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REPORT ON
COMBINED HELICOPTER-BORNE MAGNETIC, VLF-EM AND ELECTROMAGNETIC SURVEY
KIRKLAND LAKE AREA
ONTARIO

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for

LENORA EXPLORATION LIMITED

by

AERODAT LIMITED

FEBRUARY 1983

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		Page No.
1.	INTRODUCTION	1 - 1
2.	SURVEY AREA	2 - 1
3.	AIRCRAFT EQUIPMENT AND PERSONNEL	3 - 1
3.1	Aircraft	3 - 1
3.2	Equipment	3 - 1
3.2.1	Electromagnetic System	3 - 1
3.2.2	Magnetometer	3 - 1
3.2.3	VLF-EM	3 - 2
3.2.4	Magnetic Base Station	3 - 2
3.2.5	Radar Altimeter	3 - 2
3.2.6	Tracking Camera	3 - 3
3.2.7	Analog Recorder	3 - 3
3.2.8	Digital Recorder	3 - 4
3.2.9	Radar Positioning System	3 - 4
3.3	Personnel	3 - 5
4.	DATA PRESENTATION	4 - 1
4.1	Base Map and Flight Path	4 - 1
4.2	Electromagnetic	4 - 2
4.3	Magnetics	4 - 3
4.4	VLF-EM	4 - 3
5.	INTERPRETATION	5 - 1
5.1	Electromagnetic	5 - 1
5.2	VLF-EM Electromagnetic System	5 - 8
5.3	Magnetics	5 - 11
5.4	Discussion of Results	5 - 12
6.	RECOMMENDATIONS	6 - 1
	APPENDIX - Anomaly List	

LIST OF MAPS

(Scale: 1/15,840)

Map 1	Airborne Electromagnetic Survey Interpretation Map
Map 2	Airborne Electromagnetic Survey Profiles (955 Hz. coaxial)
Map 3	Total Field Magnetic Map
Map 4	VLF-EM Total Field Contour Map (Cutler Maine)

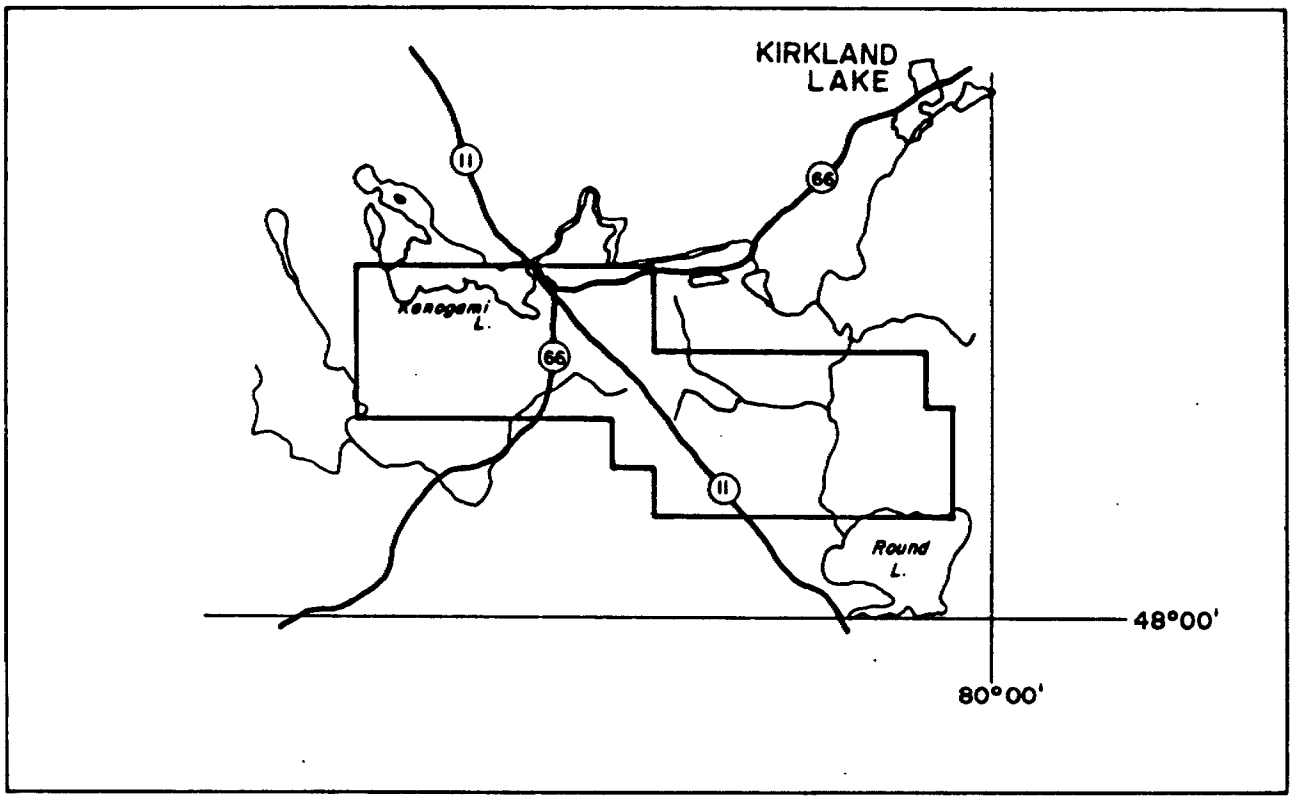
1. INTRODUCTION

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

The survey area in the vicinity of Kirkland Lake, Ontario was flown during the period of February 1 to 4, 1983. A total of 330 line miles were flown.

2. SURVEY AREA

The survey area is located in the vicinity of Kirkland Lake, Ontario as shown on the map below.



3. AIRCRAFT EQUIPMENT AND PERSONNEL

3.1 Aircraft

The helicopter used for the survey was an Aerospatial Astar 350D owned and operated by North Star Helicopters. Installation of the geophysical and ancillary equipment was carried out by Aerodat at Kirkland Lake, Ontario.

3.2 Equipment

3.2.1 Electromagnetic System

The electromagnetic system was an Aerodat/ Geonics 3 frequency system. Two vertical coaxial coil pairs were operated at 955 and 4540 Hz and a horizontal coplanar coil pair at 4130 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 Magnetometer

The magnetometer was a Geometrics G-803 proton precession type. The sensitivity of the instrument was 1 gamma at a 1 second sample

rate. The sensor was towed in a bird 15 meters below the helicopter.

3.2.3 VLF-EM System

The VLF-EM system was a Herz Totem 2A. This instrument measures the total field and vertical quadrature components of two selected frequencies. The transmitters used were located at Cutler Maine (NAA, 17.8 KHz) and Annapolis Maryland (NSS, 21.4 KHz).

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 earths magnetic field. The clock of the base station was synchronized with that of the airborne system to facilitate later correlation.

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

A 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:

Channel	Input	Scale
00	altimeter (500 ft. at top of chart)	10 ft./mm
4	mid freq. quadrature	4 ppm/mm
3	mid freq. in-phase	4 ppm/mm
6	high freq. quadrature	2 ppm/mm
5	high freq. in-phase	2 pmm/mm
2	low freq. quadrature	2 ppm/mm
1	low freq. in-phase	2 ppm/mm
15	magnetometer	5 gamma/mm
14	magnetometer	2 gamma/mm

Channel	Input	Scale
7	VLF-EM (Total Field, Cutler Maine)	2.5%/mm
8	VLF-EM quadrature	2.5%/mm
9	VLF-EM (Total Field, Annapolis Maryland)	2.5%/mm
10	VLF-EM quadrature	2.5%/mm

3.2.8 Digital Recorder

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

Equipment	Interval
EM	0.1 second
magnetometer	1.0 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 positioning system was used for navigation and final flight path recovery. Distance

from two established transponders is determined several times per second and a navigational computer triangulates this range-range data to determine UTM coordinate position.

3.3. Personnel

Personnel directly involved with the survey operation were as follows:

Pilot: Bert Simon

Equipment Operator/Technician: W. P. Boyko

Mike Blondin

4. DATA PRESENTATION

4.1 Base Map and Flight Path

A photomosaic was constructed using available aerial photography. It was used during the course of the survey for visual navigation and preliminary flight path recovery.

The recorded MRS III radar positioning data was used to derive the final flight track position, with an accuracy in the order of 10 meters. The aerial photographs from which the photomosaic was constructed contained significant scale differential and distortion which rendered the mosaic incompatible with the radar positional information. An enlargement of the published 1:50,000 topographic map, which is planimetrically compatible with the radar positions, was therefore adopted as the final base map.

In the northwest corner of the survey area, the radar positioning information was unreliable and the flight line location was based on conventional plotted points.

4.2 Electromagnetic

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

Local sferic 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 sferic events.

The signal to noise is further enhanced by the application of a low pass filter. The filter is applied digitally. It has zero phase shift which prevents any lag or peak displacement from occurring and it will suppress 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 is made. The correction applied is a linear function of time that ensures that the corrected amplitude of the various inphase and quadrature components is zero

when no conductive or permeable source is present.

The filtered and levelled in-phase and quadrature response for the low frequency coaxial coil pair is presented in profile map form.

4.3 Magnetics

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 2.5 mm interval using a cubic spline technique. The grid provided the basis for threading the presented contours.

4.4 VLF-EM

The total field VLF-EM data, for Cutler Maine (17.8 KHz) was gridded at a 2.5 mm interval and presented in contour map form.

5. INTERPRETATION

5.1 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 I 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 the depth estimate but both should be considered a relative rather than absolute guide to the anomalies 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 under rate 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 associate 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 infered 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 follow 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.

5.2 VLF-EM Electromagnetic System

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 Totem instrument uses 3 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-EM provides high response factors for bodies of low conductance. Relatively "disconnected" sulphides 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 often produce VLF anomalies. The method can therefore be used for geologic mapping. The most significant advantage of the method is in its sensitivity to conductive overburden which often produces anomalies unrelated to the underlying geology. In conductive ground and overburden areas the depth of exploration is severely limited.

Strike direction of the conductor relative to the energizing field is a significant factor. A conductor aligned along a radius drawn from the transmitter location will be maximum coupled and thereby produce a stronger response than at a lesser angle. Theoretically it would be possible for a conductor, oriented tangentially, to produce no signal. The most obvious effect of this strike angle consideration is that conductors most favourably oriented with respect to the given transmitter will be enhanced relative to similar conductors with a less favourable strike direction.

The total field response provides an indication of presence and location of a conductive anomaly. The response, without any special filtering, will show a maximum over the conductor, and will strongly favour the upper edge even in the case of a shallow dip. A single steeply dipping bedrock conductor will produce a symmetric peak. Multiple conductors, overburden or a shallow dip will produce a wider anomaly of less regular shape.

The quadrature component associated with a steeply dipping bedrock conductor is a crossover with the inflection point coincident with the associated total field peak. The amplitude and direction of the

crossover is a function of the conductivity and depth of the anomaly as well as the conductivity of its environment.

The quadrature response from a good conductor at surface in a resistive environment will be negative on the side of aircraft approach and positive on the side of departure. An increase in conductor depth or an increase in host rock or overburden conductivity can lead to a reverse of this convention. The amplitude of the crossover, negative to positive peak is an indication of the absolute amplitude of the quadrature component and if the secondary field phase shift is close to zero no quadrature response may be apparent.

