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REPORT ON
COMBINED HELICOPTER BORNE
MAGNETIC, ELECTROMAGNETIC AND VLF
SURVEY
SWAYZE AREA, ONTARIO

for
MELROSE RESOURCES LTD.
by
AERODAT LIMITED
JUNE, 1984

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MINING LANDS SECTION

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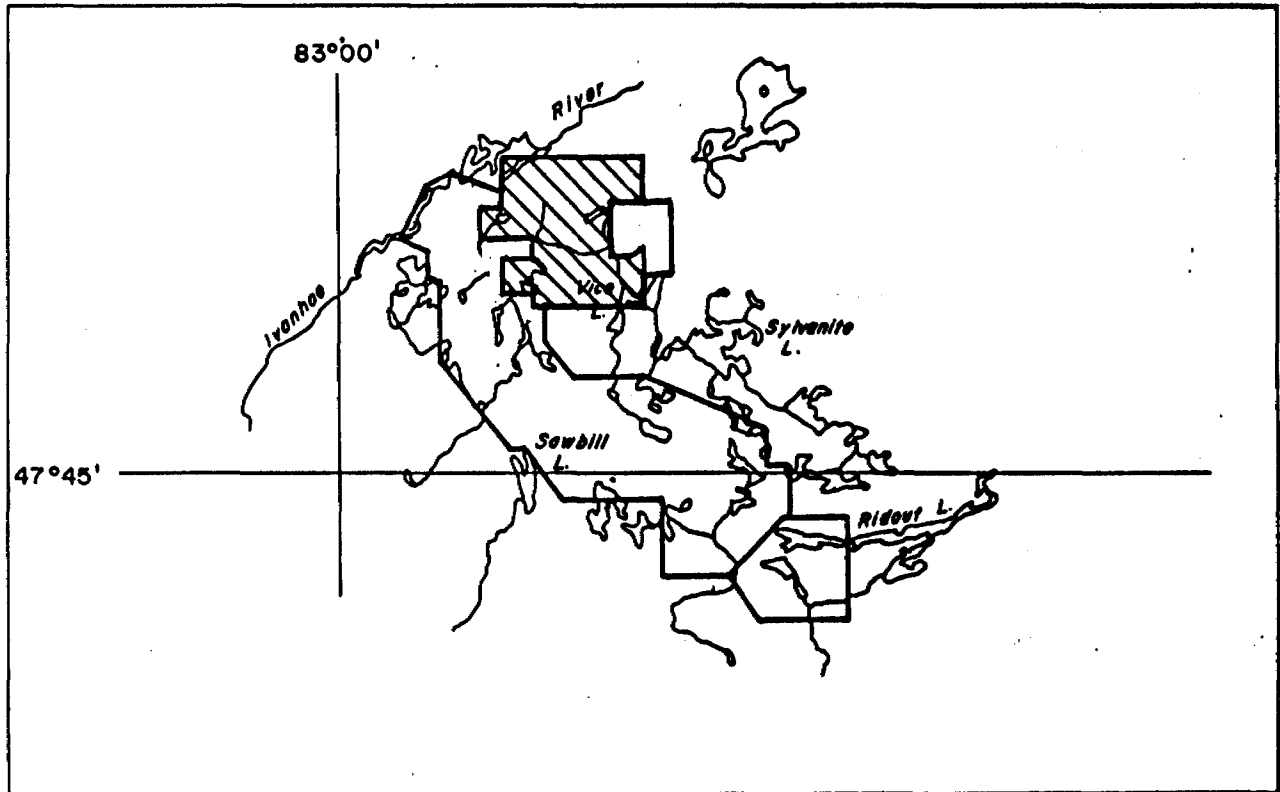
1. INTRODUCTION

This report describes an airborne geophysical survey carried out by Aerodat Limited. Equipment operated included a 3-frequency electromagnetic system, a magnetometer, a VLF-EM system, and a radar positioning system.

The survey, located near Chapleau, Ontario, was flown from March 31 to April 3, 1984. A total of approximately 925 line kilometers (575 line miles) of data were collected. This report refers to a part of this survey, consisting of 111.6 miles.

2. SURVEY AREA LOCATION

The index map below outlines the total survey block; the shaded zone is the area relating to this report. The nominal line spacing was 100 meters.



3. AIRCRAFT AND EQUIPMENT

3.1 Aircraft

The helicopter used for the survey was an Aerospatiale A-Star 350D owned and operated by Maple Leaf Helicopters. Installation of the geophysical and ancillary equipment was carried out by Aerodat. The survey aircraft was flown at a nominal altitude of 60 meters.

3.2 Equipment

3.2.1 Electromagnetic System

The electromagnetic system was an Aerodat 3 frequency system. Two vertical coaxial coil pairs were operated at 946 and 4575 Hz and a horizontal coplanar coil pair at 4175 Hz. The transmitter-receiver separation was 7 meters. In-phase and quadrature signals were measured simultaneously for the 3 frequencies with a time-constant of 0.1 seconds. The electromagnetic bird was towed 30 meters below the helicopter.

3.2.2 VLF-EM System

The VLF-EM System was a Herz 1A. This instrument measures the total field and vertical

quadrature component of the selected frequency. The sensor was towed in a bird 13.7 meters below the helicopter. The station used was NAA (Cutler, Maine, 24.0 kHz).

3.2.3 Magnetometer

The magnetometer was a Geometrics G-803 proton precession type. The sensitivity of the instrument was 1 gamma at a 0.5 second sample rate. The sensor was towed in a bird 13.7 meters below the helicopter.

