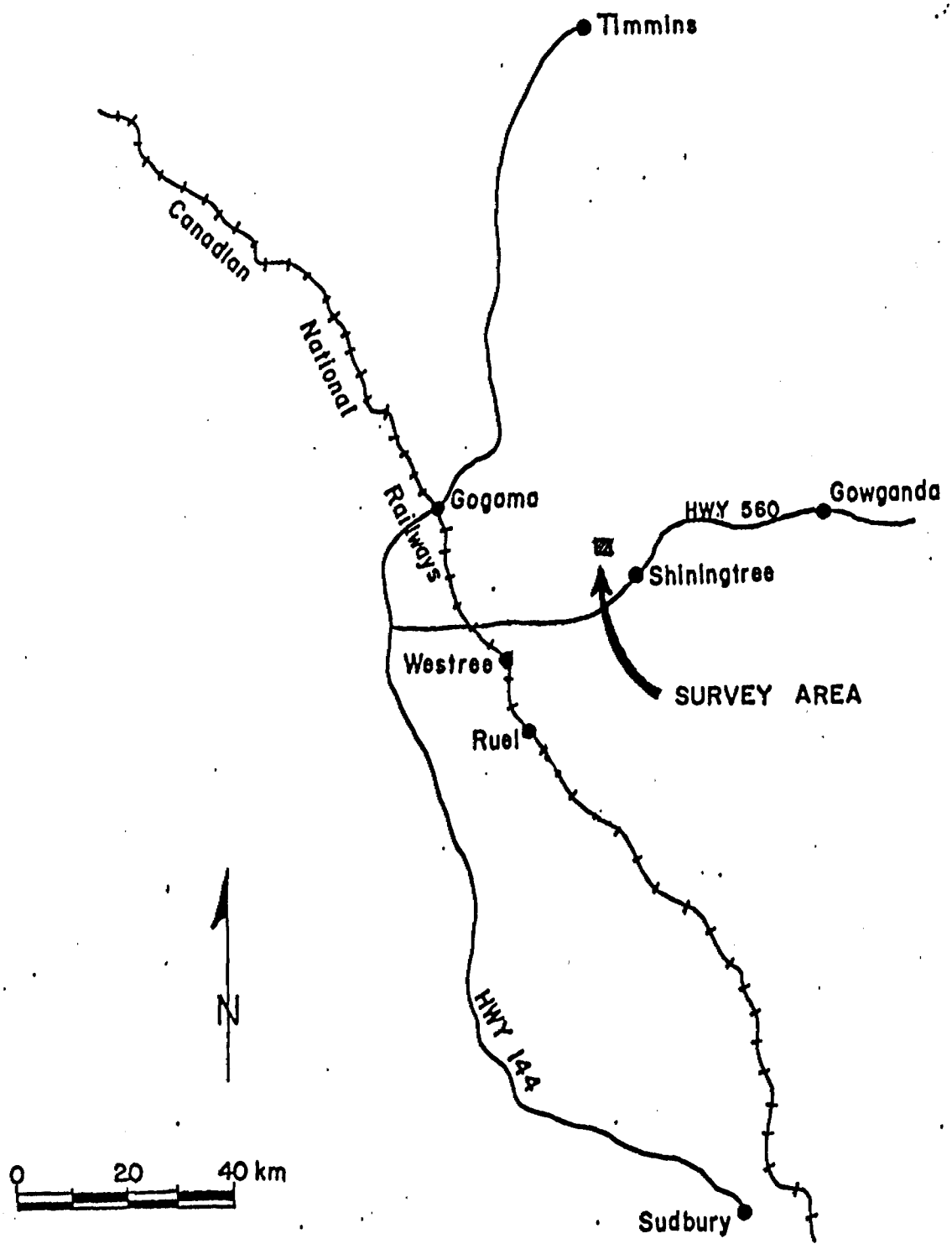
Goldhurst Resources Inc.

V.L.F. ELECTROMAGNETIC SURVEY

Connaught Township
District of Larder Lake, Ont.

F.T Archibald, B.Sc.Geologist.

January 19, 1981.



(Figure 1) Location map showing Survey Area

P.S. Archibald

Summary:

This report covers the results of a Crone Radem V.L.F. Electromagnetic Survey carried out over Goldhurst Resources Inc. property during the month of January, 1981.