5.3 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.

5.4 Discussion of Results

The magnetic map reveals several major geologic units within the survey area. A large relatively quiet magnetic zone is noted to the NW of Round Lake, and is attributed to granitic rock. Within this zone near the southern boundary of the area is a circular more intense magnetic anomaly indicative of basic volcanic intrusive.

To the north and east the large zone of intense magnetic activity reflects the surrounding basic volcanic rocks. Internally the magnetic pattern is complex with alignments of ENE/WSW and NW/SE, the most prominent. In the northwest corner of the project area there is an indication of structural alignment extending from the mouth of the river at the town of Kenogami Lake, in a WSW direction.

At the east end of the project area is a zone of moderate magnetic relief suggestive of intermediate volcanic rock. To the north the apparent contact is aligned with flight line 1190 and to the south it is in the vicinity of line 1140 and 1150. The southern boundary occurs just above Round Lake.

Numerous electromagnetic anomalies, both HEM and VLF-EM were identified by the survey. The anomalies

selected for conductance symbolization were selected on the basis of response shape attributes characteristic of steeply dipping bedrock conductors.

Where such anomalies coincided with cultural features such as roads, towns and mapped power lines, the response has been attributed to a cultural source.

The interpreted geologic conductor axes all have a low apparent conductance typical of a structural type of source; electrolytic conduction in faults and shears. Mineralization, if present, would be expected to be minor and disseminated.

Magnetic association has been indicated where the conductor axis in coincident with a magnetic anomaly or is simply aligned with a magnetic anomaly or trend.

6. RECOMMENDATIONS

Numerous conductor axes have been identified by the survey. The distinction between bedrock and overburden conductors is not always clear and it is recommended that those anomalies with magnetic association be given first follow up consideration, as those most certain to be of bedrock origin.

The anomalies are typical of those associated with electrolytic conduction in faults and shears or with minor disseminated mineralization. There is no indication of major sulphide or graphite mineralization within the survey area.

The conductive axes identified may be associated with zones favourable to gold mineralization and their relative significance and follow up priority can be best evaluated by those geologists most familiar with the mineralization of the area.

Respectfully submitted,

AERODAT LIMITED.

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March 28, 1983.

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APPENDIX

Anomaly List

FLIGHT	LINE	ANOMALY	CATEGORY	FREQUENCY INPHASE	955 QUAD.	CONDUCTOR CTP MHOS	DEPTH MTRS	BIRD HEIGHT MTRS
1	1010	A	2	15.9	18.1	4.8	14	27
1	1010	B	2	12.9	13.5	5.0	17	29
1	1010	C	2	9.4	9.8	4.4	23	29
1	1020	A	0	4.2	11.7	0.7	10	29
1	1020	B	0	1.1	5.8	0.1	20	21
1	1020	C	3	11.1	7.5	8.6	33	25
1	1020	D	3	15.2	8.4	12.7	31	23
1	1020	E	1	10.0	12.9	3.4	23	23
1	1020	F	0	4.4	8.1	1.4	26	24
1	1030	A	4	40.1	22.1	17.5	17	22
1	1030	B	0	2.9	6.3	0.9	35	17
1	1030	C	3	20.7	11.2	14.4	25	24
1	1040	A	2	5.8	5.6	4.1	31	33
1	1040	B	0	2.0	4.8	0.6	22	35
1	1040	C	0	1.7	6.0	0.3	18	28
1	1040	D	0	1.1	6.1	0.1	12	28
1	1040	E	0	2.5	6.1	0.6	28	24
1	1040	F	3	27.6	17.2	13.2	18	25
1	1050	A	3	41.3	27.9	13.5	12	24
1	1050	B	3	30.4	26.4	8.8	12	25
1	1050	C	0	2.0	4.4	0.7	22	37
1	1050	D	0	2.3	4.8	0.8	22	37
1	1050	E	2	20.8	24.2	5.2	12	25
1	1060	A	2	14.9	14.2	6.0	13	33
1	1060	B	2	24.8	33.5	4.6	10	22
1	1070	A	1	11.2	13.9	3.7	13	32
1	1070	B	0	6.8	11.9	1.9	16	28
1	1070	C	2	11.4	10.6	5.6	19	32
1	1080	A	2	9.9	10.6	4.4	23	28
1	1080	B	0	1.8	3.9	0.6	39	23
1	1080	C	0	1.7	3.6	0.6	39	25
1	1080	D	2	14.0	16.4	4.4	23	19
1	1080	E	3	16.3	12.7	8.2	29	19
1	1090	A	2	4.9	4.1	4.6	49	23
1	1090	B	3	19.1	10.0	14.7	30	21
1	1090	C	3	13.3	9.3	8.8	27	26
1	1090	D	2	3.2	2.1	5.5	57	33

Estimated depth may be unreliable because the stronger part of the conductor may be deeper or to one side of the flight line, or because of a shallow dip or overburden effects.

FLIGHT	LINE	ANOMALY	CATEGORY	FREQUENCY INPHASE	955 QUAD.	CONDUCTOR CTP MHOS	DEPTH MTRS	BIRD HEIGHT MTRS
1	1090	E	0	5.2	9.8	1.5	18	28
1	1100	A	0	2.1	3.6	1.0	43	24
1	1100	B	0	2.7	3.9	1.6	41	28
1	1100	C	3	15.6	11.0	9.2	29	21
1	1100	D	1	2.9	2.4	3.8	66	20
1	1100	E	4	26.2	13.5	16.7	28	17
1	1100	F	0	4.6	10.9	1.0	22	20
1	1110	A	0	6.1	14.5	1.1	14	24
1	1110	B	4	25.8	12.4	18.2	22	24
1	1110	C	3	13.9	9.2	9.6	28	26
1	1110	D	2	4.0	3.0	5.0	52	28
1	1110	E	1	3.5	3.1	3.7	51	28
1	1110	F	0	2.5	3.8	1.4	44	24
1	1120	A	0	2.2	4.1	0.9	46	17
1	1120	B	0	1.6	4.2	0.4	28	29
1	1120	C	0	1.9	4.1	0.7	33	28
1	1120	D	2	18.3	19.9	5.4	21	19
1	1120	E	0	1.3	3.5	0.3	39	22
1	1120	F	3	16.7	12.7	8.5	32	16
1	1130	A	2	13.0	12.0	6.0	24	25
1	1130	B	1	9.3	11.0	3.7	20	29
1	1130	C	0	2.3	3.7	1.2	41	27
1	1130	D	0	1.5	3.2	0.6	41	26
1	1130	E	1	2.1	2.3	2.1	58	28
1	1140	A	0	-0.1	3.2	0.0	0	20
1	1140	B	0	-1.0	3.0	0.0	0	21
1	1140	C	0	-1.8	2.3	0.0	0	21
1	1140	D	0	2.6	9.3	0.3	19	21
1	1140	E	1	9.0	13.4	2.7	19	24
1	1140	F	1	13.1	25.7	2.1	11	22
1	1150	A	0	1.9	8.9	0.2	5	32
1	1150	B	0	2.9	4.2	1.6	41	26
1	1150	C	0	1.5	7.7	0.1	15	23
1	1150	D	0	1.3	5.2	0.2	24	23
1	1150	E	0	-0.3	2.5	0.0	0	20
1	1150	F	0	0.6	3.9	0.0	22	22
1	1150	G	0	0.5	3.9	0.0	19	23
1	1160	A	0	-0.9	2.6	0.0	0	21

Estimated depth may be unreliable because the stronger part of the conductor may be deeper or to one side of the flight line, or because of a shallow dip or overburden effects.

FLIGHT	LINE	ANOMALY	CATEGORY	FREQUENCY INPHASE	955 QUAD.	CONDUCTOR CTP MHOS	DEPTH MTRS	BIRD HEIGHT MTRS
1	1160	B	0	-1.2	4.0	0.0	0	19
1	1160	C	0	-0.5	3.2	0.0	0	19
1	1160	D	0	-0.8	2.9	0.0	0	21
1	1160	E	0	-0.2	4.0	0.0	0	20
1	1160	F	0	-0.6	3.7	0.0	0	17
1	1160	G	0	-0.1	3.4	0.0	0	13
1	1160	H	0	1.9	5.7	0.4	32	17
1	1160	J	1	7.9	9.0	3.7	26	27
1	1170	A	2	9.8	6.8	7.9	31	29
1	1170	B	0	-0.2	3.1	0.0	0	35
1	1180	A	0	-2.1	4.3	0.0	0	22
1	1180	B	0	-1.4	5.0	0.0	0	23
1	1180	C	0	0.2	3.9	0.0	8	23
1	1180	D	2	9.7	10.1	4.5	27	25
1	1180	E	0	1.3	6.0	0.1	12	30
1	1190	A	1	12.1	22.7	2.2	5	30
1	1190	B	0	1.7	3.5	0.7	34	31
1	1190	C	0	1.2	3.0	0.4	38	28
1	1190	D	0	0.9	4.9	0.0	12	32
1	1190	E	0	0.7	4.5	0.0	15	27
1	1200	A	0	1.9	9.6	0.1	6	29
1	1200	B	0	0.4	6.4	0.0	0	28
1	1200	C	0	3.6	18.6	0.2	5	22
1	1200	D	0	12.4	31.3	1.5	5	23
1	1210	A	0	7.9	15.1	1.8	13	27
1	1210	B	0	2.8	13.3	0.2	8	23
1	1210	C	0	2.8	13.1	0.2	8	24
1	1210	D	0	1.7	14.4	0.0	6	19
1	1210	E	0	0.6	3.5	0.0	24	24
1	1210	F	0	0.7	4.1	0.0	19	26
1	1220	A	0	0.1	13.5	0.0	0	23
1	1220	B	0	0.5	15.0	0.0	1	15
1	1220	C	0	1.6	7.2	0.1	19	21
1	1220	D	0	1.5	9.9	0.0	16	15
1	1220	E	0	2.2	14.3	0.1	10	18
1	1220	F	0	1.8	14.0	0.0	11	16
1	1220	G	1	13.0	20.3	2.9	17	20
1	1230	A	0	10.3	22.5	1.6	10	23

Estimated depth may be unreliable because the stronger part of the conductor may be deeper or to one side of the flight line, or because of a shallow dip or overburden effects.