3.2.4 Magnetic Base Station

An IFG proton precession type magnetometer was operated at the base of operations to record diurnal variations of the earth's magnetic field. The clock of the base station was synchronized with that of the airborne system.

3.2.5 Radar Altimeter

A Hoffman HRA-100 radar altimeter was used to record terrain clearance. The output from the instrument is a linear function of altitude for maximum accuracy.

3.2.6 Tracking Camera

A geocam tracking camera was used to record flight path on 35 mm film. The camera was operated in strip mode and the fiducial numbers for cross-reference to the analog and digital data were imprinted on the margin of the film.

3.2.7 Analog Recorder

An RMS dot-matrix recorder was used to display the data during the survey. In addition to manual and time fiducials, the following data was recorded:

<u>Channel</u>	<u>Input</u>	<u>Scale</u>
00	Altimeter (500 ft at top of chart)	10 ft/mm
04	high freq. quadrature	2 ppm/mm
03	high freq. in-phase	2 ppm/mm
06	mid freq. quadrature	4 ppm/mm
05	mid freq. in-phase	4 ppm/mm
02	low freq. quadrature	2 ppm/mm
01	low freq. in-phase	2 ppm/mm
15	magnetometer	25 gamma/mm
14	magnetometer	2.5 gamma/mm
07	VLF-EM Total Field	2.5%/mm
08	VLF-EM Quadrature	2.5%/mm

3.2.8 Digital Recorder

A Perle DAC/NAV data system recorded the survey data on magnetic tape. Information recorded was as follows:

<u>Equipment</u>	<u>Interval</u>
EM	0.1 second
VLF-EM	0.5 second
magnetometer	0.5 second
altimeter	1.0 second
fiducial (time)	1.0 second
fiducial (manual)	0.2 second
MRS III	0.2 second

3.2.9 Radar Positioning System

A Motorola Mini-Ranger (MRS III) radar navigation system was utilized for both navigation and track recovery. Transponders located at fixed known locations were interrogated several times per second and the ranges from these points to the helicopter measured to several meter accuracy. A navigational computer triangulates the position of the helicopter and provides the pilot with navigation information. The range/range data was recorded on magnetic tape for subsequent flight path determination.

4. DATA PRESENTATION

4.1 Base Map and Flight Path Recovery

The base map is a photomosaic at a scale of 1:10,000.

The flight path was derived from the Mini Ranger radar positioning system. The distance from the helicopter to two established reference locations was measured several times per second, and the position of the helicopter mathematically calculated by triangulation. It is estimated that the flight path is generally accurate to about 10 meters with respect to the topographic detail of the base map. The flight path is presented with fiducials for cross-reference to both the analog and digital data.

4.2 Electromagnetic Profile Maps

The electromagnetic data was recorded digitally at a sample rate of 10/second with a time constant of 0.1 second. A two stage digital filtering process was carried out to reject major spheric events, and to reduce system noise. The process is outlined below.

Local atmospheric activity can produce sharp, large amplitude events that cannot be removed by conventional filtering procedures. Smoothing or stacking will reduce their amplitude but leave a broader residual response that can be confused with a geological phenomenon. To avoid this possibility, a computer algorithm searches out and rejects the major spheric events.

The signal to noise ratio was further enhanced by the application of a low pass digital filter. It has zero phase shift which prevents any lag or peak displacement from occurring, and it suppresses only variations with a wavelength less than about 0.25 seconds. This low effective time constant permits maximum profile shape resolution.

Following the filtering processes, a base level correction was made. The correction applied is a

linear function of time that ensures that the corrected amplitude of the various in-phase and quadrature components is zero when no conductive or permeable source is present. The filtered and levelled data was then presented in profile map form.

The in-phase and quadrature responses of the 946 Hz coaxial configuration were presented with flight path and electromagnetic anomaly information on the base map.

The in-phase and quadrature responses of the 4575 Hz coaxial and the 4175 Hz coplanar coil configurations were presented as a two colour overlay.

4.3 Total Field Magnetic Contours

The aeromagnetic data was corrected for diurnal variations by subtraction of the digitally recorded base station magnetic profile. No correction for regional variation was applied.

The corrected profile data was interpolated onto a regular grid at a 25 m true scale interval using a cubic spline technique. The grid provided the basis for threading the presented contours at a 10 gamma interval.

The aeromagnetic data was presented with electromagnetic anomaly information on the base map.

4.4 VLF-EM Total Field Contours

The VLF-EM signal, from NAA (Cutler, Maine), was compiled in map form. The mean response level of the total field signal was removed and the data was gridded and contoured at an interval of 2%.

The VLF-EM data was presented with electromagnetic anomaly information on the base map.

5. INTERPRETATION

The Ontario Department of Mines, Geological Map # 2116 indicates the survey area to be largely covered by basic to intermediate volcanic rocks with some acid volcanic rocks noted, particularly in the northeast. Archean acid igneous rocks border the survey area to the north and west. A zone of metasedimentary rock extends in an east-west direction through the southern map sheet then continues in a NW/SE direction through the central sheet; a second more irregular unit occurs on the northern sheet. Several faults have been mapped in the area and strike in a NNW/SSE direction.

Aeromagnetics

The aeromagnetic contour map reflects the general geology as mapped but adds considerable detail. The intense magnetic activity along the southwestern margin of the survey area is the typical expression of basic volcanic rocks. Parallel to and in contact with this unit is a zone of low magnetization, typical of metasedimentary rocks. This zone of metasedimentary rocks extends through the central sheet into the southern sheet where

it offsets to the north at a mapped fault. Other areas of metasedimentary rocks are suggested at the extreme SE corner of the project, the NE corner of the central sheet and the NE corner of the northern sheet.