The survey was run over 12 unpatented mining claims numbered: L553672 to L553683 inclusively. These claims are all situated in the eastern section of Connaught Township in the District of Larder Lake, Northern Ontario.

The purpose of the survey was to try and define known mineralized shear or fault zones and to try and define any mineralized areas associated with these zones.

Some 9.0 miles of line was traversed using the transmitting station of Cutler, Maine with a frequency of 17.6 KHz. Another grid, using the orthogonal station of Annapolis, Maryland with a frequency of 21.4 KHz. was run over that portion of the grid covered by Little Esther Lake. Some 9.75 miles was traversed in total, on lines spaced at 400 feet apart and stations every 100 feet.

Three anomalous trends were outlined using the station of Cutler, Maine. One of these conforms to a brecciated fault zone striking N 60° W, and has been outlined as a moderate-strong conductive zone of at least 3800 feet in length. The others are caused by low, swampy overburden.

A north-south trending fault or shear zone was outlined as a moderate-strong conductor, using an orthogonal station of Annapolis, Maryland.

It has been found in the past that chalcopyrite and pyrite mineral concentrations carrying significant copper and gold values have been associated with a brecciated fault zone. The V.L.F. electromagnetic survey has been able to outline this zone, which is found to occur in a low overburden-filled or lake-covered area.

Several good diamond drill hole targets have been outlined by the V.L.F. electromagnetic survey; the most significant being where the two anomalies cross in Little Esther Lake.

Location and Access:

The property is located some five miles north-west of the town of Shining Tree which is situated on Highway #560. This highway can be reached by highway #144 which runs between Sudbury and Timmins; or from Highway #11 at either the New Liskeard or Kirkland Lake turnoffs.

Access is made by ski or float plane to Little Esther Lake, or by skidoo during the winter months across several lakes and portages from the town of Shining Tree.

The survey was run over the Goldhurst Resources Inc. property consisting of the following unpatented mining claims:

L553672 to L553683 inclusive.

Topography:

The property is generally flat to gently undulating. It consists of many small northwest to southeast trending ridges and knolls not usually greater than 25 feet above the surrounding lake levels; and is dotted by many low lying cedar and tag swamps.

Approximately 50% of the property is covered by water or low lying swampy ground. Outcroppings are generally scarce except in the vicinity of Little Esther Lake.

Timber consists of mature birch, poplar, spruce, and jack pine; from 4 to 10 inches in diameter on average.

General Geology:

The underlying rocks consist of Archean quartz diorite intrusives of Precambrian age, with a younger metavolcanics unit of rhyolite overlying the area to the southwest of Little Esther Lake.

The showings near the south-west end of Little Esther Lake are in a fault breccia which strikes N 60°W and dips approximately 60° to the north.

It is believed that the north-south trending fault zone crosses the eastern section of Little Esther Lake, intersecting the east-west trending fault breccia zone.

Economic Geology:

The east-west trending fault zone contains associated disseminated chalcopyrite and pyrite mineralization which occurs in erratic concentrations.

Some stripping, blasting, and trenching was done in 1973 to a limited extent. As far as it is known, a diamond drilling program has never been carried out on the companies claims to further test the fault zones or the anomalies associated with them.

Discussion of Equiptment:

The Crone Radem V.L.F.- Electromagnetic unit utilizes higher than normal frequencies and is capable of detecting small sulphide bodies and disseminated sulphide deposits. It accurately isolates banded conductors and operates through areas of high noise or interference levels.

This method is capable of deep penetration but due to the low frequency used, its penetration is limited in areas of clay and conductive overburden. The components of dip angle in degrees of the magnetic field component, field strength of the magnetic component of the V.L.F. field, and out of phase component of the magnetic field are measured at each station.

There are several channels or stations available, each with a different frequency. A channel to be used should be parallel to the general strike of the area. If this cannot be determined, then two orthogonal stations are used to define any possible conductors.

The dip angle measurement measures the angle of inclination from horizontal of the direction of the resultant V.L.F. or the amplitude of the major axis of the polarization ellipse. It is detected by a minimum on the field strength meter and is read from an inclinometer with a range of $\pm$ 90. A conductor is designated by a true crossover pattern of the readings. The measurement is taken from an audio null when the instrument is held in a vertical position, after turning perpendicular to the direction in alignment with the V.L.F. field. The V.L.F. field is found by an audio null or minimum field strength measurement when the instrument is held in a horizontal position.

