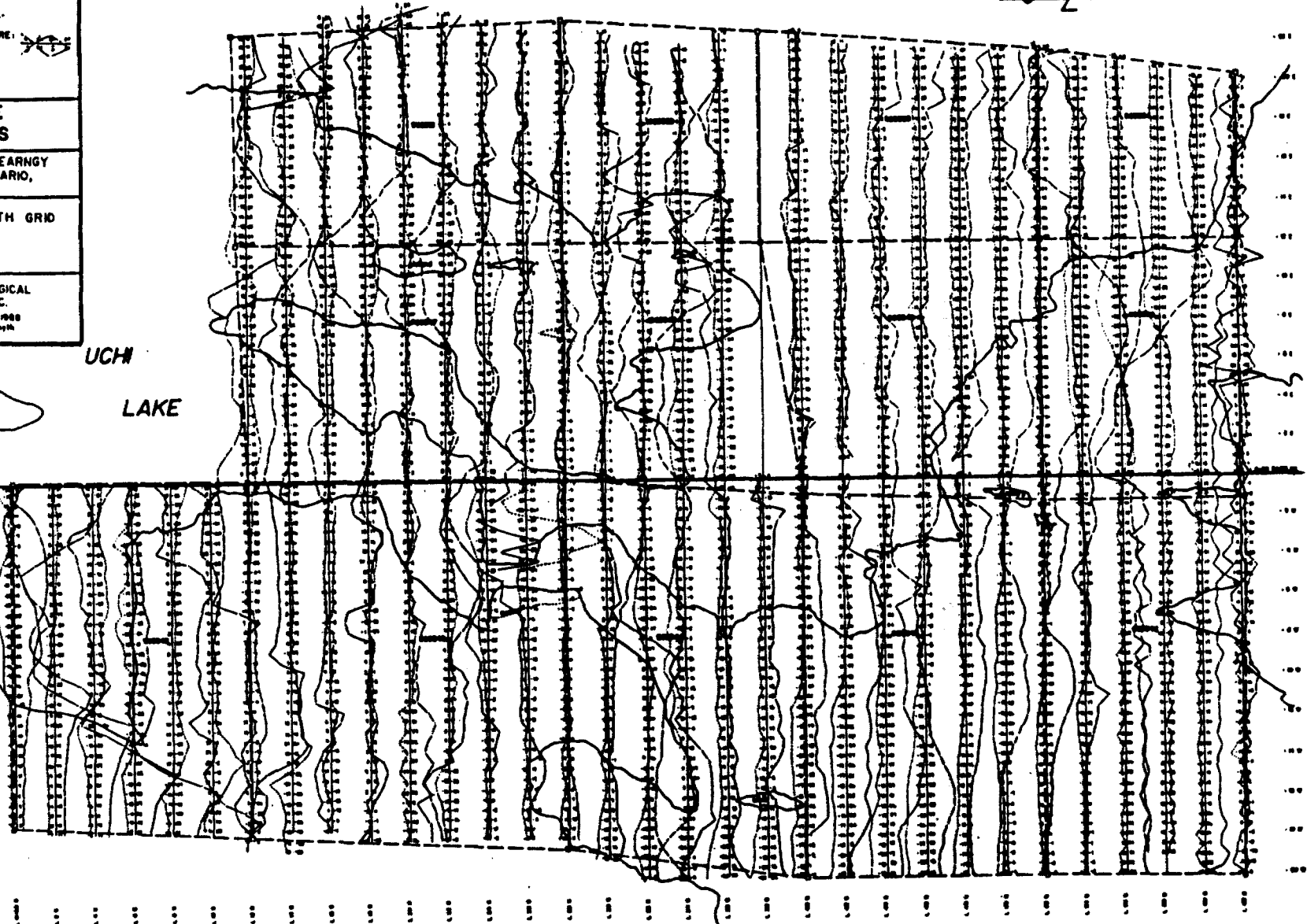
VLF SURVEY - SOUTH GRID

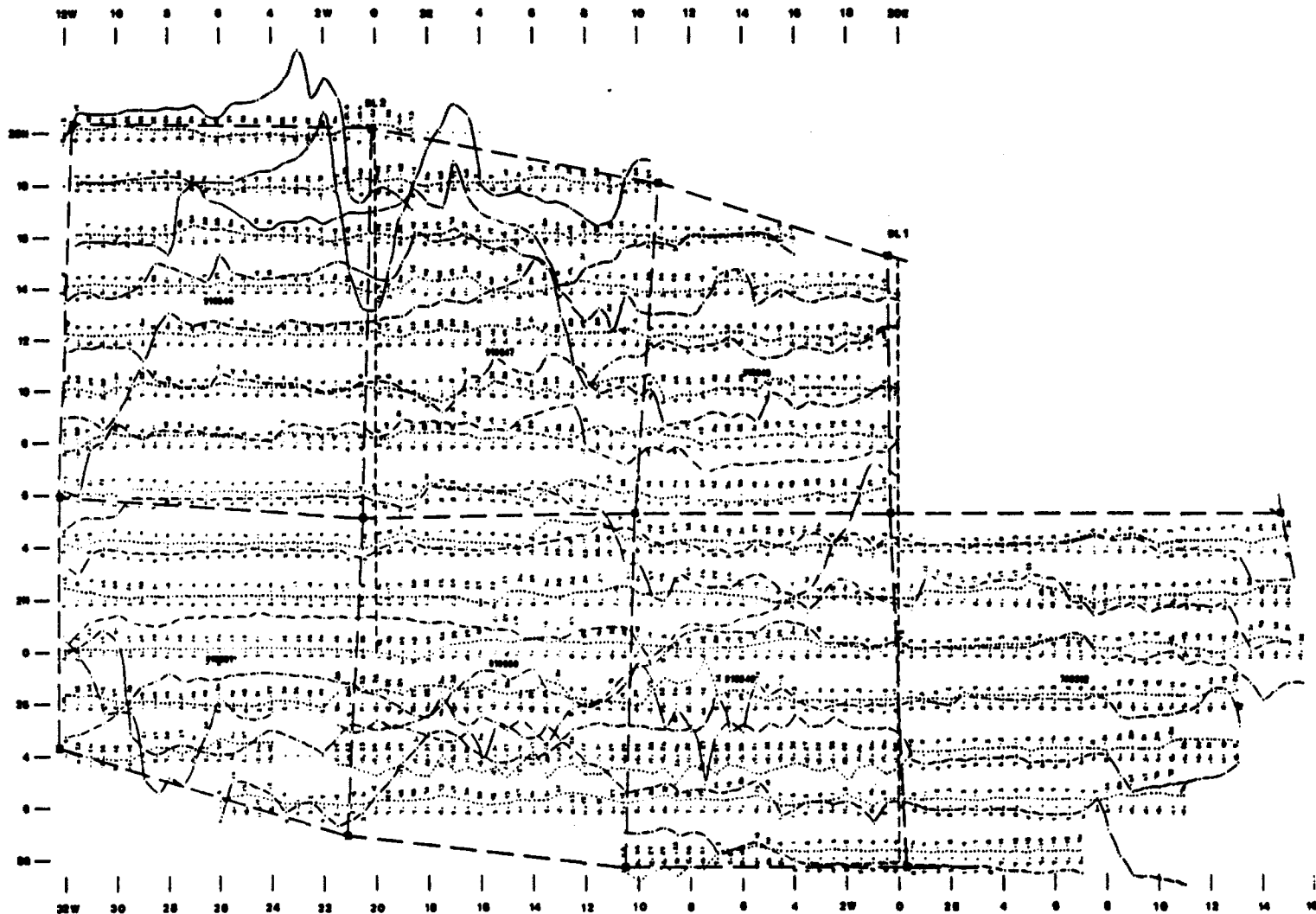
SUDBURY GEOLOGICAL
SERVICES INC.