In the NW corner of the northern sheet a sharp change in magnetic pattern is noted along an ENE/WSW trending contact. This is likely the edge of the acid igneous complex.

Scattered throughout the central part of the survey area are isolated, sometimes elongated magnetic anomalies. The stronger anomalies of several hundred or more gammas amplitude likely reflect basic volcanic rock. In some cases, the very intense features may be indicative of iron formation.

Also noted in the central region are numerous dykes striking in a N to NNW direction as well as in a NE direction. The amplitude of the associated magnetic anomalies ranges from tens to hundreds of gammas and may reflect differences in composition as well as thickness.

Other weaker, 20 to 50 gamma, anomalies are noted throughout the central area. These anomalies form a low amplitude, often irregular background and probably reflect acid volcanic rocks. As noted previously the

metasedimentary rocks are also of low magnetization and a clear differentiation between the two units is difficult to make qualitatively. The magnetic lows in the central area may reflect sedimentary rocks or simply a transition to lower magnetization in acid volcanic rocks.

Electromagnetics

The HEM profile data was analysed and those responses interpreted to be of bedrock as opposed to surficial origin were identified. Many of the conductors are of low conductance, less than 2 mhos, and typical of electrolytic conduction in faults or shears or possible minor disseminated mineralization. As a result their response characteristics are most clearly noted on the higher frequency coil pairs.

The survey area is geologically favorable for both gold and base metal mineralization. Higher conductance responses of say 8 mhos or greater are an indication of electronic conduction due to significant sulphide or graphite mineralization and therefore warrant added consideration as base metal targets. This is not the case for gold mineralization where minor disseminated

accessory mineralization may provide the only indirect indication of a favorable zone.

The emphasis in the electromagnetic interpretation was therefore directed at the identification of potential bedrock conductors without emphasis on conductance.

Although a formal magnetic interpretation is beyond the scope of this report the conductors have been grouped on the basis of their geologic association as inferred from the magnetic data. The general categorization is as follows:

1. Conductors within a low featureless magnetic zone, interpreted to be indicative of metasedimentary rocks.
2. Conductors within a zone of low magnetic relief, interpreted to be indicative of acid to intermediate volcanic rocks.
3. Conductors within an area of strong magnetic relief, interpreted to be indicative of intermediate to basic volcanic rocks.
4. Conductor interpreted to be on a contact between volcanic and sedimentary rocks.

5. Conductor interpreted to be on a contact between different volcanic rocks.

As noted previously in the discussion of the magnetic data the distinction between metasedimentary and acid volcanic rocks is the least reliable and hence categories 1 and 2 as well as 4 and 5 may often be interchanged.

VLF-EM

The VLF-EM system is sensitive to lower conductance anomalies than the HEM system. It may map more clearly a weak conductor along a fault or shear but at the same time be more responsive to conductive overburden and lake bottom sediments.

The VLF contour maps were reviewed and conductive axes, not identified by the HEM system and interpreted to be of probable bedrock as opposed to surficial origin, have been indicated.

6. RECOMMENDATIONS

The general survey area is favorable for both gold and base metal mineralization. The airborne geophysical survey has identified numerous conductors within both meta-sedimentary and volcanic rocks that may indirectly indicate zones favorable to gold mineralization. Several conductors of higher conductance may also warrant investigation as potential base metal prospects.

Relative priorities for ground follow up investigation should be assigned by those most familiar with the detailed geology of the area.

Respectfully submitted,

AERODAT LIMITED



R. L. Scott Hogg,



RLSH/cb
Encl.

APPENDIX 1

GENERAL INTERPRETIVE CONSIDERATIONS

APPENDIX I

GENERAL INTERPRETIVE CONSIDERATIONS

Electromagnetic

The Aerodat 3 frequency system utilizes 2 different transmitter-receiver coil geometries. The traditional coaxial coil configuration is operated at 2 widely separated frequencies and the horizontal coplanar coil pair is operated at a frequency approximately aligned with one of the coaxial frequencies.

The electromagnetic response measured by the helicopter system is a function of the "electrical" and "geometrical" properties of the conductor. The "electrical" property of a conductor is determined largely by its conductivity and its size and shape; the "geometrical" property of the response is largely a function of the conductors shape and orientation with respect to the measuring transmitter and receiver.

Electrical Considerations

For a given conductive body the measure of its conductivity or conductance is closely related to the measured phase shift between the received and transmitted electromagnetic field. A small phase shift indicates a relatively high conductance, a large phase shift lower conductance. A small phase shift results in a large in-phase to quadrature

ratio and a large phase shift a low ratio. This relationship is shown quantitatively for a vertical half-plane model on the accompanying phasor diagram. Other physical models will show the same trend but different quantitative relationships.

The phasor diagram for the vertical half-plane model, as presented, is for the coaxial coil configuration with the amplitudes in ppm as measured at the response peak over the conductor. To assist the interpretation of the survey results the computer is used to identify the apparent conductance and depth at selected anomalies. The results of this calculation are presented in table form in Appendix II and the conductance and in-phase amplitude are presented in symbolized form on the map presentation.

The conductance and depth values as presented are correct only as far as the model approximates the real geological situation. The actual geological source may be of limited length, have significant dip, its conductivity and thickness may vary with depth and/or strike and adjacent bodies and overburden may have modified the response. In general the conductance estimate is less affected by these limitations than is the depth estimate, but both should be considered as relative rather than absolute guides to the anomaly's properties.

Conductance in mhos is the reciprocal of resistance in ohms and in the case of narrow slab-like bodies is the product of electrical conductivity and thickness.