FLIGHT	LINE	ANOMALY	CATEGORY	FREQUENCY INPHASE	955 QUAD.	CONDUCTOR CTP MHOS	DEPTH MTRS	BIRD HEIGHT MTRS
1	1230	B	0	3.1	9.7	0.5	21	19
1	1230	C	0	2.6	5.5	0.8	37	18
1	1230	D	0	1.6	4.2	0.4	32	26
1	1230	E	0	2.7	5.1	1.0	34	25
1	1230	F	0	2.3	4.7	0.8	36	23
1	1230	G	0	2.0	9.1	0.2	11	26
1	1230	H	0	2.4	8.5	0.3	16	24
1	1240	A	1	5.1	6.6	2.5	31	27
1	1240	B	0	8.2	15.7	1.8	13	26
1	1250	A	1	6.8	8.7	2.9	24	29
1	1250	B	0	2.3	5.2	0.7	26	30
1	1250	C	0	2.1	5.0	0.6	26	30
1	1250	D	0	2.4	4.6	0.9	31	29
1	1260	A	0	0.1	10.4	0.0	0	22
1	1260	B	0	0.7	6.0	0.0	14	20
1	1260	C	0	0.5	6.5	0.0	5	24
1	1260	D	0	2.3	9.1	0.3	12	27
1	1270	A	0	0.7	5.1	0.0	15	23
1	1270	B	0	2.0	8.4	0.2	8	31
1	1280	A	0	2.0	10.3	0.1	7	27
1	1280	B	0	1.8	10.7	0.1	8	24
1	1280	C	0	-0.3	7.1	0.0	0	20
1	1290	A	0	1.5	2.5	0.9	52	26
1	1290	B	0	1.2	1.8	0.9	63	26
1	1290	C	0	0.3	0.2	1.7	182	22
1	1290	D	0	1.5	4.0	0.4	31	27
1	1290	E	0	2.4	5.0	0.8	30	27
1	1300	A	0	1.8	19.8	0.0	1	20
1	1300	B	2	8.4	6.9	5.9	37	23
1	1310	A	0	2.3	12.6	0.1	12	19
1	1310	B	0	1.9	6.2	0.3	30	17
1	1310	C	2	9.4	9.2	4.8	29	25
1	1320	A	1	9.4	13.0	3.0	20	25
1	1320	B	0	2.5	11.0	0.2	15	20
1	1320	C	0	1.6	6.8	0.2	22	19
1	1330	A	0	1.9	6.8	0.3	22	22

Estimated depth may be unreliable because the stronger part of the conductor may be deeper or to one side of the flight line, or because of a shallow dip or overburden effects.

FLIGHT	LINE	ANOMALY	CATEGORY	FREQUENCY INPHASE	955 QUAD.	CONDUCTOR CTP MHOS	DEPTH MTRS	BIRD HEIGHT MTRS
1	1330	B	0	1.9	5.4	0.4	25	26
1	1330	C	0	1.6	6.8	0.2	19	23
1	1330	D	0	7.1	17.0	1.2	12	24
1	1330	E	0	1.6	7.1	0.2	18	23
1	1340	A	0	3.6	6.2	1.4	26	30
1	1340	B	0	1.4	7.4	0.1	19	19
1	1340	C	0	1.4	7.3	0.1	12	26
1	1340	D	0	8.0	16.7	1.6	10	28
1	1340	E	0	1.8	6.2	0.3	20	26
1	1340	F	0	2.2	8.1	0.3	17	24
2	1350	A	0	0.5	6.7	0.0	2	26
2	1350	B	0	6.3	15.5	1.1	10	27
2	1350	C	0	0.1	9.4	0.0	0	28
2	1350	D	0	3.6	8.5	0.9	14	32
2	1360	A	0	0.1	6.0	0.0	0	29
2	1360	B	0	1.7	8.6	0.1	6	31
2	1370	A	0	-1.0	6.9	0.0	0	24
2	1390	A	0	1.7	9.0	0.1	14	21
2	1400	A	0	6.5	11.3	1.8	15	30
2	1400	B	0	1.0	7.1	0.0	5	30
2	1410	A	0	0.2	5.5	0.0	1	23
2	1410	B	0	0.3	5.1	0.0	6	23
2	1410	C	0	1.8	15.7	0.0	5	20
2	1410	D	0	1.3	17.4	0.0	0	22
2	1410	E	0	-0.1	15.4	0.0	0	17
2	1410	F	0	5.7	13.4	1.1	14	25
2	1420	A	0	-0.2	6.7	0.0	0	23
2	1420	B	0	0.6	5.9	0.0	10	23
2	1430	A	0	0.3	11.9	0.0	0	21
2	1430	B	0	-0.1	8.1	0.0	0	24
2	1430	C	0	-0.7	6.0	0.0	0	25
2	1440	A	1	6.0	7.7	2.7	28	27
2	1450	A	0	1.1	9.6	0.0	9	20
2	1450	B	0	1.6	9.7	0.1	6	27

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FLIGHT	LINE	ANOMALY	CATEGORY	FREQUENCY INPHASE	955 QUAD.	CONDUCTOR CTP MHOS	DEPTH MTRS	BIRD HEIGHT MTRS
2	1450	C	0	1.0	12.1	0.0	0	24
2	1450	D	0	1.6	7.8	0.1	15	23
2	1460	A	2	10.0	10.8	4.3	20	31
2	1460	B	0	5.1	10.8	1.2	20	24
2	1460	C	0	0.5	9.1	0.0	0	23
2	1460	D	0	0.8	7.8	0.0	10	20
2	1460	E	0	1.5	8.3	0.1	13	23
2	1460	F	0	5.1	13.4	0.9	2	36
2	1470	A	0	0.7	8.1	0.0	9	19
2	1470	B	1	12.3	23.4	2.2	12	22
2	1470	C	0	1.0	7.9	0.0	0	32
2	1470	D	2	12.6	14.9	4.2	23	21
2	1480	A	1	6.8	9.4	2.6	10	40
2	1480	B	0	4.4	8.1	1.4	16	34
2	1480	C	0	8.0	18.3	1.4	6	30
2	1500	A	1	4.9	7.0	2.1	35	21
2	1510	A	0	6.5	11.7	1.7	22	22
2	1530	A	1	9.3	13.1	2.9	20	25
2	1540	A	0	5.5	9.2	1.8	18	31
2	1550	A	0	2.2	7.6	0.3	17	26
2	1570	A	1	10.9	18.4	2.4	12	26
2	1570	B	0	6.2	11.6	1.6	16	27
2	1580	A	1	7.3	9.8	2.8	12	38
2	1580	B	1	8.0	13.9	2.0	5	37
2	1590	A	0	2.4	3.7	1.3	45	23
2	1590	B	0	2.2	3.6	1.1	47	21
2	1590	C	0	3.3	7.4	0.9	21	28
2	1590	D	0	3.2	8.6	0.6	15	29
2	1590	E	0	2.9	5.2	1.2	22	37
2	1590	F	0	2.4	4.8	0.9	23	36
2	1600	A	0	3.8	7.3	1.2	17	35
2	1600	B	0	2.0	5.5	0.5	18	33
2	1600	C	1	7.6	8.8	3.5	12	41

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FLIGHT	LINE	ANOMALY	CATEGORY	FREQUENCY INPHASE	955 QUAD.	CONDUCTOR CTP MHOS	DEPTH MTRS	BIRD HEIGHT MTRS
2	1600	D	1	7.9	9.3	3.5	23	29
2	1610	A	0	2.1	6.0	0.4	23	27
2	1610	B	1	9.0	14.0	2.5	13	30
2	1610	C	0	1.4	4.4	0.3	27	27
2	1620	A	0	3.4	6.5	1.1	22	32
2	1620	B	0	2.4	5.6	0.7	27	27
2	1630	A	0	1.5	4.8	0.3	28	23
2	1640	A	0	2.3	3.7	1.2	33	35
2	1650	A	0	0.8	6.3	0.0	12	23
2	1650	B	1	5.5	6.6	2.9	35	24
2	1650	C	2	8.4	7.2	5.6	37	21
2	1650	D	1	5.3	5.1	3.9	43	23
2	1650	E	1	5.6	5.9	3.5	41	21
2	1650	F	0	2.0	4.4	0.7	30	29
2	1660	A	0	0.8	5.8	0.0	1	36
2	1660	B	0	3.7	6.7	1.3	23	31
2	1660	C	0	3.4	6.3	1.2	18	37
2	1660	D	0	0.6	4.3	0.0	6	36
2	1660	E	1	7.3	9.4	3.0	22	29
2	1660	F	0	1.1	5.2	0.1	14	30
2	1660	G	0	1.0	5.4	0.0	15	27
2	1670	A	0	1.3	9.1	0.0	5	27
2	1670	B	0	0.5	12.1	0.0	0	20
2	1670	C	1	5.3	7.4	2.3	29	26
2	1670	D	0	2.7	6.2	0.8	20	32
2	1670	E	0	4.3	6.3	1.9	31	26
2	1670	F	0	3.8	6.3	1.5	34	22
2	1670	G	0	-0.1	12.4	0.0	0	24
2	1680	A	1	4.9	6.3	2.5	28	31
2	1680	B	0	1.8	5.3	0.4	24	27
2	1680	C	1	6.2	6.3	3.9	22	39
2	1680	D	2	19.4	19.8	6.1	7	33
2	1680	E	2	19.2	20.7	5.6	12	27
2	1680	F	3	23.7	16.4	10.9	17	27
2	1680	G	0	6.4	14.5	1.2	17	22
2	1680	H	0	3.7	5.3	1.9	29	32
2	1680	J	0	-2.6	11.3	0.0	0	24

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FLIGHT	LINE	ANOMALY	CATEGORY	FREQUENCY INPHASE	955 QUAD.	CONDUCTOR CTP MHOS	DEPTH MTRS	BIRD HEIGHT MTRS
2	1690	A	0	4.5	16.2	0.5	6	26
2	1690	B	0	2.6	11.7	0.2	11	23
2	1690	C	0	1.9	20.7	0.0	4	17
2	1690	D	0	0.4	10.4	0.0	1	18
2	1690	E	0	-0.7	5.9	0.0	0	18
2	1690	F	0	2.9	8.6	0.5	13	29
2	1690	G	2	19.5	17.0	7.5	15	29
2	1690	H	3	33.8	26.3	10.5	18	19
2	1690	J	2	20.6	19.5	6.8	14	27
2	1690	K	2	9.1	9.1	4.6	18	36
2	1700	A	2	18.4	16.9	6.8	24	19
2	1700	B	3	24.1	15.3	12.3	18	26
2	1700	C	2	22.7	24.6	5.9	13	24
2	1700	D	1	15.2	22.9	3.3	11	25
2	1700	E	2	21.5	22.0	6.3	13	26
2	1700	F	0	3.4	10.2	0.6	17	23
2	1710	A	0	0.5	8.2	0.0	7	18
2	1710	B	0	0.0	8.4	0.0	0	18
2	1710	C	0	-1.8	5.4	0.0	0	18
2	1710	D	0	6.0	13.5	1.2	25	15
2	1720	A	0	0.9	9.7	0.0	1	26
2	1720	B	0	0.7	8.8	0.0	3	23
2	1720	C	0	1.3	6.6	0.1	17	23
2	1730	A	0	-1.7	11.6	0.0	0	20
2	1730	B	1	7.9	12.6	2.3	20	24
2	1730	C	0	1.2	7.5	0.0	5	31
2	1740	A	0	2.1	6.7	0.4	8	38
2	1740	B	0	-3.1	5.4	0.0	0	28
2	1740	C	0	-2.5	5.0	0.0	0	25
2	1740	D	0	-0.1	10.0	0.0	0	24
2	1740	E	0	1.6	9.0	0.1	14	21
2	1740	F	0	0.6	9.9	0.0	0	25
2	1740	G	0	0.9	9.9	0.0	5	21
2	1810	A	0	0.5	10.1	0.0	0	24
2	1810	B	0	0.6	10.2	0.0	1	21
2	1810	C	0	-0.1	10.4	0.0	0	23
2	1810	D	0	-6.2	4.8	0.0	0	30
2	1810	E	0	1.1	11.0	0.0	0	28