D. C. Gormanston March, 1988
D. C. Frasier J. S. Smyth



UCHI
LAKE





LEGEND

VLF EM Survey
 Equipment Used
 EDA OMNI-PLUS VLF/
 MAGNETOMETER

VLF Station
 24.0 kHz Cutler, Maine, USA

VLF Data
 - - - - - In Phase
 Quadrature
 -ve
 +ve
 In Phase
 Quadrature

Scale: 1" = 50'



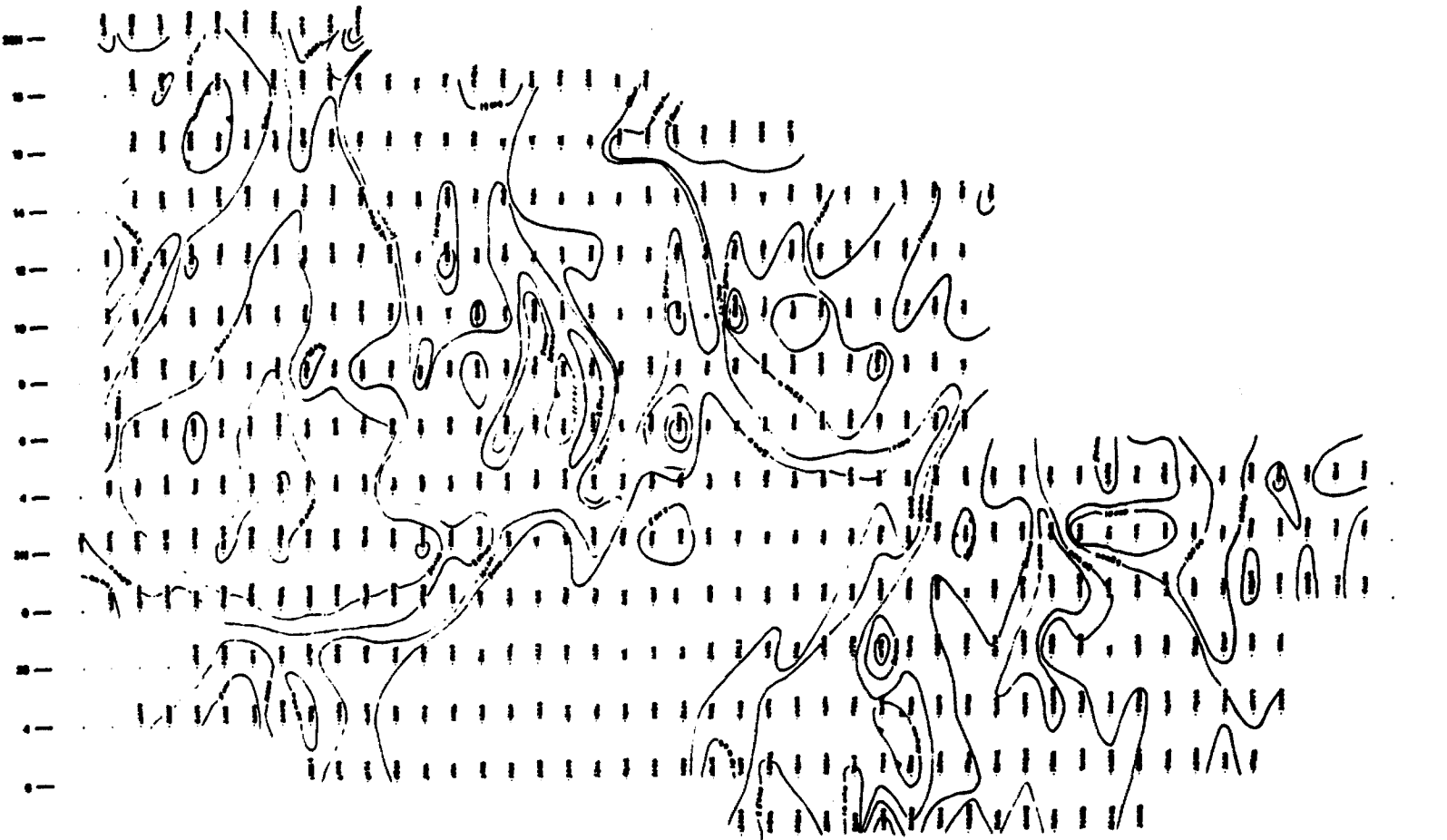
**ST. JUDE
 RESOURCES**

UCHI LAKE & EARNGY
 TOWNSHIP ONTARIO,
 NTS 52 N/2

1- VLF Cross-Overs
 north side

**SUDBURY GEOLOGICAL
 SERVICES INC**
 R. H. Hammondson March, 1995
 B. C. Fraser

T T I I I T I T I I I T T T T T



100 90 80 70 60 50 40 30 20 10 0 0 4 8 12 16 20 24 28 32 36 40 44 48 52 56 60 64 68 72 76 80 84 88 92 96 100