Most overburden will have an indicated conductance of less than 2 mhos; however, more conductive clays may have an apparent conductance of say 2 to 4 mhos. Also in the low conductance range will be electrolytic conductors in faults and shears.

The higher ranges of conductance, greater than 4 mhos, indicate that a significant fraction of the electrical conduction is electronic rather than electrolytic in nature. Materials that conduct electronically are limited to certain metallic sulphides and to graphite. High conductance anomalies, roughly 10 mhos or greater, are generally limited to sulphide or graphite bearing rocks.

Sulphide minerals with the exception of sphalerite, cinnabar and stibnite are good conductors; however, they may occur in a disseminated manner that inhibits electrical conduction through the rock mass. In this case the apparent conductance can seriously underrate the quality of the conductor in geological terms. In a similar sense the relatively non-conducting sulphide minerals noted above may be present in significant concentration in association with minor conductive

sulphides, and the electromagnetic response only relate to the minor associated mineralization. Indicated conductance is also of little direct significance for the identification of gold mineralization. Although gold is highly conductive it would not be expected to exist in sufficient quantity to create a recognizable anomaly, but minor accessory sulphide mineralization could provide a useful indirect indication.

In summary, the estimated conductance of a conductor can provide a relatively positive identification of significant sulphide or graphite mineralization; however, a moderate to low conductance value does not rule out the possibility of significant economic mineralization.

Geometrical Considerations

Geometrical information about the geologic conductor can often be interpreted from the profile shape of the anomaly. The change in shape is primarily related to the change in inductive coupling among the transmitter, the target, and the receiver.

In the case of a thin, steeply dipping, sheet-like conductor, the coaxial coil pair will yield a near symmetric peak over the conductor. On the other hand the coplanar coil pair will pass through a null couple relationship and yield a minimum over the conductor, flanked by positive side lobes. As the dip of the conductor decreases from vertical, the coaxial

anomaly shape changes only slightly, but in the case of the coplanar coil pair the side lobe on the down dip side strengthens relative to that on the up dip side.

As the thickness of the conductor increases, induced current flow across the thickness of the conductor becomes relatively significant and complete null coupling with the coplanar coils is no longer possible. As a result, the apparent minimum of the coplanar response over the conductor diminishes with increasing thickness, and in the limiting case of a fully 3 dimensional body or a horizontal layer or half-space, the minimum disappears completely.

A horizontal conducting layer such as overburden will produce a response in the coaxial and coplanar coils that is a function of altitude (and conductivity if not uniform). The profile shape will be similar in both coil configurations with an amplitude ratio (coplanar/coaxial) of about 4/1*.

In the case of a spherical conductor, the induced currents are confined to the volume of the sphere, but not relatively restricted to any arbitrary plane as in the case of a sheet-like form. The response of the coplanar coil pair directly over the sphere may be up to 8* times greater than that of the coaxial coil pair.

In summary, a steeply dipping, sheet-like conductor will display a decrease in the coplanar response coincident with the peak of the coaxial response. The relative strength of this coplanar null is related inversely to the thickness of the conductor; a pronounced null indicates a relatively thin conductor. The dip of such a conductor can be inferred from the relative amplitudes of the side-lobes.

Massive conductors that could be approximated by a conducting sphere will display a simple single peak profile form on both coaxial and coplanar coils, with a ratio between the coplanar to coaxial response amplitudes as high as 8.*

Overburden anomalies often produce broad poorly defined anomaly profiles. In most cases the response of the coplanar coils closely follows that of the coaxial coils with a relative amplitude ratio of 4.*

Occasionally if the edge of an overburden zone is sharply defined with some significant depth extent, an edge effect will occur in the coaxial coils. In the case of a horizontal conductive ring or ribbon, the coaxial response will consist of two peaks, one over each edge; whereas the coplanar coil will yield a single peak.

*It should be noted at this point that Aerodat's definition of the measured ppm unit is related to the primary field sensed in the receiving coil without normalization to the maximum coupled (coaxial configuration). If such normalization were applied to the Aerodat units, the amplitude of the coplanar coil pair would be halved.

Magnetics

The Total Field Magnetic Map shows contours of the total magnetic field, uncorrected for regional variation. Whether an EM anomaly with a magnetic correlation is more likely to be caused by a sulphide deposit than one without depends on the type of mineralization. An apparent coincidence between an EM and a magnetic anomaly may be caused by a conductor which is also magnetic, or by a conductor which lies in close proximity to a magnetic body. The majority of conductors which are also magnetic are sulphides containing pyrrhotite and/or magnetite. Conductive and magnetic bodies in close association can be, and often are, graphite and magnetite. It is often very difficult to distinguish between these cases. If the conductor is also magnetic, it will usually produce an EM anomaly whose general pattern resembles that of the magnetics. Depending on the magnetic permeability of the conducting body, the amplitude of the inphase EM anomaly will be weakened, and if the conductivity is also weak, the inphase EM anomaly may even be reversed in sign.

VLF Electromagnetics

The VLF-EM method employs the radiation from powerful military radio transmitters as the primary signals. The magnetic field associated with the primary field is elliptically polarized in the vicinity of electrical conductors. The Herz Totem uses three coils in the X, Y, Z configuration to measure the total field and vertical quadrature component of the polarization ellipse.

The relatively high frequency of VLF 15-25 kHz provides high response factors for bodies of low conductance. Relatively "disconnected" sulphide ores have been found to produce measurable VLF signals. For the same reason, poor conductors such as sheared contacts, breccia zones, narrow faults, alteration zones and porous flow tops normally produce VLF anomalies. The method can therefore be used effectively for geological mapping. The only relative disadvantage of the method lies in its sensitivity to conductive overburden. In conductive ground the depth of exploration is severely limited.