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FLIGHT	LINE	ANOMALY	CATEGORY	FREQUENCY INPHASE	955 QUAD.	CONDUCTOR CTP MHOS	DEPTH MTRS	BIRD HEIGHT MTRS
2	1820	A	1	9.5	16.7	2.2	1	38
2	1820	B	0	2.7	9.2	0.4	3	38
2	1820	C	1	5.7	8.0	2.3	21	32
2	1830	A	0	3.4	8.3	0.8	21	25
2	1830	B	0	3.0	11.3	0.4	5	31
4	1840	A	0	-0.1	6.6	0.0	0	24
4	1840	B	0	2.4	20.7	0.0	1	21
4	1840	C	0	3.5	11.9	0.5	9	28
4	1840	D	0	-4.1	10.7	0.0	0	20
4	1840	E	0	-2.0	15.3	0.0	0	19
4	1840	F	0	-3.9	7.4	0.0	0	18
4	1840	G	0	-2.2	8.6	0.0	0	20
4	1840	H	0	-2.0	5.8	0.0	0	22
4	1840	J	0	-1.1	6.2	0.0	0	22
4	1850	A	0	-2.5	13.1	0.0	0	18
4	1850	B	0	2.6	21.0	0.1	4	19
4	1850	C	0	-6.6	7.2	0.0	0	20
4	1850	D	0	-5.9	7.2	0.0	0	20
4	1850	E	0	-1.5	8.2	0.0	0	28
4	1860	A	0	3.3	28.5	0.1	4	15
4	1860	B	0	1.5	11.8	0.0	0	28
4	1860	C	0	-0.7	7.6	0.0	0	23
4	1860	D	0	-2.2	7.2	0.0	0	19
4	1860	E	0	0.6	11.0	0.0	0	23
4	1860	F	0	1.6	12.6	0.0	5	23
4	1870	A	0	-3.5	6.5	0.0	0	26
4	1870	B	0	-3.6	13.1	0.0	0	19
4	1870	C	0	-5.7	6.3	0.0	0	19
4	1870	D	0	-3.7	7.2	0.0	0	19
4	1870	E	0	-0.4	10.3	0.0	0	28
4	1880	A	0	-0.9	20.0	0.0	0	14
4	1880	B	0	-6.3	9.3	0.0	0	17
4	1880	C	0	-3.3	7.5	0.0	0	24
4	1880	D	0	-1.3	14.3	0.0	0	21
4	1890	A	0	-7.4	21.5	0.0	0	14
4	1890	B	0	-3.7	11.3	0.0	0	18
4	1890	C	0	-7.9	15.6	0.0	0	18

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FLIGHT	LINE	ANOMALY	CATEGORY	FREQUENCY INPHASE	955 QUAD.	CONDUCTOR CTP MHOS	DEPTH MTRS	BIRD HEIGHT MTRS
4	1890	D	0	-4.6	7.7	0.0	0	21
4	1890	E	0	-1.3	20.3	0.0	0	16
4	1900	A	0	0.0	21.0	0.0	0	13
4	1900	B	0	-4.3	8.2	0.0	0	32
4	1900	C	0	-1.8	8.1	0.0	0	28
4	1900	D	0	-2.1	10.8	0.0	0	26
4	1910	A	0	-0.9	8.9	0.0	0	27
4	1910	B	0	1.8	25.8	0.0	2	15
4	1910	C	0	2.0	21.6	0.0	0	23
4	1920	B	0	1.1	19.9	0.0	0	24
4	1920	D	0	1.7	23.2	0.0	0	19
4	1920	G	0	-1.0	5.1	0.0	0	26
4	1930	A	0	0.4	5.5	0.0	4	26
4	1930	B	0	0.6	5.2	0.0	11	25
4	1930	C	0	4.4	32.4	0.1	7	13
4	1930	D	0	3.6	19.7	0.2	6	20
4	1940	A	0	3.2	18.4	0.2	1	25
4	1940	B	0	0.3	5.3	0.0	0	28
4	1940	C	0	0.2	5.7	0.0	0	26
4	1940	D	0	-0.8	4.0	0.0	0	22
4	1950	A	0	0.0	5.6	0.0	0	22
4	1950	B	0	-2.7	6.7	0.0	0	19
4	1950	C	0	-0.4	12.8	0.0	0	16
4	1960	A	0	1.0	12.2	0.0	0	25
4	1970	A	0	1.5	9.4	0.1	15	17
4	1970	B	0	1.8	10.9	0.1	12	19
4	1970	C	0	-1.5	9.8	0.0	0	16
4	1980	A	0	2.3	5.8	0.6	28	24
4	1980	B	0	1.8	5.1	0.4	28	25
4	1990	A	0	1.7	5.9	0.3	27	19
4	1990	B	0	1.1	6.5	0.0	20	18
4	1990	C	0	0.9	11.0	0.0	5	19
4	1990	D	0	-0.5	7.6	0.0	0	17
4	1990	E	0	1.1	10.7	0.0	8	19
4	2000	A	0	1.8	12.9	0.1	3	25

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FLIGHT	LINE	ANOMALY	CATEGORY	FREQUENCY INPHASE	955 QUAD.	CONDUCTOR CTP MHOS	DEPTH MTRS	BIRD HEIGHT MTRS
4	2000	B	0	0.3	5.6	0.0	7	20
4	2000	C	0	1.6	8.9	0.1	20	15
4	2010	A	0	2.9	5.8	1.0	35	20
4	2010	B	0	0.1	10.8	0.0	0	13
4	2010	C	0	-1.1	11.0	0.0	0	14
4	2010	D	0	-0.2	11.4	0.0	0	17
4	2010	E	0	0.1	11.8	0.0	0	16
4	2020	A	0	1.8	11.7	0.1	7	23
4	2020	B	0	1.2	10.7	0.0	6	21
4	2030	A	0	0.5	16.9	0.0	3	12
4	2060	A	0	-10.3	7.8	0.0	0	18
4	2070	A	0	-7.5	6.8	0.0	0	19
4	2070	B	0	-4.8	6.1	0.0	0	17
4	2070	C	0	-4.8	7.4	0.0	0	17
4	2080	A	0	-0.1	6.5	0.0	0	19
4	2080	B	0	-3.4	8.0	0.0	0	24
4	2080	C	0	-3.2	5.5	0.0	0	24
4	2080	D	0	0.4	9.0	0.0	0	23
4	2090	A	0	0.2	9.5	0.0	0	16
4	2100	A	0	0.8	20.0	0.0	0	18
4	2100	B	0	1.2	17.8	0.0	2	17
4	2110	A	0	0.7	20.5	0.0	0	16
4	2130	A	0	0.1	8.4	0.0	0	23
4	2130	B	0	-0.5	12.6	0.0	0	17
4	2130	C	0	-0.3	14.7	0.0	0	16
4	2130	D	0	0.0	8.9	0.0	0	16

Estimated depth may be unreliable because the stronger part of the conductor may be deeper or to one side of the flight line, or because of a shallow dip or overburden effects.

Lands admin — Report #19

Ministry of Natural Resources
Ontario

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

42A01SE8908 2.5481 EBY

900

F.I.# L618673 — The N

Type of Survey(s)
Airborne Survey — Eby Twp

Claim Holder(s)
R J Kusner

Prospector's Licence No.
K17051

Survey Company
AERODAT LTD.

Survey Dates (linecutting to office)
26 | 1 | 83 (Day | Mo. | Yr.) — 28 | 1 | 83 (Day | Mo. | Yr.)

Total Miles of line Cut

Name and Address of Author (of Geo-Technical report)
AERODAT LTD 3883 Nashua Drive, Mississauga Ont. L4V 1R3

Special Provisions Credits Requested

Instructions
For first survey: Enter 40 days. (This includes line cutting)
For each additional survey: using the same grid: Enter 20 days (for each)

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

Man Days

Instructions
Complete reverse side and enter total(s) here

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

Airborne Credits

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

	Days per Claim
Electromagnetic	40
Magnetometer	20
Radiometric	

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

Calculation of Expenditure Days Credits

Total Expenditures $ ÷ 15 = Total Days Credits

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

Report Completed

Date of Report	Recorded Holder or Agent (Signature)

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
	L-618673	60
	618674	60
	618675	60
	618676	60
	618677	60
	618678	60
	640893	60
	640894	60
	640895	60
	640896	60
	640897	60
	640898	60
	640899	60
	640900	60
	640901	60
	640902	60
	640903	60
	640904	60
	640905	60
	640906	60
	640908	60

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.

RECEIVED
MAR 7 1983
MINING LANDS SECTION

LARDER LAKE MINING DIV.
RECEIVED
JAN 28 1983
AM 7 8 9 10 11 12 1 2 3 4 5 PM 6

Total number of mining claims covered by this report of work. 21

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
1,260	JAN 31 1983	
	Date Approved as Recorded: Aug 17/83	Manager/Geoscientist/Approved Director: for

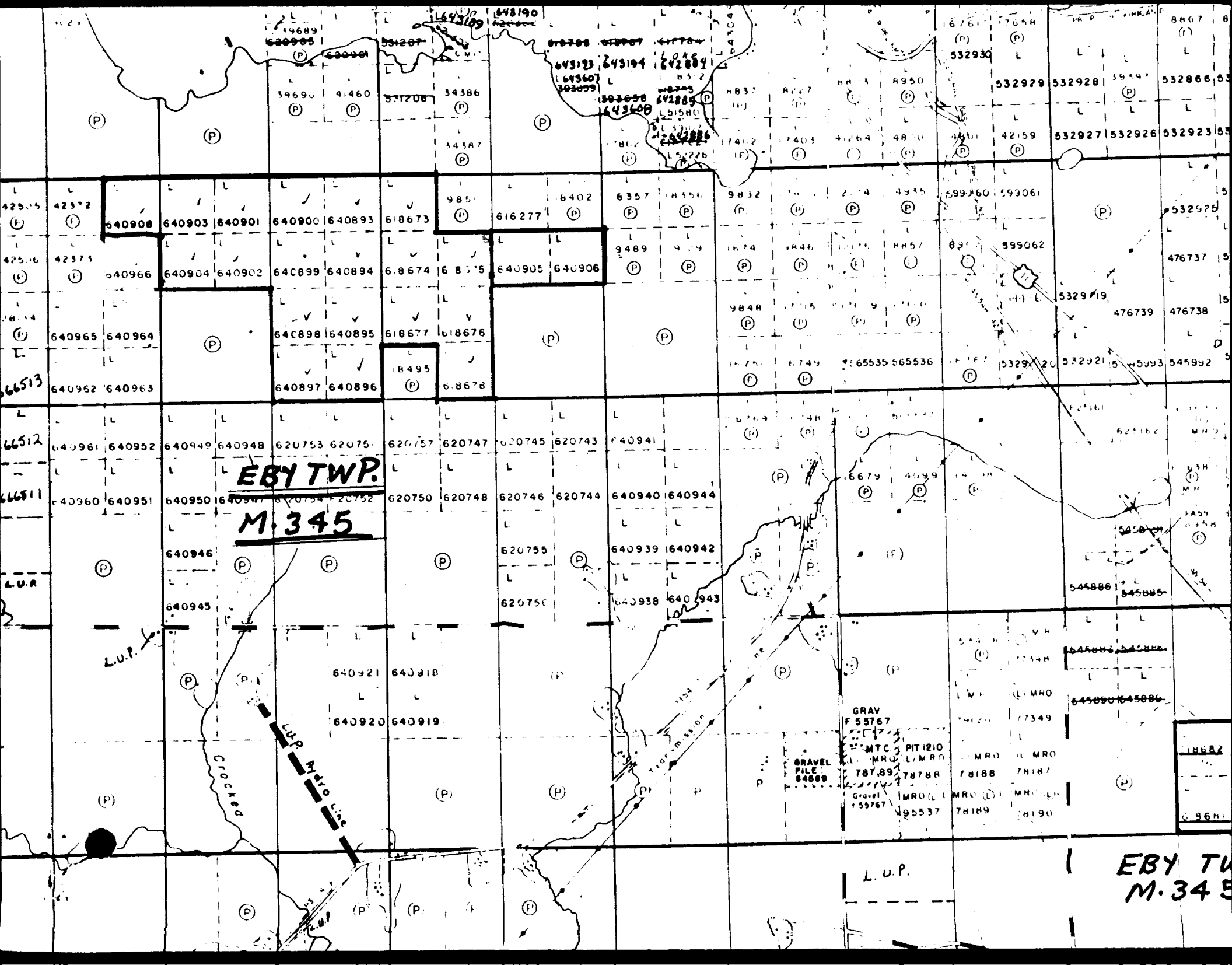
Certification Verifying Report of Work

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

Name and Postal Address of Person Certifying
R.J. Kusner 105-111 Richmond St W Toronto