LEGEND

Induced Polarization Survey
Equipment Used
EDA IP-2 Receiver
Phoenix IPT 1 Transmitter
Phoenix MG-2 Generator



**ST. JUDE
RESOURCES**

UCHI LAKE & EARNGY
TOWNSHIP ONTARIO,
NTS 5N 2

IP Resistivity
Contour Interval
NORTH GRID

**SUDBURY GEOLOGICAL
SERVES INC.**

R. H. Gormanson April, 1988
D. C. Fraser

LEGEND

Induced Polarization Survey
Equipment Used
EDA IP-2 Receiver
Phoenix PT-1 Transmitter
Phoenix MG-2 Generator

**ST. JUDE
RESOURCES**

UCHI LAKE & EARNBY
TOWNSHIP ONTARIO,
NTS 5N2

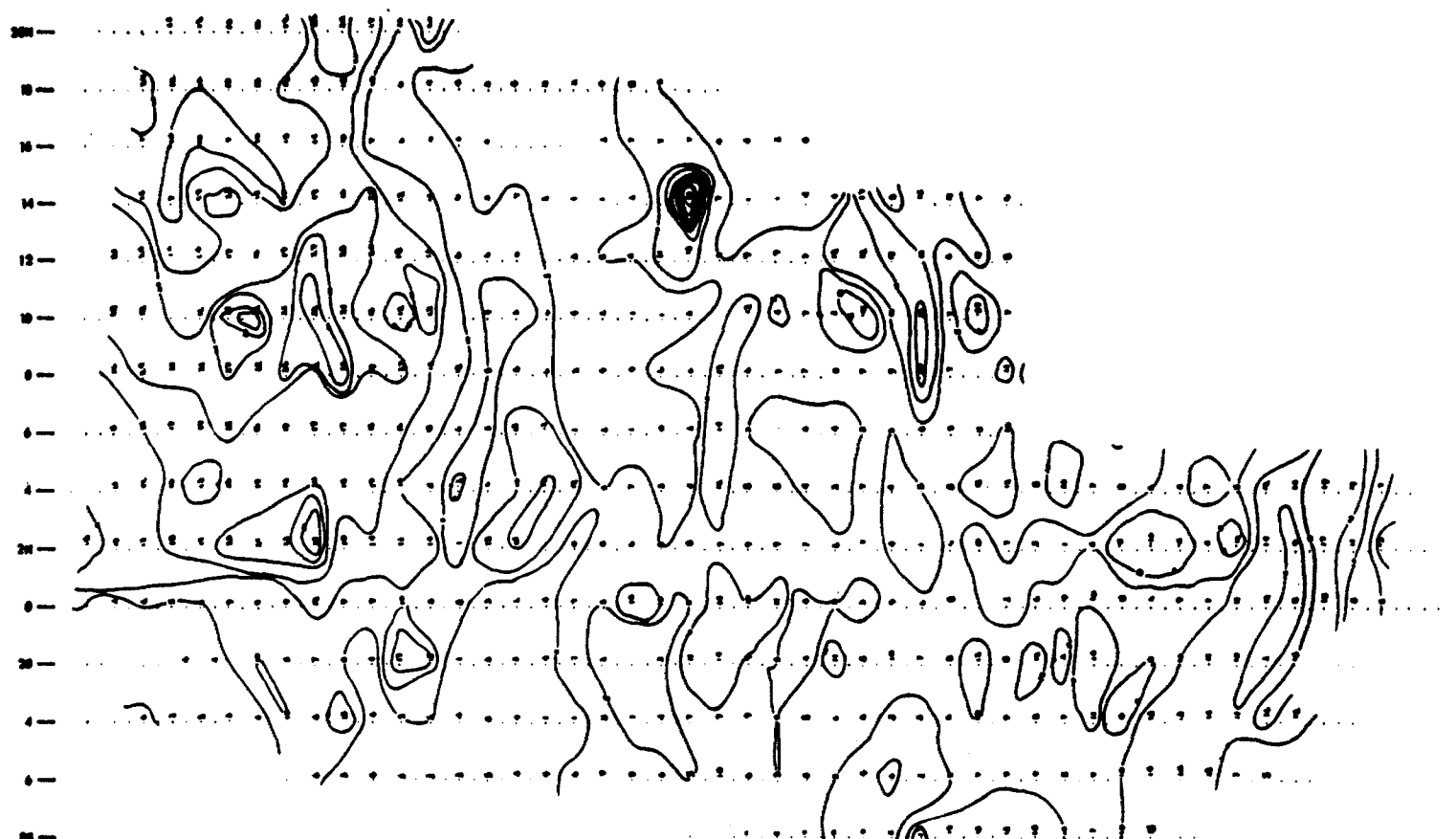
1-IP Chargeability
Contour Interval 5 mV