The effect of strike direction is important in the sense of the relation of the conductor axis relative to the energizing electromagnetic field. A conductor aligned along a radius drawn from a transmitting station will be

in a maximum coupled orientation and thereby produce a stronger response than a similar conductor at a different strike angle. Theoretically it would be possible for a conductor, oriented tangentially to the transmitter to produce no signal. The most obvious effect of the strike angle consideration is that conductors favourably oriented with respect to the transmitter location and also near perpendicular to the flight direction are most clearly rendered and usually dominate the map presentation.

The total field response is an indicator of the existence and position of a conductivity anomaly. The response will be a maximum over the conductor, without any special filtering, and strongly favour the upper edge of the conductor even in the case of a relatively shallow dip.

The vertical quadrature component over steeply dipping sheet like conductor will be a cross-over type response with the cross-over closely associated with the upper edge of the conductor.

The response is a cross-over type due to the fact that it is the vertical rather than total field quadrature component that is measured. The response shape is due largely to geometrical rather than conductivity considerations and the distance between the maximum and minimum on either side of the cross-over is related to target depth. For a given target geometry, the larger this distance the greater the

depth.

The amplitude of the quadrature response, as opposed to shape is function of target conductance and depth as well as the conductivity of the overburden and host rock. As the primary field travels down to the conductor through conductive material it is both attenuated and phase shifted in a negative sense. The secondary field produced by this altered field at the target also has an associated phase shift. This phase shift is positive and is larger for relatively poor conductors. This secondary field is attenuated and phase shifted in a negative sense during return travel to the surface. The net effect of these 3 phase shifts determine the phase of the secondary field sensed at the receiver.

A relatively poor conductor in resistive ground will yield a net positive phase shift. A relatively good conductor in more conductive ground will yield a net negative phase shift. A combination is possible whereby the net phase shift is zero and the response is purely in-phase with no quadrature component.

A net positive phase shift combined with the geometrical cross-over shape will lead to a positive quadrature response on the side of approach and a negative on the side of departure. A net negative phase shift would produce the reverse. A further sign reversal occurs with a 180 degree

change in instrument orientation as occurs on reciprocal line headings. During digital processing of the quadrature data for map presentation this is corrected for by normalizing the sign to one of the flight line headings.

LIST OF CLAIMS - HALCROW TOWNSHIP

P 783454	P 783486	P 783518	P 783168
783455	783487	783519	749992
783456	783488	783520	749991
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783481	783513	783208	
783482	783514	783209	
783483	783515	783165	
783484	783516	783166	
783485	783517	783167	

Helrose Resources Ltd.

189 PRESTON STREET - TIMMINS, ONTARIO - P4N 3N4
PHONE (705) 287-7971



December 13, 1984

Mr. F. W. Matthews
Ontario Ministry of Natural Resources
W1617, Whitney Block
Queen's Park
Toronto, Ontario
M7A 1W3

Re: Airborne Survey - Swayze - Halcrow
Claims P783454 et al

Dear Sir:

Enclosed are duplicate copies of a Report on Combined Helicopter Borne Magnetic, Electromagnetic and VLF Survey carried out in the Swayze Area.

Yours truly,

Peter G. Hunkin
President

/ch

Enclosures

RECEIVED

DEC 14 1984

MINING LANDS SECTION

Mining Lands Section

File No 2.7567

Control Sheet

TYPE OF SURVEY

GEOPHYSICAL

GEOLOGICAL

GEOCHEMICAL

EXPENDITURE

MINING LANDS COMMENTS:

L.D. • lga.

J. Hurst
Signature of Assessor

84-12-18
Date

Crockett Twp. - M.740

THE TOWNSHIP OF
OF
HALCROW

DISTRICT OF
SUDBURY

PORCUPINE
MINING DIVISION

SCALE: 1-INCH 40 CHAINS

LEGEND

- PATENTED LAND ⊙
- CROWN LAND SALE ⊙
- LEASES ⊙
- LOCATED LAND ⊙
- LICENSE OF OCCUPATION L.O.
- MINING RIGHTS ONLY M.R.O.
- SURFACE RIGHTS ONLY S.R.O.
- ROADS —
- IMPROVED ROADS —
- KING'S HIGHWAYS —
- RAILWAYS —
- POWER LINES —
- MARSH OR MUSKEG —
- MINES ⊙
- CANCELLED ⊙

NOTES

400' Surface Rights Reservation around all lakes and rivers.