The accuracy of the dip angle measurements is $\pm \frac{1}{2}^{o}$.

The field strength measurement defines the shape and the attitude of the conductor by the strength of the field in the horizontal plane or the amplitude of the major axis of the polarization ellipse. It is the maximum reading obtained from the field strength meter when the instrument is rotated in the horizontal plane, and is measured as a percent of normal field strength established at a base station. The field strength of the V.L.F. stations drifts with time, and must be adjusted with the base station every few hours. The field strength measurement has an accuracy of $\pm$ 2%.

The out of phase component of the magnetic field, as a percent of the normal primary field, is sensitive to a lower order of conductivity than the dip angle measurement and is used to locate conductors of a low order of magnitude. It is a measurement of the secondary field produced by a ground conductor which is in a different phase than the primary field. This is the minimum reading of the field strength meter obtained when measuring the dip angle. The measurement has an accuracy of $\pm$ 2%.

Some 455 stations (9.75 line miles) were recorded during the survey on lines spaced at 400 foot intervals and stations at every 100 feet.

The transmitting stations of: Annapolis, Maryland (frequency 21.4 KHz.) was used on an east-west grid run over Little Esther Lake; and Cutler, Maine (frequency 17.6 KHz.) was used on a north-south grid run over all of the claim group.

The dip angle was plotted on a contour of approximately 1 inch equals 35 degrees, and the field strength contoured at intervals of 70% above the normalized background of 100.

Results:

Cutler, Maine Station

Several east-west trending anomalies have been outlined by the survey.

Anomaly A is a moderately strong conductor which was traced for approximately 3800 feet before it continued off the claim boundary to the west. This zone follows a low depression area from the west arm of Little Esther Lake and westward. This anomaly is in part influenced by conductive overburden and lake bottom sediment. The anomaly is strongest between lines 4 East and 8 East, and between Lines 8 West and 12 West. It continues to approximately Line 14 East where it is cut by a north-south trending fault zone.

Anomaly B is a moderately strong anomalous zone between Lines 00 and 8 West, which is caused by conductive swamp overburden.

This zone follows low cedar swamp, and is strongest at line 4 West @ 21+00 South.

Anomaly C is a weak, discontinuous anomalous zone which is caused by conductive overburden. It follows low swampy ground and is strongest between Lines 00 and 8 West.

Annapolis, Maryland

A moderately strong anomaly was traced through the eastern arm of Little Esther Lake for some 1600 feet. It is thought to be caused by a north-south trending shear or fault zone, although due to a limited survey extent it is not known how much the lake bottom sediments have influenced this anomaly. It appears to be strongest between Lines 4 North and 8 North.