North 84°

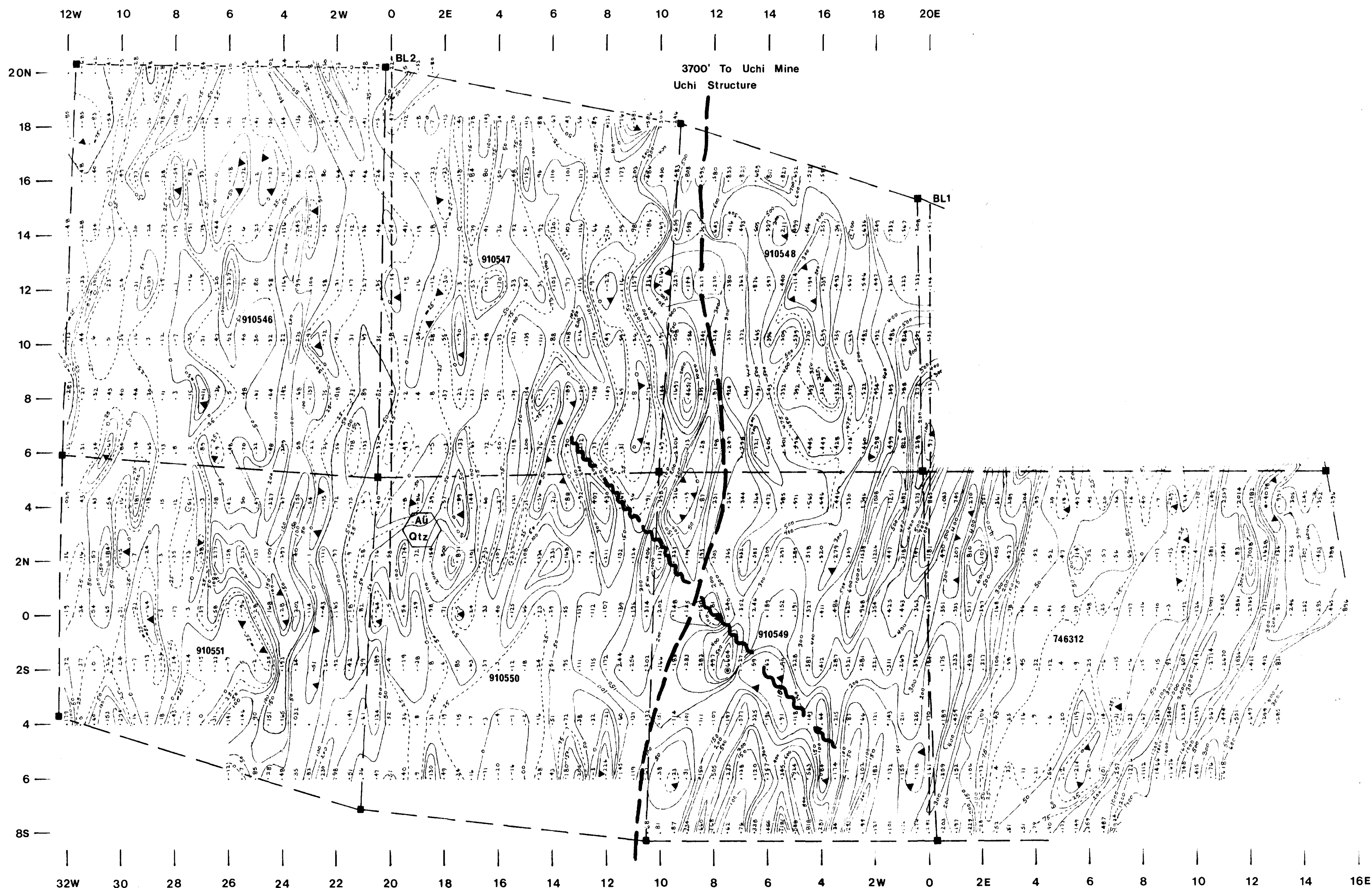
**SUDBURY GEOLOGICAL
SERVICES INC.**

B. H. Cunningham March 1988
D. C. Fraser

12W 10 8 6 4 2W 0 2E 4 6 8 10 12 14 16 18 20E



22W 20 18 16 14 12 10 8 6 4 2W 0 2E 4 6 8 10 12 14 16E



LEGEND

Magnetometer Survey
 Equipment Used
 EDA OMNI-PLUS VLF/
 MAGNETOMETER

Fault

63.5263

R.K. Germundson
May 10 1998

**ST. JUDE
RESOURCES**

UCHI LAKE & EARNGEY
TOWNSHIP, ONTARIO,
NTS 52 N/2

1 - Magnetometer Data
NORTH GRID

Scale
 300 100 0 feet 200 400

**SUBURY GEOLOGICAL
SERVICES INC.**

R.K. Germundson March, 1998
 B.C. Fraser

OM88-1-C-011

LEGEND

--- MAPPED FAULT

--- QUARTZ FELDSPAR PORPHYRY

INSTRUMENT: EDA OMNI PLUS
MAG-VLF SYSTEM

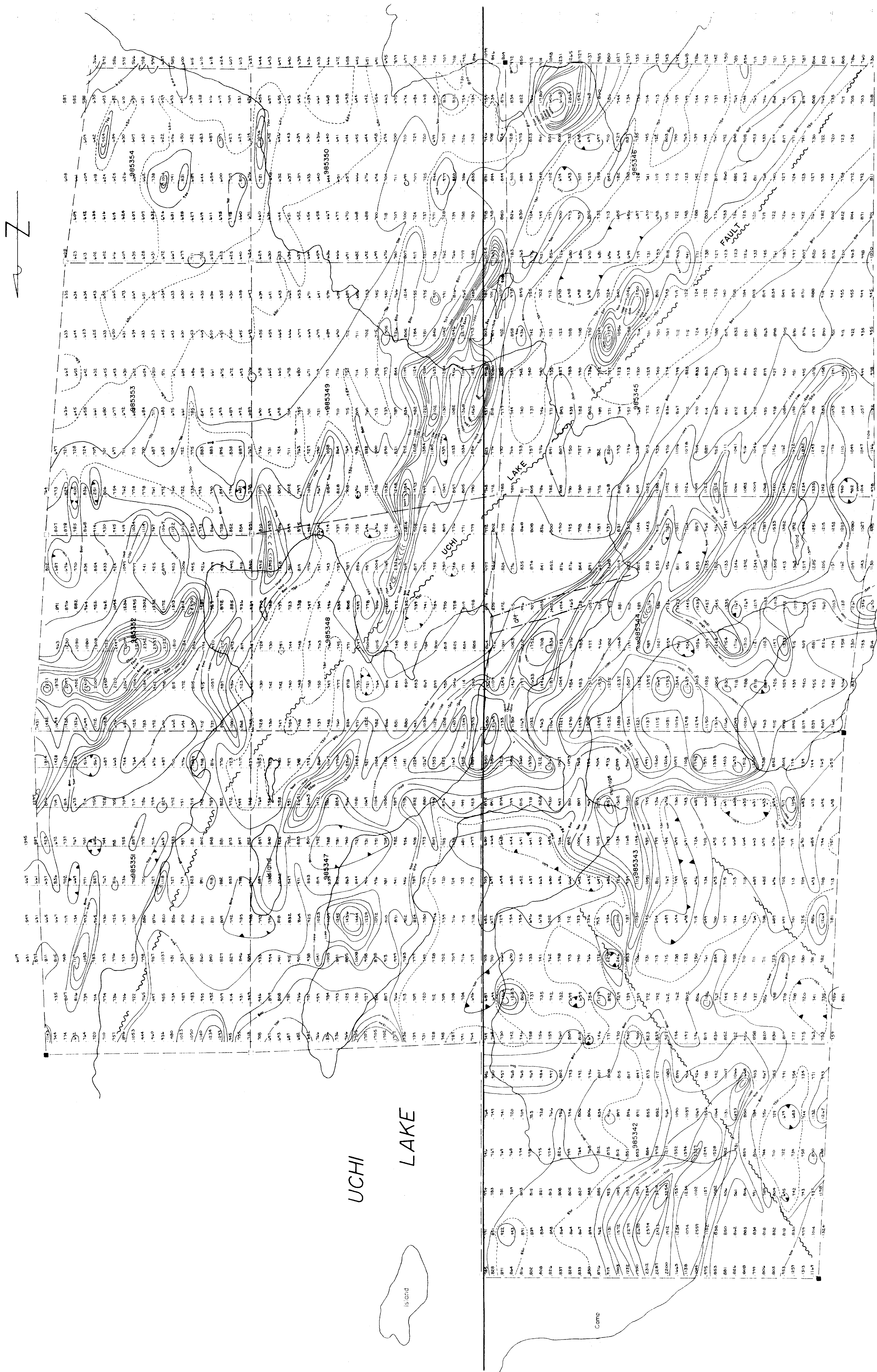
CONTOUR INTERVAL: VARIABLE
BASE READING: 56000