DEC 17 1984
SECTION

PLAN NO. **M.906**

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

Lackner Twp. - M.975

Denyes Twp. - M.758

Tooms Twp. - M.1159



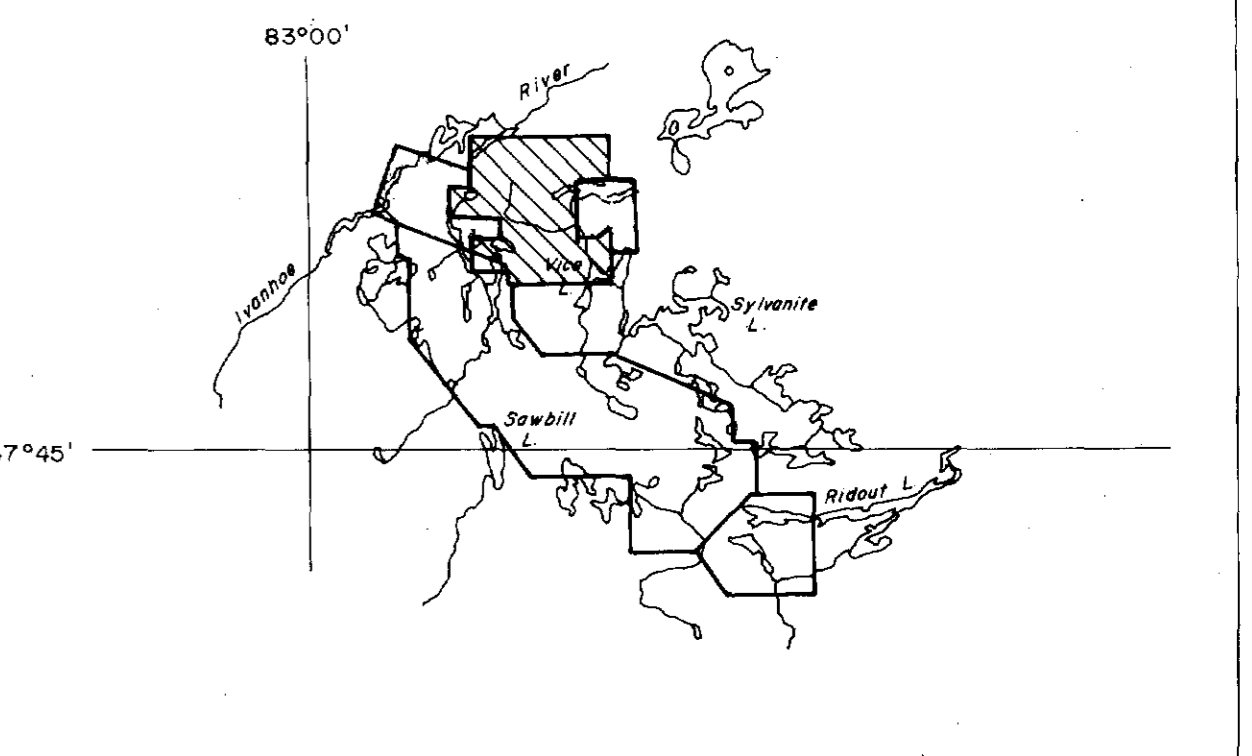
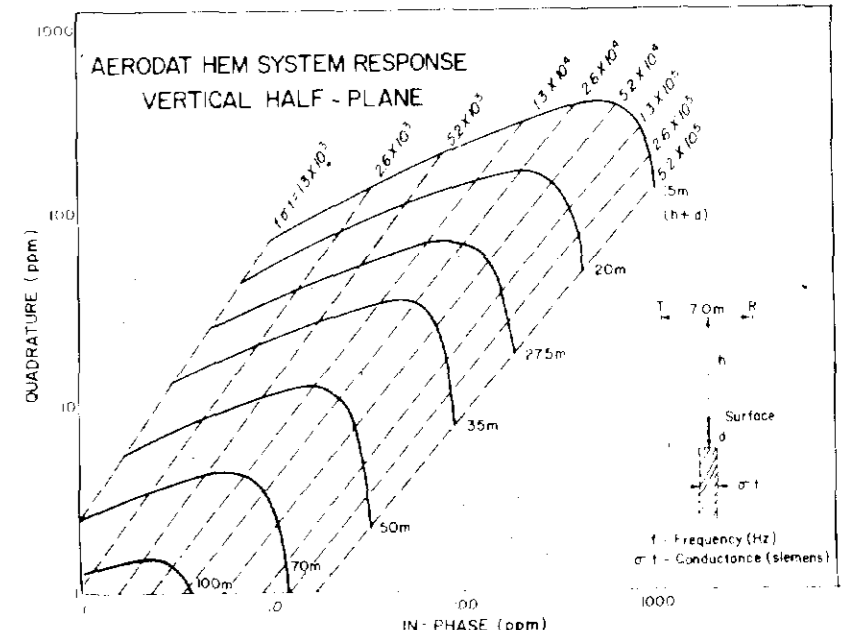