Date Certified	Certified by (Signature)
Jan 25/83	

1362 (81/2)


EBY TWP.
M.345
L.U.P.
L.U.P. Hydro Line
Crooked
Trans-mission Line
GRAV
F 55767
MTC
787.89
Gravel
f 55767
PIT 1210
GRAVEL
FILE
84669
L.U.P.
EBY TW
M.345

Ministry of Natural Resources
Ontario

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

Lands Admin

Report #20

Apr. 5th

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

The Mining Act

F. [redacted] L 561709

Type of Survey(s): Airborne

Township or Area: Otto Twp

Claim Holder(s): Lenora Explorations LTD

Prospector's Licence No.: T-997

Survey Company: AERO Dat

Survey Dates (linecutting to office): 26 Day | 1 Mo. | 83 Yr. | 28 Day | 1 Mo. | 83 Yr.

Total Miles of line Cut:

Name and Address of Author (of Geo-Technical report): AERODAT 3883 Nashua Drive Mississauga Ont L4V-1R3

Special Provisions Credits Requested

Instructions		Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	Geophysical - Electromagnetic	
	Geophysical - Magnetometer	
For each additional survey: using the same grid: Enter 20 days (for each)	Geophysical - Radiometric	
	Geophysical - Other	
	Geological	
	Geochemical	

Man Days

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

Airborne Credits

Note: Special provisions credits do not apply to Airborne Surveys.		Days per Claim
	Electromagnetic	40
	Magnetometer	20
	Radiometric	

Expenditures (excludes power stripping)

Type of Work Performed:

Performed on Claim(s):

Calculation of Expenditure Days Credits

Total Expenditures: $ ÷ 15 = Total Days Credits

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

Report Completed

Date of Report: Jan 28/83

Recorded Holder or Agent (Signature):

Certification Verifying Report of Work

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

Name and Postal Address of Person Certifying: RJ Kasner 705-111 Richmond St W Toronto Ont

Date Certified: Jan 28/83

Certified by (Signature):

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
L	561709	60
	561710	60
	616146	60
	616147	60
	616153	60
	616152	60
	617432	60
	617433	60
	617434	60
	617435	60
	617436	60
	617437	60
	616154	60
	616155	60
	616518	60
	616519	60
	616520	60
	616521	60
	616530	60
	616531	60
	616532	60
	616533	60
	616542	60
	616543	60

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.

RECEIVED
MAR 7 1983
MINING LANDS SECTION

LARDER LAKE MINING DIV.
RECEIVED
JAN 28 1983
AM 7 8 9 10 11 12 1 2 3 4 5 6 PM

Total number of mining claims covered by this report of work: 24

For Office Use Only

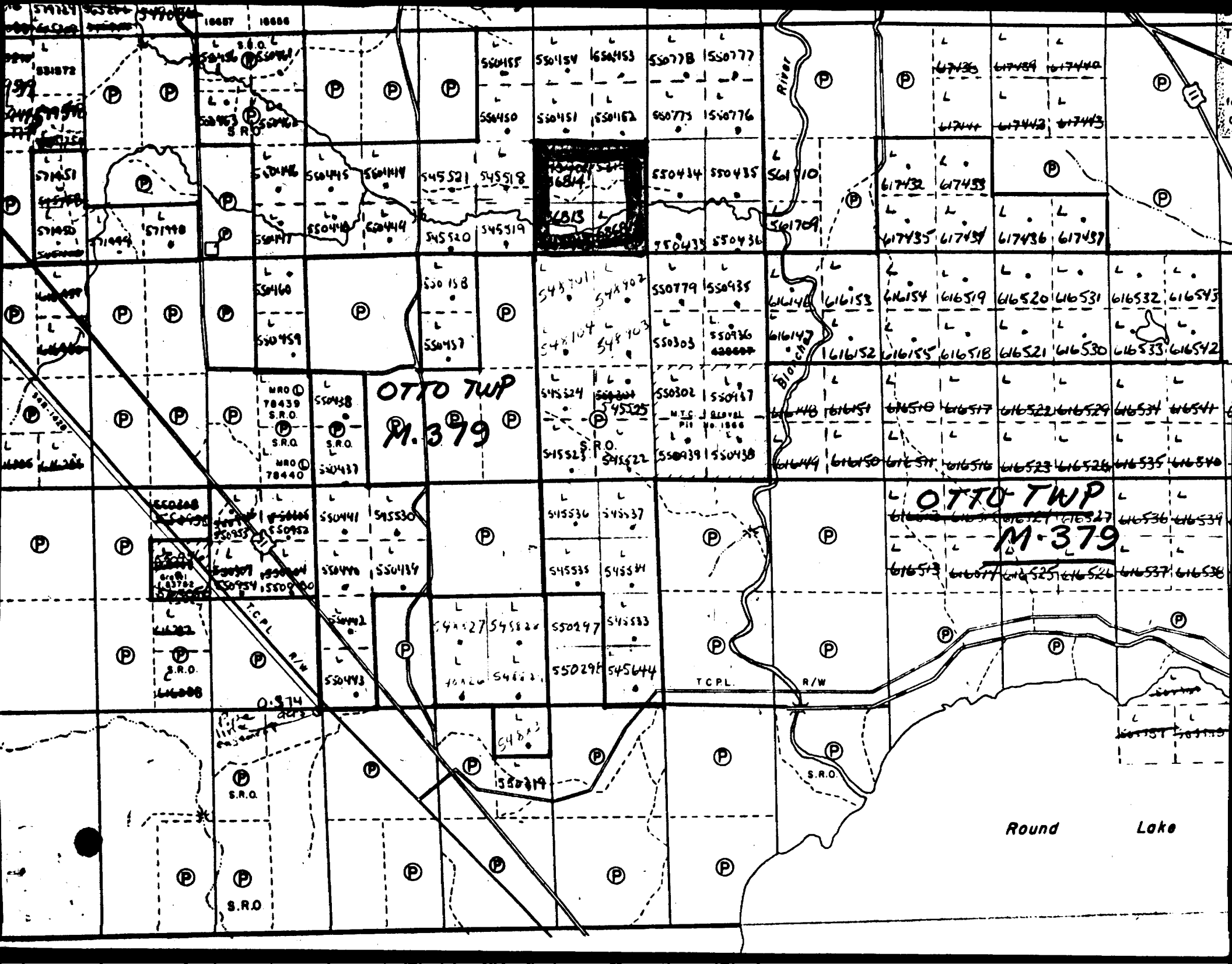
Total Days Cr. Recorded: 1,440

Date Recorded: JAN 31 1983

Date Approved as Recorded: Aug 17/83

Mining Recorder:

Regional/Provincial Director: for


OTTO TWP
M.379
OTTO TWP
M-379
TCPL
R/W
S.R.O.
Round
Lake
River

Lands Admin

Apr. 25th

2.5481

Report #21

Ministry of Natural Resources
Ontario

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

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

File # 636813

The Mining Act

Type of Survey(s): Airborne

Township or Area: Otto Twp

Claim Holder(s): Argentex Resource Expl. Corp.

Prospector's Licence No.: T1092

Survey Company: CIFRODAT

Survey Dates (linecutting to office): 26 / 1 / 83 (Day / Mo. / Yr.) — 28 / 1 / 83 (Day / Mo. / Yr.)

Total Miles of line Cut:

Name and Address of Author (of Geo-Technical report): CIFRODAT 3883 Nashua DRive Mississauga Ont L4V-1R3

Special Provisions Credits Requested

Instructions: For first survey: Enter 40 days. (This includes line cutting) For each additional survey: using the same grid: Enter 20 days (for each)

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

Man Days

Instructions: Complete reverse side and enter total(s) here

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

Airborne Credits

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

	Days per Claim
Electromagnetic	40
Magnetometer	20
Radiometric	

Expenditures (excludes power stripping)

Type of Work Performed:

Performed on Claim(s):

Calculation of Expenditure Days Credits

Total Expenditures: $ + 15 = Total Days Credits

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

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
L	636813	40
	636814	60
	636815	60

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.

RECEIVED
MAR 7 1983
MINING LANDS SECTION

LARDER LAKE MINING DIV.
RECEIVED
JAN 28 1983
AM 7 8 9 10 11 12 1 2 3 4 5 6 PM

Total number of mining claims covered by this report of work: 3

For Office Use Only

Total Days Cr. Recorded: 180

Date Recorded: Jan. 31, 1983

Date Approved as Recorded: Aug 17/83

Mining Recorder:

Regional/District Manager:

Report Completed

Date of Report: Jan 28/83

Recorded Holder or Agent (Signature):