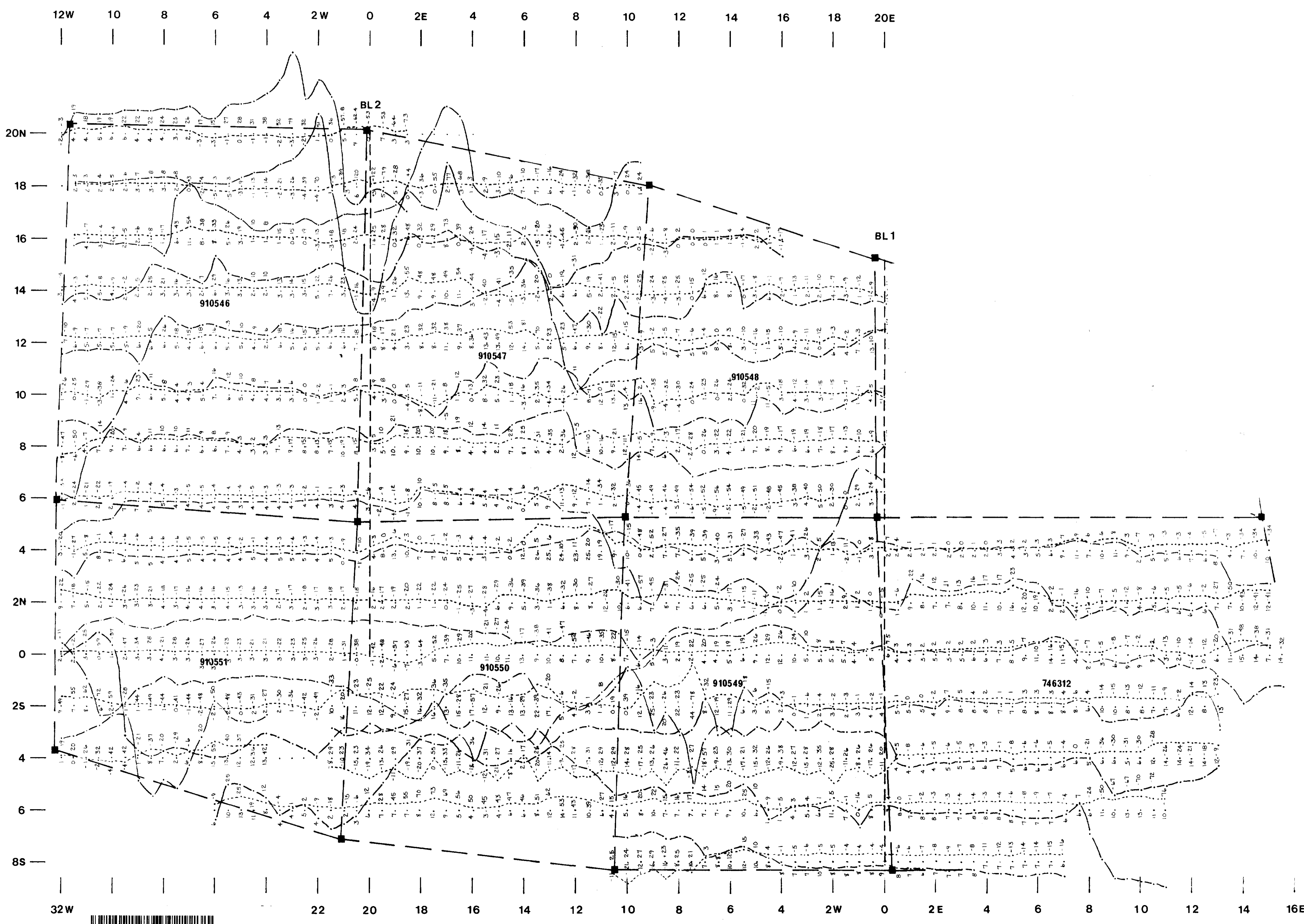
63-5263

ST. JUDE RESOURCES
UCHI LAKE & EARNLEY TOWNSHIP, ONTARIO, NTS 52 N/2

MAGNETOMETER SURVEY SOUTH GRID

SUDBURY GEOLOGICAL SERVICES INC.