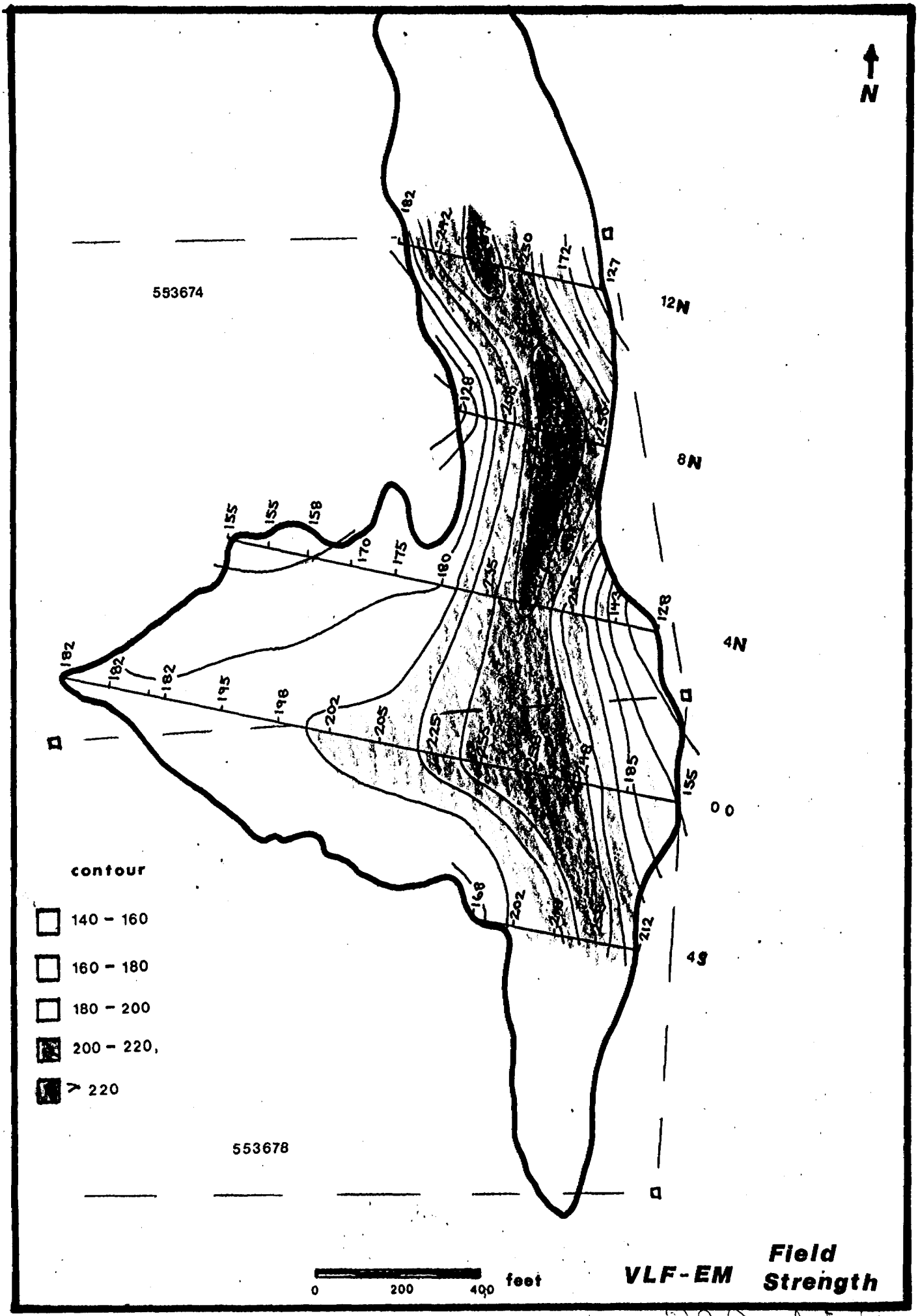
Conclusions:

The east-west trending fault-breccia zone has been traced for an extent of at least 3800 feet. Mineralized concentrations bearing gold and copper values have been found to be associated with or in close proximity to sections of this zone; thus several diamond drill targets have been located.