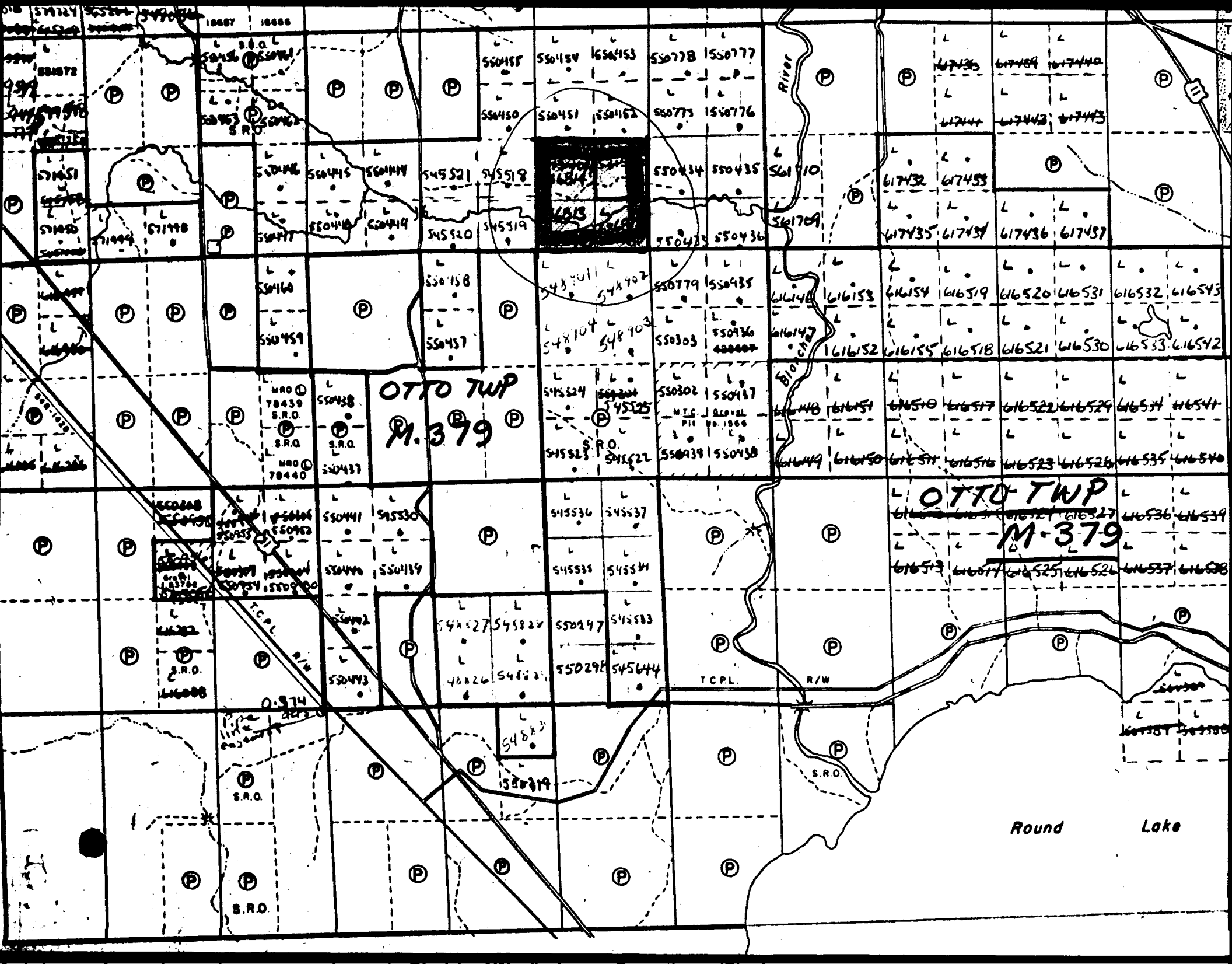
Certification Verifying Report of Work

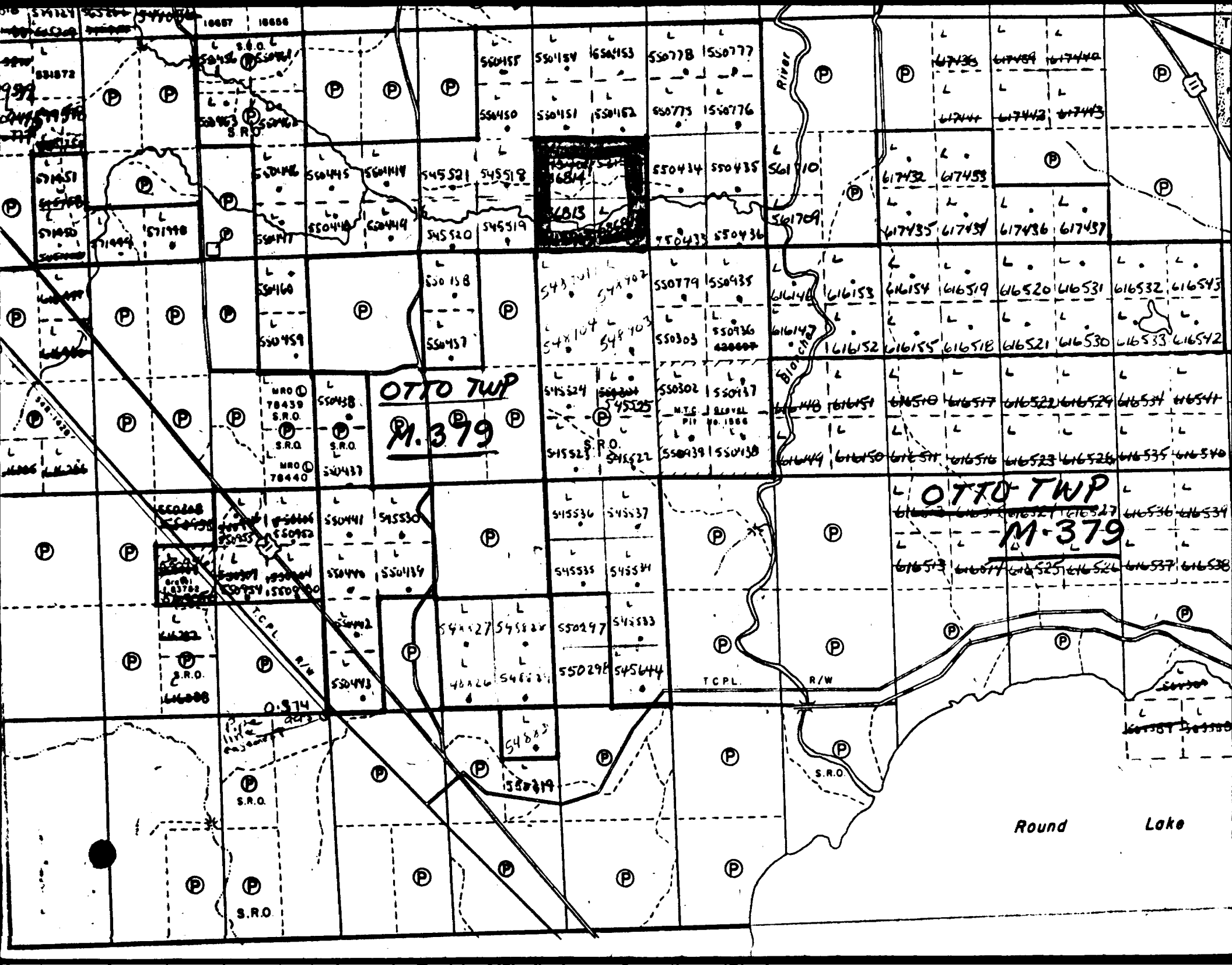
I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying: RJ Rusner 108-111 Richmond St. W Toronto Ont.

Date Certified: Jan 28/83

Certified By (Signature):


OTTO TWP
M-379
OTTO TWP
M-379
Round Lake
T.C.P.L. R/W
T.C.P.L.
S.R.O.
S.R.O.
S.R.O.
S.R.O.
S.R.O.
S.R.O.
River
Black Ck.


OTTO TWP
M.379
OTTO TWP
M-379
Round Lake
TCPL R/W
S.R.O.
Bloodvein River

Ministry of Natural Resources
Ontario

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

Lands Admin. Report # 22
Rpn 5*b

The Mining Act 2.5481

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

File # 1.545518

Type of Survey(s): Airborne

Township or Area: Otto Twp

Claim Holder(s): Argenter Resource Expl. Corp.

Prospector's Licence No.: T-1092

Survey Company: AERODAT

Survey Dates (linecutting to office): 26 / 1 / 83 (Day / Mo. / Yr.) — 28 / 1 / 83

Total Miles of line Cut:

Name and Address of Author (of Geo-Technical report): AERODAT 3883 Nashua Drive Mississauga Ont. L4V-1R3

Special Provisions Credits Requested

Instructions
For first survey: Enter 40 days. (This includes line cutting)
For each additional survey: using the same grid: Enter 20 days (for each)

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

Man Days

Instructions
Complete reverse side and enter total(s) here

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

RECEIVED
MAR 8 1983
MINING LANDS SECTION

Airborne Credits

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

	Days per Claim
Electromagnetic	
Magnetometer	20
Radiometric	

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

Calculation of Expenditure Days Credits

Total Expenditures $ ÷ 15 = Total Days Credits

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

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
L	545518	20
	545519	20
	545520	20
	545521	20
	545522	20
	545523	20
	545524	20
	545525	20
	545533 *	20
	545534	20
	545535	20
	545536	20
	545537 *	20
	545530	20
	550444	20
	550445	20
	550446	20
	550447	20
	550448	20
	550449	20
	550450	20
	550451	20
	550452	20
	550453	20
	550454	20

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
L	550455	20
	550456	20
	550457	20
	550458	20
	550459	20
	550460	20
	550461	20
	550462	20
	550463	20
	550936	20
	550932	20
	550938	20
	550939	20
	550776	20
	550779	20
	550778	20
	550952	20
	550953	20
	550954	20
	550956	20
	550980	20
	550437	20
	550438	20
	550439	20
	550440	20

Total number of mining claims covered by this report of work: 74 NW

For Office Use Only

Total Days Cr. Recorded: 1480 D
Date Recorded: Feb. 2, 1983
Date Approved as Recorded: 84.6.11
Mining Recorder:
Regional/District Director:

Report Completed

Date of Report: Apr 28/83
Recorded Holder or Agent (Signature):

Certification Verifying Report of Work

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

Name and Postal Address of Person Certifying: R.J. Kasner [illegible] St W Toronto

Date Certified: Jan 19/83
Certified by (Signature):

1362 (81/2)

Ministry of Natural Resources
Ontario

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

The Mining Act

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

Type of Survey(s)	Township or Area
Claim Holder(s)	Prospector's Licence No.
Survey Company	Survey Dates (linecutting to office) Day | Mo. | Yr. — Day | Mo. | Yr. / Total Miles of line Cut
Name and Address of Author (of Geo-Technical report)	

Special Provisions Credits Requested

Instructions		Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	Geophysical - Electromagnetic	
	- Magnetometer	
For each additional survey: using the same grid: Enter 20 days (for each)	- Radiometric	
	- Other	
	Geological	
	Geochemical	

Man Days

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

RECEIVED
MAR 8 1983
MINING LANDS SECTION

Airborne Credits

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

Expenditures (excludes power stripping)

Type of Work Performed	
Performed on Claim(s)	

Calculation of Expenditure Days Credits

Total Expenditures $ ÷ 15 = Total Days Credits

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

Report Completed

Date of Report	Recorded Holder or Agent (Signature)

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
L	550441	20
	545644	20
	548826	20
	548827	20
	548828	20
	548829	20
	548830	20
	545534	20
	545535	20
	545536	20
	550442	20
	550443	20
	550434	20
	550435	20
	550436	20
	571448	20
	571449	20
	571450	20
	571451	20
	550775	20
	548901	20
	548902	20
	548903	20
	548904	20
	550433	20

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
L	550935	20
	550779	20

LARDER LAKE MINING DIV.
RECEIVED
JAN 28 1983
AM 7 8 9 10 11 12 1 2 3 4 5 6 PM

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

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
	Date Approved as Recorded 84.6.17	Regional/Branch Director

Certification Verifying Report of Work

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

Name and Postal Address of Person Certifying		
	Date Certified	Certified by (Signature)

1362 (81/2)

Ministry of Natural Resources
Ontario

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

Lands Admin

Report #23

The Mining Act

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

File 640938

Type of Survey(s): Airborne

Township or Area: Eby

Claim Holder(s): Glenn C Kasner

Prospector's Licence No.: K 18421

Survey Company: AERODAT

Survey Dates (linecutting to office): 26 | 1 | 83 (Day | Mo. | Yr.) — 28 | 1 | 83 (Day | Mo. | Yr.)