LEGEND

VLF EM Survey
 Equipment Used
 EDA OMNI-PLUS VLF/
 MAGNETOMETER

VLF Station
 24.0 kHz Cutler, Maine, USA

VLF Data
 - - - - - In Phase
 - - - - - Quadrature
 - - - - - +ve
 - - - - - -ve
 - - - - - In Phase
 - - - - - Quadrature

Scale: 1" = 50'

63.5263

R.K. Germundson
 March 10, 1988

**ST. JUDE
 RESOURCES**

UCHI LAKE & EARNGEY
 TOWNSHIP ONTARIO,
 NTS 52 N/2

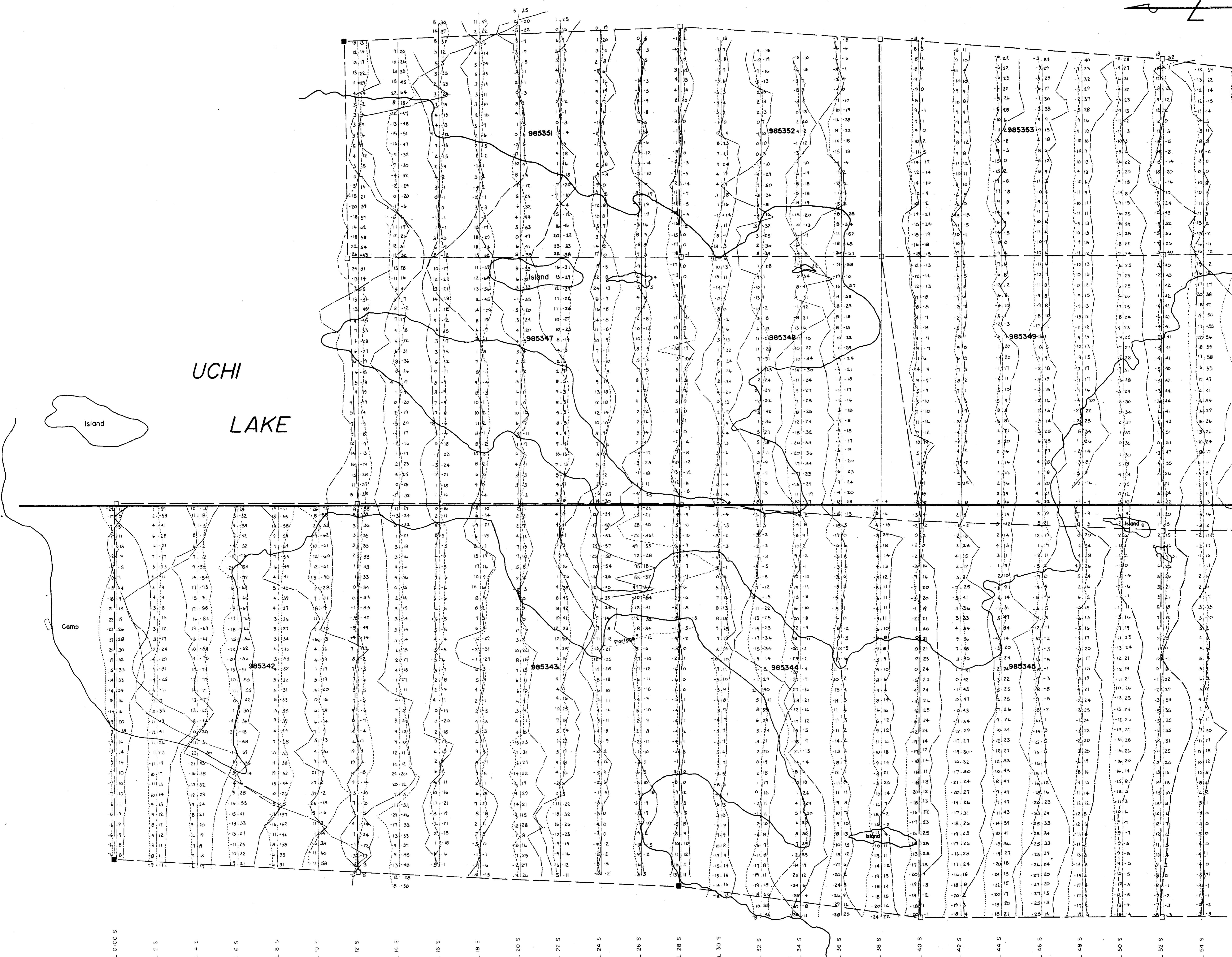
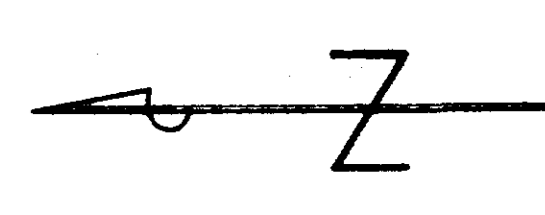
1" VLF Cross-Overs
 NORTH GRID