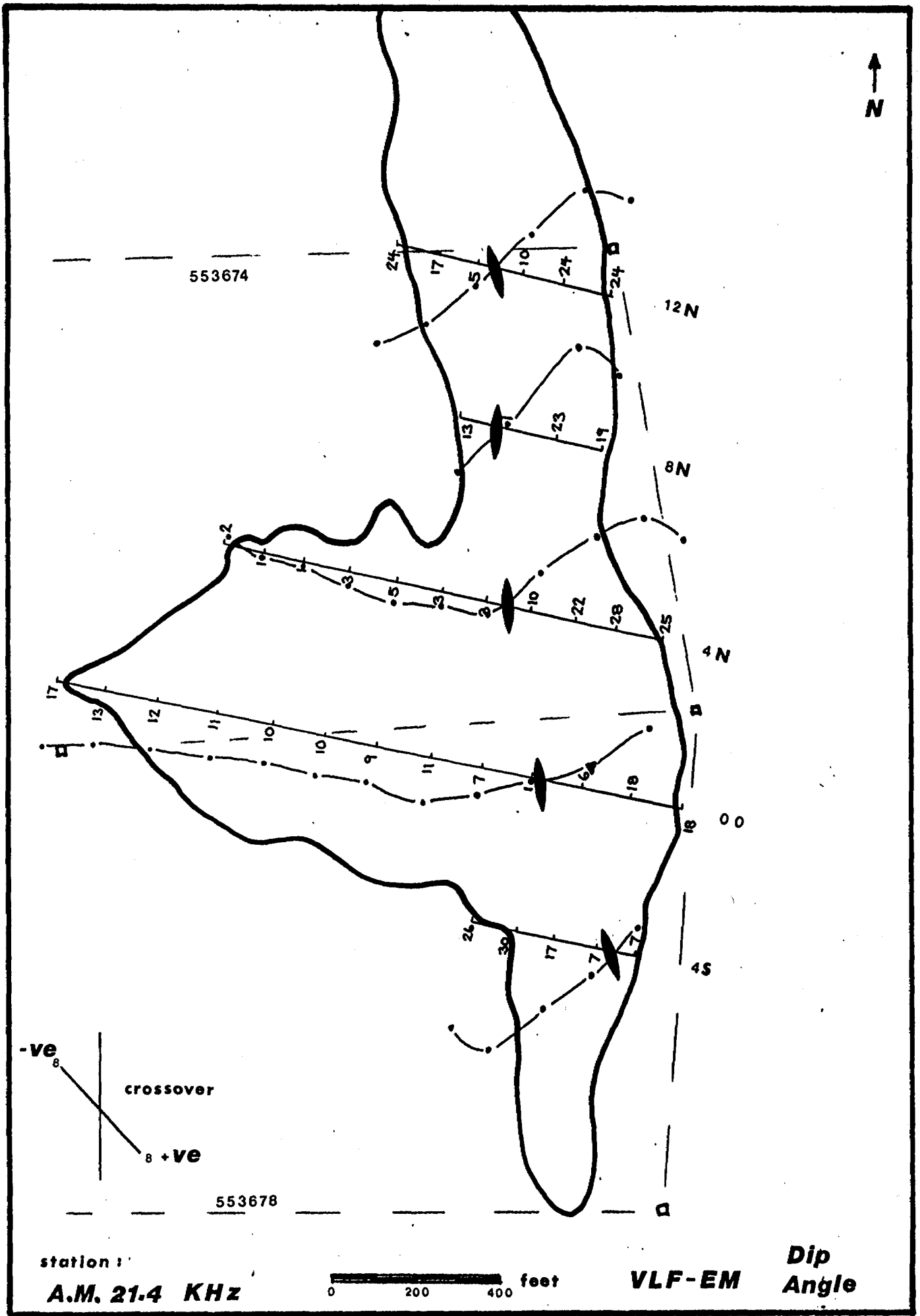
Another excellent target area, geologically speaking, is at the intersection of the north-south and east-west trending fault or shear zones. These are outlined by the V.L.F. electromagnetic anomalies and intersect some 300 feet west of the east shore of Little Esther Lake.

F. T. Archibald

F.T.Archibald,B.Sc.Geologist.
Toronto, Ontario. Jan.19,1981


N
553674
553678
12N
8N
4N
0 0
4S
contour
140 – 160
160 – 180
180 – 200
200 – 220,
> 220
0
200
400
feet
VLF-EM
Field Strength

2-3690(4841)0


N
553674
12N
8N
4N
0 0
4S
553678
-ve
crossover
+ve
station :
A.M. 21.4 KHz
0
200
400
feet
VLF-EM
Dip
Angle

Ontario

41P11SW0039 2.3690 CONNAUGHT

900

File

RECEIVED

JAN 28 1981

MINING LANDS SECTION

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) VLF - ELECTROMAGNETIC

Township or Area CONNAUGHT TWP.

Claim Holder(s) GOLDHURST RESOURCES INC.
1275 - TWO BENTALL CENTRE, 555 BURRARD ST.
VANCOUVER B.C.

Survey Company F.T. ARCHIBALD CONSULTING LTD.

Author of Report F.T. ARCHIBALD

Address of Author 702-100 ADELAIDE ST. W. TORONTO

Covering Dates of Survey JANUARY 15 - 19, 1981.
(linecutting to office)

Total Miles of Line Cut 8.9

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	40
–Magnetometer	
–Radiometric	
–Other	
Geological	
Geochemical	

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

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

DATE: JANUARY 20/81 SIGNATURE: F.S. Archibald
Author of Report or Agent

Res. Geol. _____ Qualifications 2.2715

Previous Surveys

File No.	Type	Date	Claim Holder
			L.D.