Total Miles of line Cut:

Name and Address of Author (of Geo-Technical report): AERODAT 3883 Nashua Drive, Mississauga Ont. L4V 1R3

Special Provisions Credits Requested

Instructions: For first survey: Enter 40 days. (This includes line cutting). For each additional survey: using the same grid: Enter 20 days (for each)

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

Man Days

Instructions: Complete reverse side and enter total(s) here

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

Airborne Credits

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

	Days per Claim
Electromagnetic	40
Magnetometer	20
Radiometric	

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

Calculation of Expenditure Days Credits

Total Expenditures $ ÷ 15 = Total Days Credits

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

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
L	L-640960	60
	640961	60
	640962	60
	640963	60
	640964	60
	640965	60
	640966	60
	640945	60
	640946	60
	640947	60
	640948	60
	640949	60
	640950	60
	640951	60
	640952	60
	620751	60
	620752	60
	620753	60
	620754	60
	620755	60
	620756	60
	640938	60
	640939	60
	640940	60
	640941	60

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
L	640942	60
	640943	60
	640944	60
	620743	60
	620744	60
	620745	60
	620746	60
	620747	60
	620748	60
	620749	60
	620750	60

LARDER LAKE MINING DIV.
RECEIVED
JAN 28 1983
AM 7 8 9 10 11 12 1 2 3 4 5 6 PM

RECEIVED
MAR 7 1983
MINING LANDS SECTION

Total number of mining claims covered by this report of work: 36

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
2160	FEB 2 1983	
	Date Approved as Recorded: Aug 17/83	Regional Branch Director

Report Completed

Date of Report	Recorded Holder or Agent (Signature)

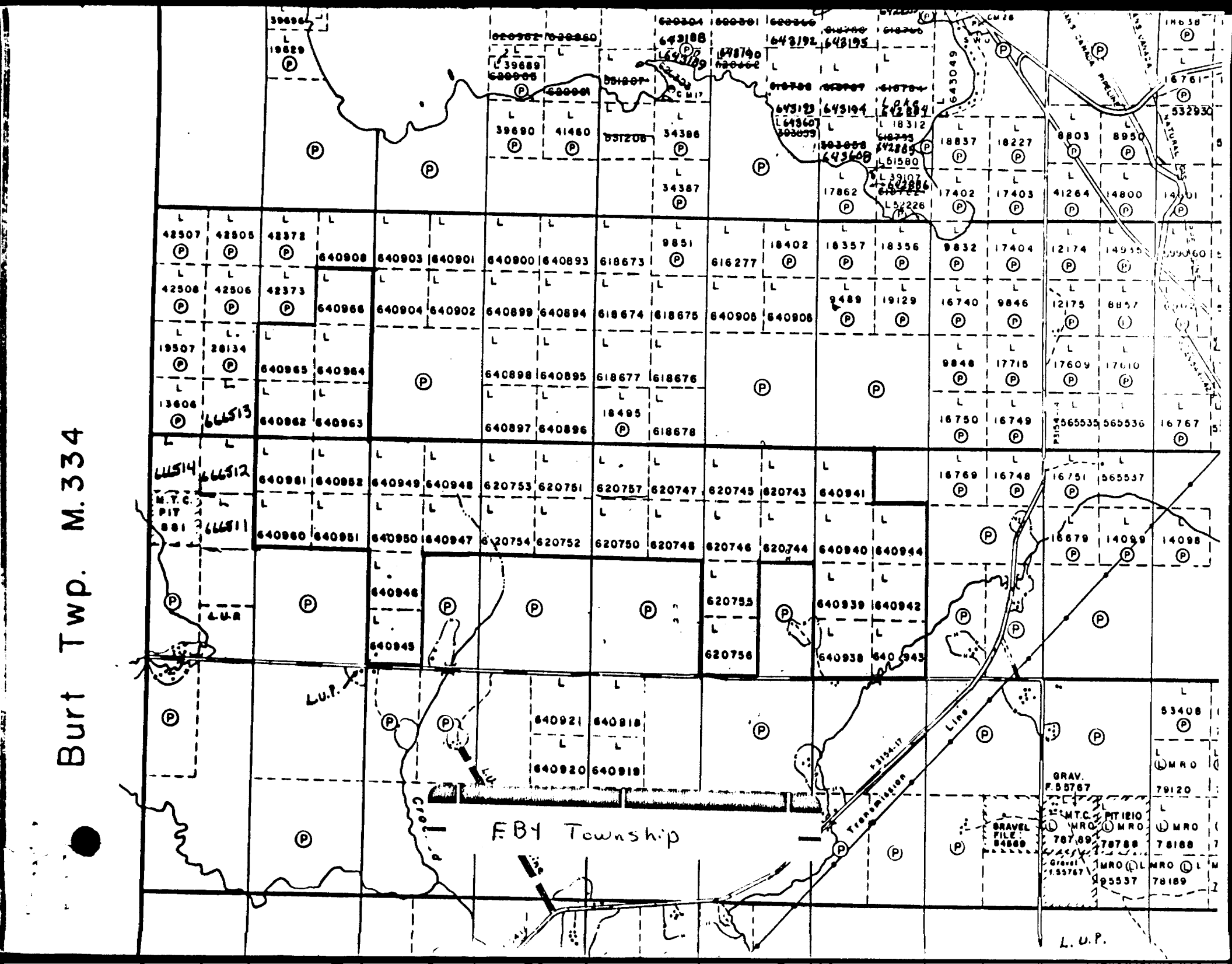
Certification Verifying Report of Work

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

Name and Postal Address of Person Certifying: [illegible] 111 Richmond St W Toronto Ont

Date Certified	Certified by (Signature)
Jan 28/83	

1362 (81/2)


Burt Twp. M.334
FB4 Township
L.U.P.
Transmission Line
GRAV. F.55767
GRAVEL FILE 84569
M.T.C. PIT 1210
M.T.C. PIT 881
L.U.P.

Ministry of Natural Resources
Ontario

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

Lands Admin
Apr. 25th

Instructions: Report #51
Please type or print.
– If number of mining claims traversed exceeds space on this form, attach a list.
Note: – Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns.
– Do not use shaded areas below.

[redacted] #L618679

The Mining Act

Type of Survey(s): Airborne
Township or Area: Eby Twp
Claim Holder(s): Argenter Resource Expl. Corp.
Prospector's Licence No.: T-1092
Survey Company: AERODAT
Survey Dates (linecutting to office): 26 / 1 / 83 (Day / Mo. / Yr.) | 28 / 1 / 83 (Day / Mo. / Yr.)
Total Miles of line Cut:
Name and Address of Author (of Geo-Technical report): AERODAT 3883 Nashua Drive Mississauga Ont L4V-1R3

Special Provisions Credits Requested

Instructions
For first survey: Enter 40 days. (This includes line cutting)
For each additional survey: using the same grid: Enter 20 days (for each)

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

Man Days

Instructions: Complete reverse side and enter total(s) here

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

Airborne Credits

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

	Days per Claim
Electromagnetic	40
Magnetometer	20
Radiometric	

Expenditures (excludes power stripping)

Type of Work Performed:
Performed on Claim(s):
Calculation of Expenditure Days Credits
Total Expenditures: $ ÷ 15 = Total Days Credits

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

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
L	618679	60
	618680	60
	618681	60
	618682	60

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.

RECEIVED
MAR 7 1983
MINING LANDS SECTION

LANDER LAKE MINING DIV.
RECEIVED
JAN 28 1983
AM 7 8 9 10 11 12 1 2 3 4 5 6 PM

Total number of mining claims covered by this report of work: 4

Report Completed

Date of Report: Jan 25/83
Recorded Holder or Agent (Signature):

For Office Use Only

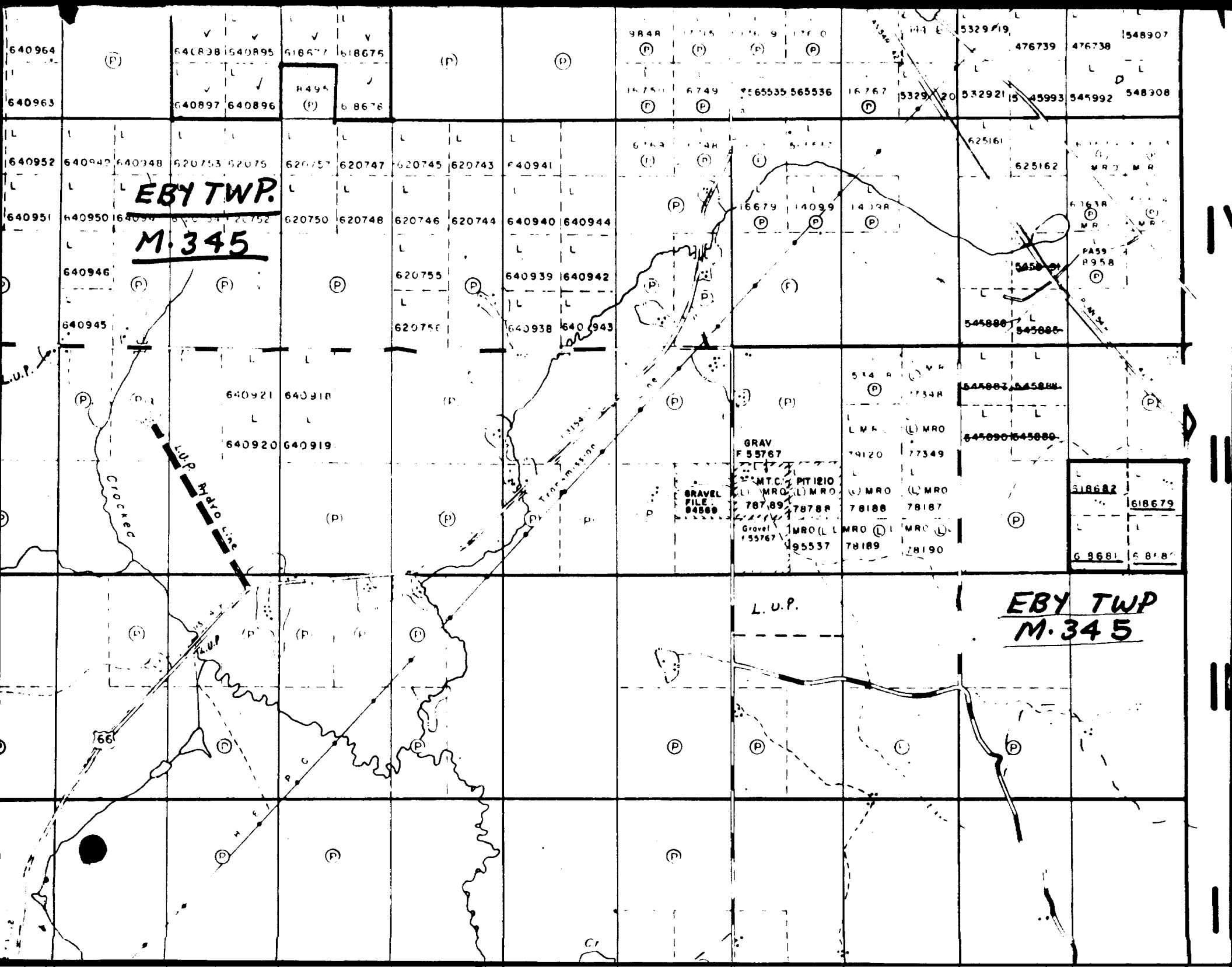
Total Days Cr. Recorded: 240.0
Date Recorded: Feb 24 1983
Date Approved as Recorded: Aug 17/83
Mining Recorder:
Regional/Branch Director: for

Certification Verifying Report of Work

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

Name and Postal Address of Person Certifying: R.J. Kasner 908-111 Richmond St W Toronto Ont
Date Certified: Jan 25/83
Certified by (Signature):

362 (81/2)


EBY TWP.
M.345
L.U.P.
Hydro Line
Crooked
GRAVEL FILE 84869
GRAV F 55767
PIT 1810
EBY TWP
M.345
L.U.P.
640964
640963
640952
640951
640950
640946
640945
640921
640920
640919
640940
640944
640939
640942
640938
640943
620745
620743
620746
620744
620748
620750
620747
620755
620756
625161
625162
476739
476738
548907
548908
545992
545993
618682
618679
618675
618676
640838
640895
640897
640896
R495
R958
PASS
MRO
L.U.P.