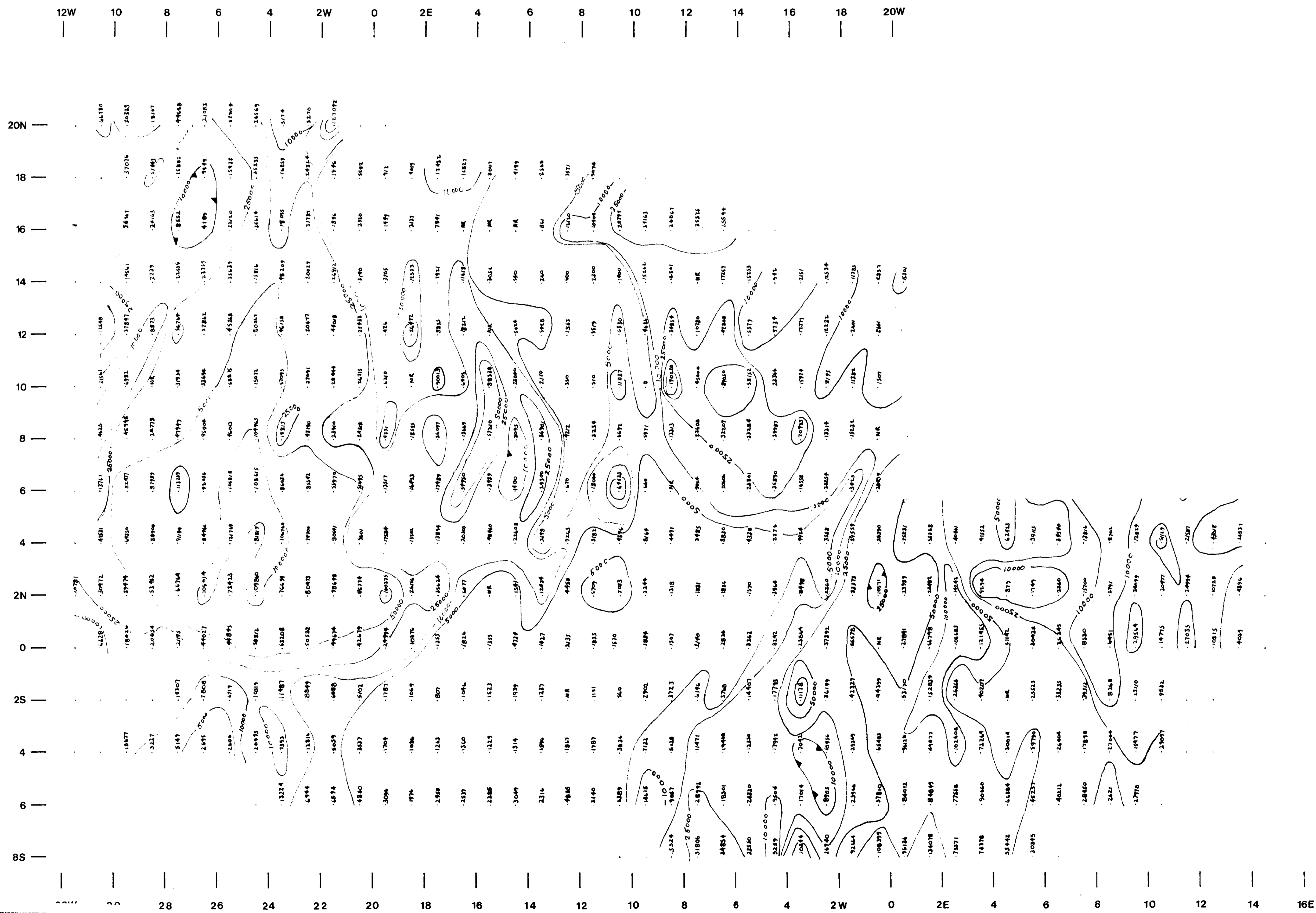
Scale
 200 100 0 feet 200 400

SUDBURY GEOLOGICAL
 SERVICES INC

R.K. Germundson March, 1988
 B.C. Fraser







LEGEND

Induced Polarization Survey
 Equipment Used
 EDA IP-2 Receiver
 Phoenix IPT-1 Transmitter
 Phoenix MG-2 Generator

63.5263

R. K. Germundson *M. C. Fraser*

ST. JUDE RESOURCES

UCHI LAKE & EARNGEY
 TOWNSHIP ONTARIO,
 NTS 5N/2

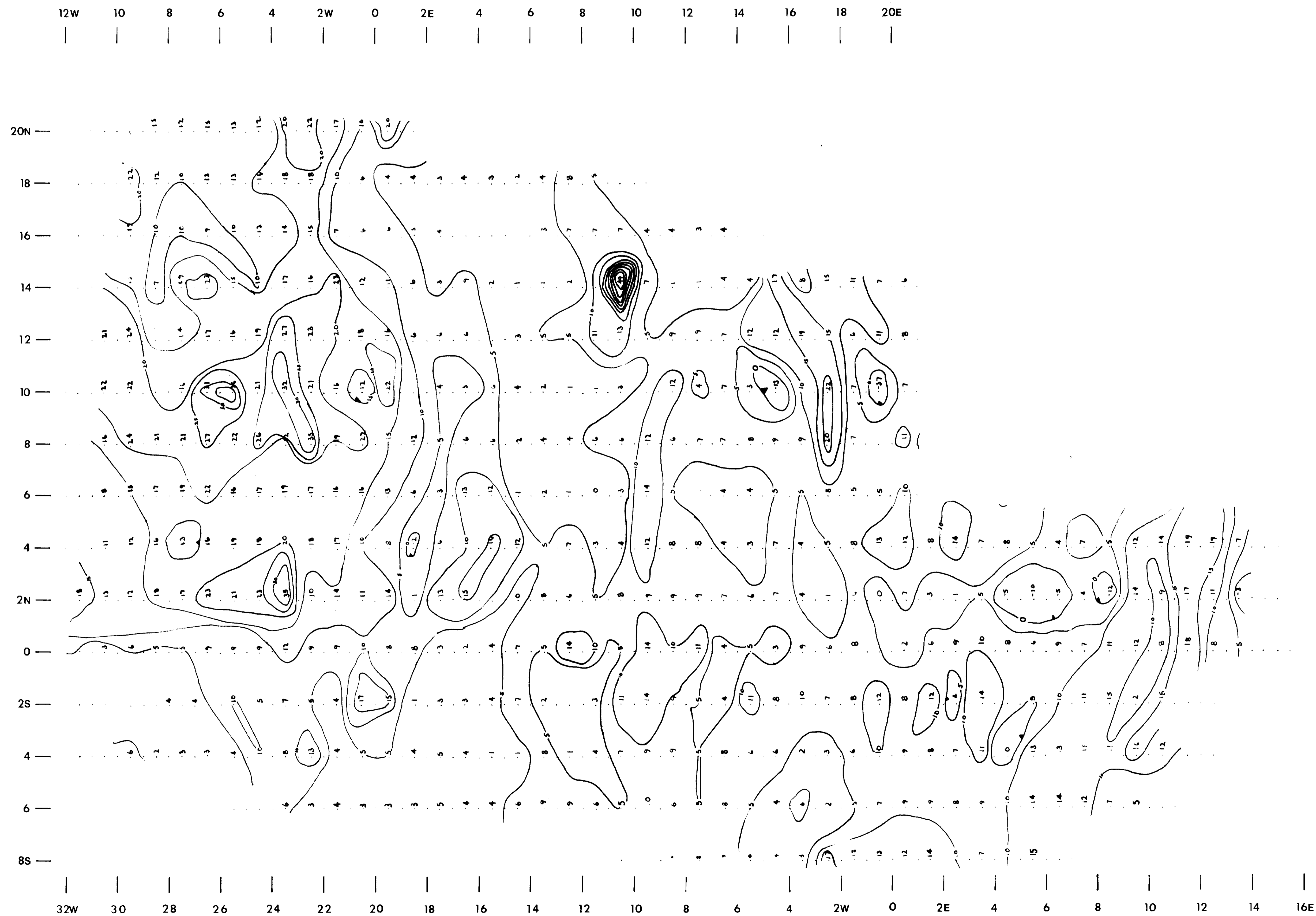
IP Resistivity
 Contour Interval
 NORTH GRID



SUDBURY GEOLOGICAL
 SERVICES INC.