MINING CLAIMS TRAVERSED
List numerically

(prefix) (number)

L 553672
L 553673
L 553674
L 553675
L 553676
L 553677
L 553678
L 553679
L 553680
L 553681
L 553682
L 553683

If space insufficient, attach list

TOTAL CLAIMS 12

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 426 Number of Readings 426

Station interval 100 FEET APART Line spacing 400 FEET APART

Profile scale 1 INCH = 35 DEGREES (DIP ANGLE)

Contour interval 20 % (FIELD STRENGTH) 1" = 35° (DIP ANGLE)

MAGNETIC

Instrument

Accuracy – Scale constant

Diurnal correction method

Base Station check-in interval (hours)

Base Station location and value

ELECTROMAGNETIC

Instrument CRONE RADEM V.L.F. E.M.

Coil configuration STATIONS 100 FEET APART

Coil separation

Accuracy ±5% FIELD STRENGTH ±2° DIP ANGLE

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

Frequency CUTLER MAINE 17.6 KHz ANNAPOLIS MARYLAND 21.4 KHz.
(specify V.L.F. station)

Parameters measured DIP ANGLE, FIELD STRENGTH

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

PROPERTY PLAN
GOLDHURST RESOURCES INC.

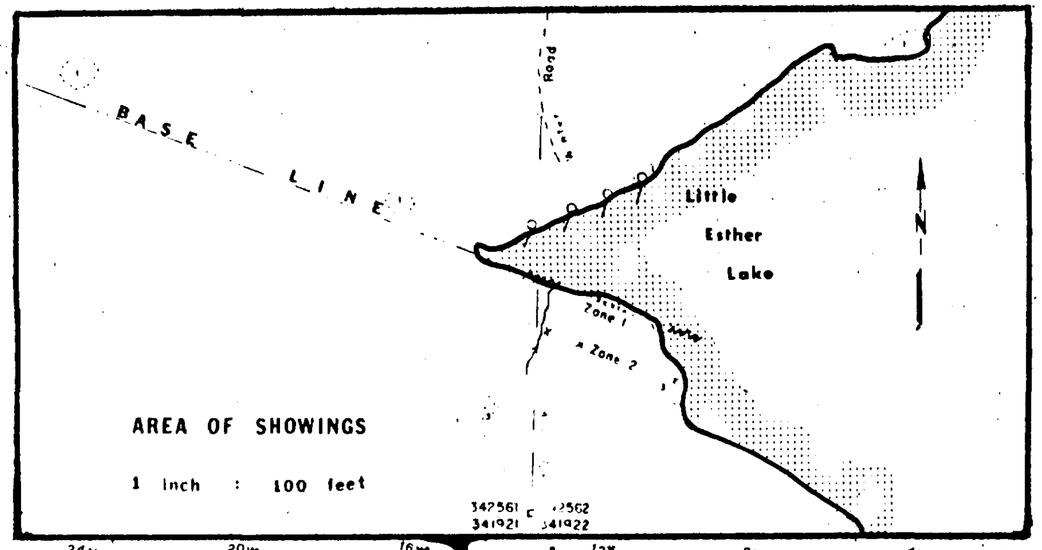
CONNAUGHT TOWNSHIP, ONTARIO

VLF-EM Dip Angles

SCALE

400 200 0 400

FEET



LEGEND

- RHYOLITE
- ANDESITE
- QUARTZ DIORITE
- SEDIMENTS
- OUTCROP
- SHOWINGS
- PROPOSED DRILL HOLE

-ve +ve crossover +ve +ve

ANOMALY

CUTLER ; MAINE 17.8 KHz.

1" = 30° CONTOUR SCALE

24W 20W 16W 12W 8W 4W 0 4E 8E 12E 16E 20E 24E 28E

553672 553673 A 553674 553675

BASE LINE

LITTLE ESTHER LAKE

FAULT

553676 553677 553678 553679

C

553680 B 553681 553682 553683

N

PROPERTY PLAN

GOLDHURST RESOURCES INC.

CONNAUGHT TOWNSHIP, ONTARIO

VLF-EM Field Strength

SCALE

400 200 0 400

FEET

LEGEND

- RHYOLITE
- ANDESITE
- QUARTZ DIORITE
- SEDIMENTS
- OUTCROP
- SHOWINGS
- PROPOSED DRILL HOLE

CONTOUR INTERVAL

- 120 - 140
- 140 - 160
- 160 - 180
- > 180