○ MRS III control point
 ○ 3 MRS III control point
 — VLF-EM conductor axis
 ~~~~~ Interpreted Fault

Horizontal control ..... MRS III  
 Average bird height ..... 30 metres  
 Line spacing ..... 100 metres

**EM RESPONSE**

- Conductivity thickness in mhos
- ⊙ > 500
  - ⊙ 250 - 500
  - ⊙ 125 - 250
  - ⊙ 60 - 125
  - ⊙ 30 - 60
  - ⊙ 15 - 30
  - ⊙ 8 - 15
  - ⊙ 4 - 8
  - ⊙ 2 - 4
  - ⊙ < 2
- Calculation based on 457.5 Hz coaxial



**MELROSE RESOURCES LIMITED**

**AIRBORNE ELECTROMAGNETIC SURVEY  
INTERPRETATION MAP**

SWAYZE AREA  
ONTARIO

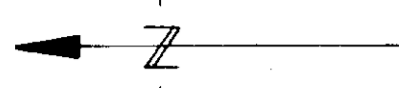
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0 100 200 500 1 Kilometre

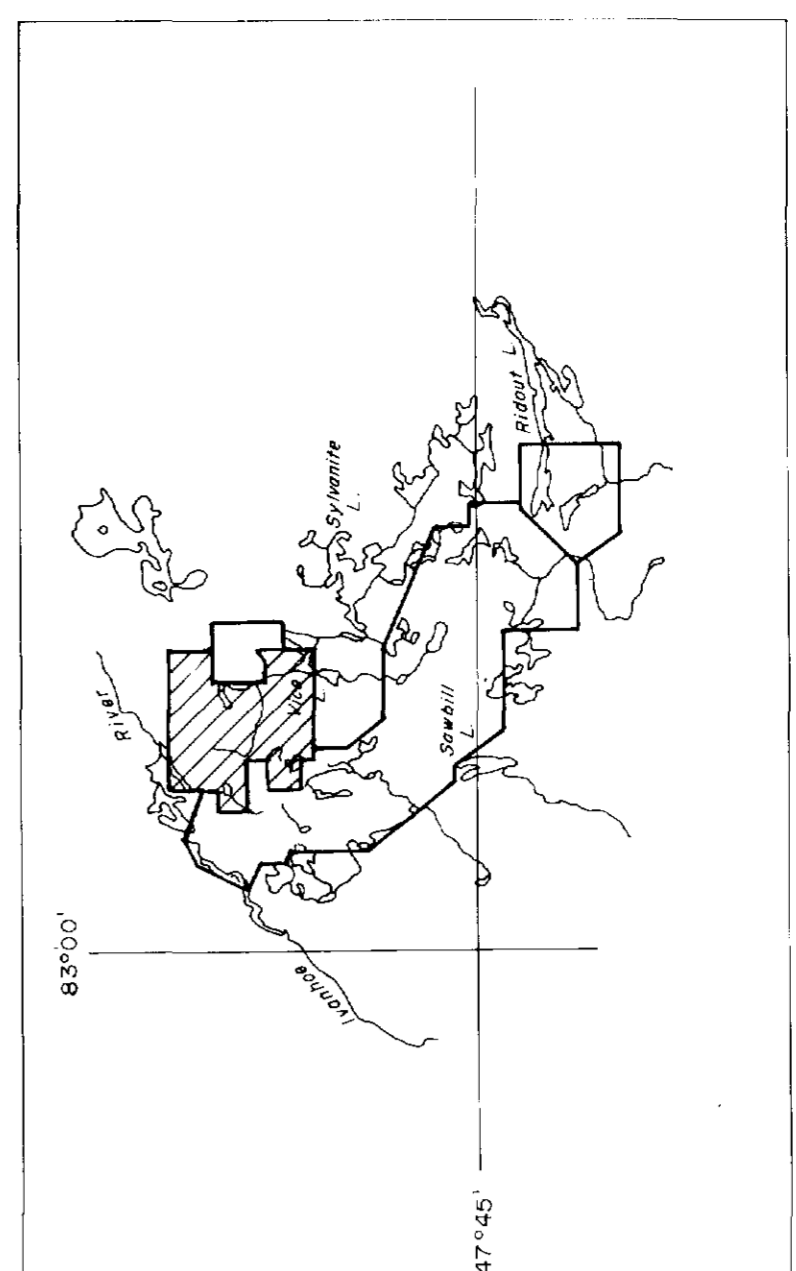
|                        |                         |
|------------------------|-------------------------|
| <b>AERODAT LIMITED</b> | DATE: March, April 1984 |