R. K. Germundson April, 1988
 B. C. Fraser





LEGEND

Induced Polarization Survey
 Equipment Used
 EDA IP-2 Receiver
 Phoenix IPT-1 Transmitter
 Phoenix MG-2 Generator

63.5263

*R.K. Germundson
 11/10/88*

**ST. JUDE
 RESOURCES**

UCHI LAKE & EARNGEY
 TOWNSHIP, ONTARIO,
 NTS 5N/2

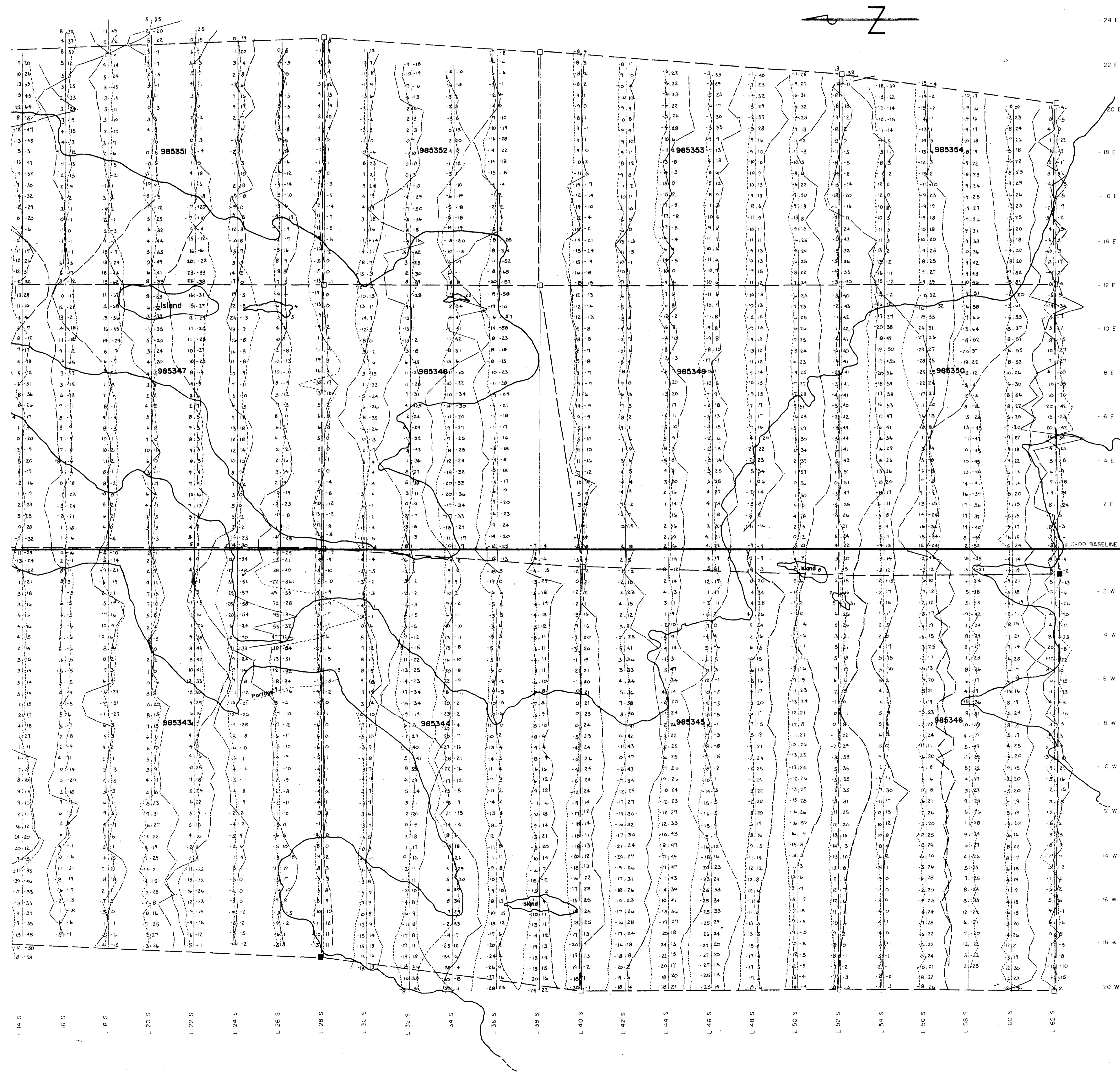
1-IP Chargeability
 Contour Interval 5 mV

NORTH GRID



SUDBURY GEOLOGICAL
 SERVICES INC.
 R. K. Germundson March 1988
 B. C. Fraser





LEGEND

INSTRUMENT: EDA OMNI PLUS
 MAG-VLF SYSTEM

STATION: CUTLER, MAINE (24.0 KHZ)

SCALE: 1" = 50'

IN - PHASE:
 QUADRATURE:
 NEGATIVE B QUADRATURE:
 POSITIVE B IN-PHASE:

63.5263

R. K. Germondson
March 1988

**ST. JUDE
 RESOURCES**

UCHI LAKE & EARNLEY
 TOWNSHIP, ONTARIO,
 NTS 52 N/2

VLF SURVEY - SOUTH GRID

Scale
 200 100 0 feet 200 400

SUDBURY GEOLOGICAL
 SERVICES INC.
 R. K. Germondson March, 1988
 B. C. Fraser J. S. Smyth

DM88-1-C-011