|                        | N.T.S. No.: 410         |
|                        | MAP No.:                |







LEGEND  
250 gamma  
50 gamma  
10 gamma

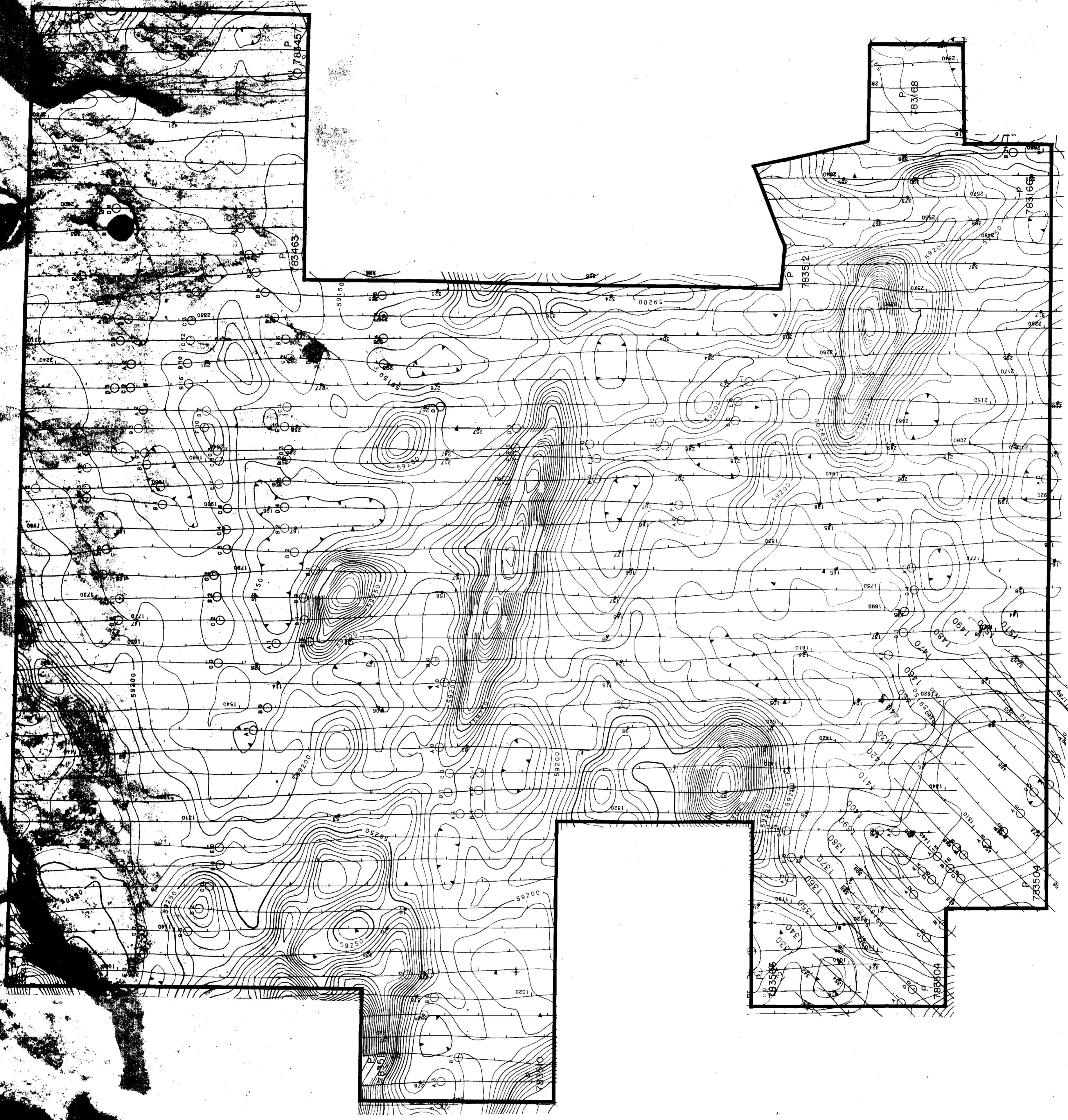


MELROSE RESOURCES LIMITED  
PROJECT 5422  
**TOTAL FIELD MAGNETIC MAP**  
SWAYZE AREA  
ONTARIO

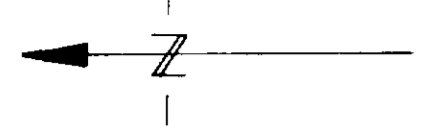
SCALE 1/10,000  
0 200 400 600 800 1000  
1/2 mile  
1 kilometre

DATE: March, April 1984  
N.T.S. No: 410  
MAP No: 3

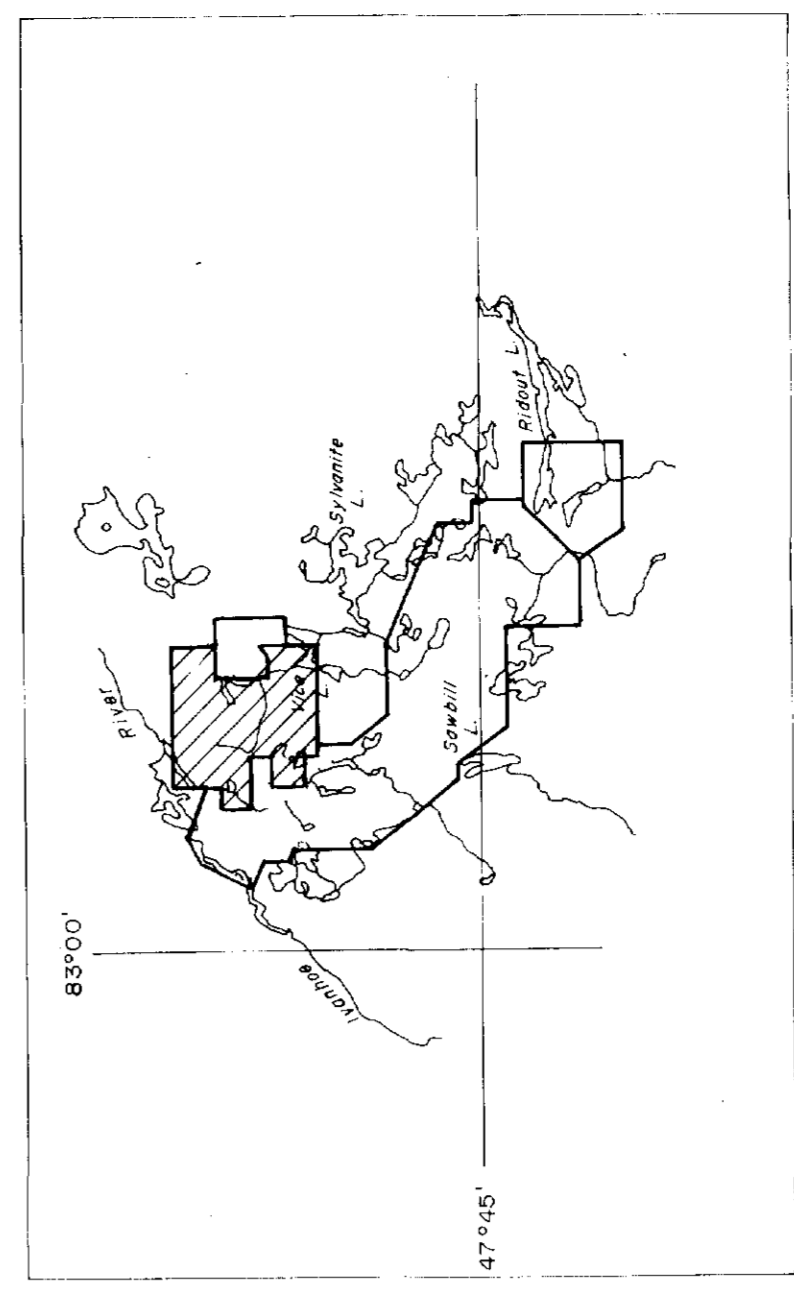
**AERODAT LIMITED**







LEGEND  
50 %  
10 %  
2 %



MELROSE RESOURCES LIMITED  
PROJECT 5422  
VLF-EM TOTAL FIELD CONTOURS  
SWAYZE AREA  
ONTARIO

SCALE 1:10,000  
0 100 200 300  
0 100 200 300  
Kilometers  
Miles

DATE: March, April 1984  
N.T.S. No: 410  
MAP No: 4

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