Ministry of Natural Resources
Ontario

Order of the Minister

Room 6450, Whitney Block
Queen's Park
Toronto, Ontario
M7A 1W3
416/965-1380

The Mining Act

In the matter of mining claims:

L 618673 to 78 inclusive
640893 to 906 "
640908

in the Township of Eby.

On consideration of an application from the recorded holder, R.J. Kasner
under Section 77 Subsection 22 of The Mining Act, I hereby order that the time for filing reports and plans in support of Airborne Magnetometer & Electromagnetic assessment work recorded on January 31, 1983
be extended until and including April 15, 1983.

March 30, 1983.
Date

Signature of Director, Land Management Branch

Copies: Mining Recorder
Kirkland Lake, Ontario

" Mr. R.J. Kasner
Suite 908
111 Richmond Street West
Toronto, Ontario
M5H 2G4

1333 (82/1)

Ministry of Natural Resources
Ontario

Order of the Minister

Room 6450, Whitney Block
Queen's Park
Toronto, Ontario
M7A 1W3
416/965-1380

The Mining Act

In the matter of mining claims:

L 640960 to 66 inclusive
640945 to 52 "
620751 to 56 "
640938 to 44 "
620743 to 48 "
620757
620749-50

in the Township of Eby.

On consideration of an application from the recorded holder, Glen C. Kasner
under Section 77 Subsection 22 of The Mining Act, I hereby order that the time for filing reports and plans in support of Airborne Magnetometer & Electromagnetic assessment work recorded on February 2, 1983
be extended until and including April 15, 1983.

March 30, 1983.
Date

Signature of Director, Land Management Branch

Copies: Mining Recorder
Kirkland Lake, Ontario

Mr. G.C. Kasner
Suite #908
111 Richmond Street West
Toronto, Ontario
M5H 2G4

1333 (82/1)

LIST OF CLAIMS

Otto Twp: (27 claims)

561709 - 561710 inc.
616146 - 616147 inc.
616152 - 616153 inc.
617432 - 617437 inc.
616154 - 616155 inc.
616518 - 616521 inc.
616530 - 616532 inc.
616542 - 616543 inc.
636813 - 616815 inc.

Eby Twp: (61 claims)

618673 - 618682 inc.
620743 - 62756 inc.
640893 - 640908 inc.
640938 - 640944 inc.

Ministry of Natural Resources
Ontario

Geotechnical Report Approval

File 2.5481

July 20/83

Mining Lands Comments

☑ To: Geophysics Mr. Barlow.

Comments

☑ Approved ☐ Wish to see again with corrections | Date August 9/83 | Signature K. Barlow

☐ To: Geology - Expenditures

Comments

☐ Approved ☐ Wish to see again with corrections | Date | Signature

☐ To: Geochemistry

Comments

L.D.

☐ Approved ☐ Wish to see again with corrections | Date | Signature

☐ To: Mining Lands Section, Room 6462, Whitney Block. (Tel: 5-1380)

1593 (81/10)

ARGENTEX RESOURCE EXPLORATION CORPORATION

HEAD OFFICE
Ste. 500, 67 Richmond St. W.
TORONTO, Ontario M5H 1Z5
(416) 361-0737

EXECUTIVE OFFICE
Ste. 908, 111 Richmond Street W.
TORONTO, Ontario M5H 2G4
(416) 947-1465/6

947-1465

RECEIVED
Land Management Branch
CIRCULATE
COMMENTS PLEASE
MAY 16 1983

May 13, 1983

Mr. Arthur Barr,
Land Management Branch,
Whitney Block, Room 6450
Queens Park,
Toronto, Ont.
M7A 1W3

Dear Mr. Barr:

Regarding your letter of May 13 and our conversation of May 13, 1983. Please find enclosed maps that were missing from the original report. As discussed, I will be adding some new claims in Otto Township that will be covered by these maps.

Thank you for your assistance.

Yours truly,

ARGENTEX RESOURCE EXPLORATION CORP.

R. J. Kasner
President

RJK;b
Encs.

1983 04 22 2.5481

Mining Recorder
Ministry of Natural Resources
4 Government Road East
P.O. Box 984
Kirkland Lake, Ontario
P2N 1A2

Report 71.20

Dear Sir:

RE: Airborne Geophysical (Electromagnetic & Magnetometer) Survey submitted on Mining Claims L 561709 et al in the Townships of Otto and Eby

On January 31, 1983 Lenora Exploration Limited recorded 40 Airborne Electromagnetic and 20 Airborne Magnetometer days credits on Mining Claims L 561709-10, 616146-47, 616152-53, 617432 to 37 inclusive, 616154-55, 616518 to 21 inclusive, 616530 to 33 inclusive and 616542-43.

The survey report and maps were not submitted within the time prescribed by Section 77 of the Mining Act, i.e. 60 days.

You are hereby authorized to delete the work credits recorded on January 31, Report #20 from each of the claim record sheets. Please inform the recorded holder accordingly.

For your information a survey report and maps was received on April 13, 1983, part of which covers these claims. It would seem that in order to receive full credits for the report submitted, Lenora Exploration Limited must provide another Report of Work form.

Yours very truly,

E.F. Anderson
Director
Land Management Branch

Whitney Block, Room 6450
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: 416/965-1380

A. Barr:sc

cc: Aerodat Limited, Mississauga, Ont.
cc: Lenora Exploration Ltd., Toronto, Ont.
cc: Mr. R.J. Kasner, Kirkland Lake, Ont.

#20,21,19,23,51.

1983 04 21

2.5481

Mining Recorder
Ministry of Natural Resources
4 Government Road East
P.O. Box 984
Kirkland Lake, Ontario
P2N 1A2

Dear Sir:

We have received reports and maps for an Airborne Geophysical (Electromagnetic & Magnetometer) Survey submitted on Mining Claims L 561709 et al in the Townships of Otto and Eby.

This material will be examined and assessed and a statement of assessment work credits will be issued.

Yours very truly,

E.F. Anderson
Director
Land Managemnt Branch

Whitney Block, Room 6450
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: 416/965-1380

A. Barr:sc

cc: Argentex Resource Exploration Corp.
Toronto, Ontario

cc: Lenora Exploration Limited
Toronto, Ontario

cc: Glen C. Kasner
Kirkland Lake, Ontario

cc: R.J. Kasner
Kirkland Lake, Ontario

April 4, 1983.

Mr. F.W. Matthews, Mining Lands,
Ministry of Natural Resources,
Whitney Block, Rm. 6450,
Queen's Park, M7A1W3.

RECEIVED
APR 13 1983
MINING LANDS SECTION

Dear Sir;

Re: Otto and Eby Townships,
Airborne E.M. and Mag
Surveys.-

On behalf of Mr. R.J. Kasner, President of Lenora Exploration, I enclose duplicate copies of reports and maps covering airborne E.M. and magnetometer surveys which were carried out by Aerodat Limited, on the claims listed in the attachment to this letter.

As a result of the delays pertaining to the airborne system, it required to obtain a 2 week extension on the said claims. I trust that you will find the data in order. If there are any questions pertaining to this submission, please contact me at your earliest convenience.

Yours very truly,

Nelson W. Baker, P. Eng.
282-2184.

REGISTERED

June 1, 1984

File: 2.5481

Argentex Resources Exploration Corp.
67 Richmond Street West
Suite 500
Toronto, Ontario
M5H 1Z5

Dear Sirs:

RE: Airborne Geophysical (Magnetometer) Survey
submitted on Mining Claims L 545518 et al
in the Township of Otto

Enclosed is a copy of our letter dated February 13, 1984, requesting additional information for the above-described survey.

Unless you can provide the required data by June 18, 1984 the mining recorder will be directed to cancel the work credits recorded on February 2, 1983.

For further information, please contact Mr. Ray Pichette at (416)965-4888.

Yours sincerely,

S.E. Yundt
Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3
Phone:(416)965-4888

S. Hurst:mc

cc: Mining Recorder
Kirkland Lake, Ontario

Encl.

200 metres spaced
44.5 miles
874 claims

Baczkowski called on Behalf of Argentex - claims letter was sent with appropriate info back on Feb/84

Your File: #22
Our File: 2.5481

February 13, 1984.

Argentex Resources Exploration Corp.
67 Richmond Street West
Suite 500
Toronto, Ontario
M5H 1Z5

Dear Sir:

RE: Airborne Geophysical (Magnetometer) survey submitted on mining claims L 545518 et al in the Township of Otto.

In order to assess the above mentioned survey, please provide the mileage flown over only those claims as listed in the enclosed copies of the Report of Work.

For further information, please contact Mr. F. W. Matthews at (416) 965-1380.

Yours very truly,

J. R. Morton
Acting Director
Land Management Branch

Whitney Block
Room 6643
Queen's Park
Toronto, Ontario
Phone: (416) 965-1380

D. Kinvig:dg

cc: Aerodat Limited
3883 Nashua Drive
Mississauga, Ontario L4V 1R3

cc: Mining Recorder
Kirkland Lake, Ontario.

Encls:

maps on the way: match up with other survey in the area.

2.5481

1983 05 13

Argentex Resources Exploration Corp
67 Richmond Street West
Suite 500
Toronto, Ontario
M5H 1Z5

Dear Sir:

Enclosed is a copy of a report of work for Airborne Magnetometer assessment work credits that was recorded on February 2, 1983 on Mining Claims L 545518 et al in the Township of Otto.

We have no record that you provided the full reports and maps to the Minister within the sixty day period provided by Section 77 of the Mining Act.

Unless you can provide evidence that the reports and maps were submitted as required by May 27, 1983, the Mining Recorder will be directed to cancel the work credits recorded on February 2, 1983.

Yours very truly,

E.F. Anderson
Director
Land Management Branch

Whitney Block, Room 6450
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: 416/965-1380

A. Barr:sc

Encls:

cc: Aerodat Limited
Mississauga, Ontario

cc: Mr. R.J. Kasner
908 - 111 Richmond St.W.
Toronto, Ontario
M5H 2G4

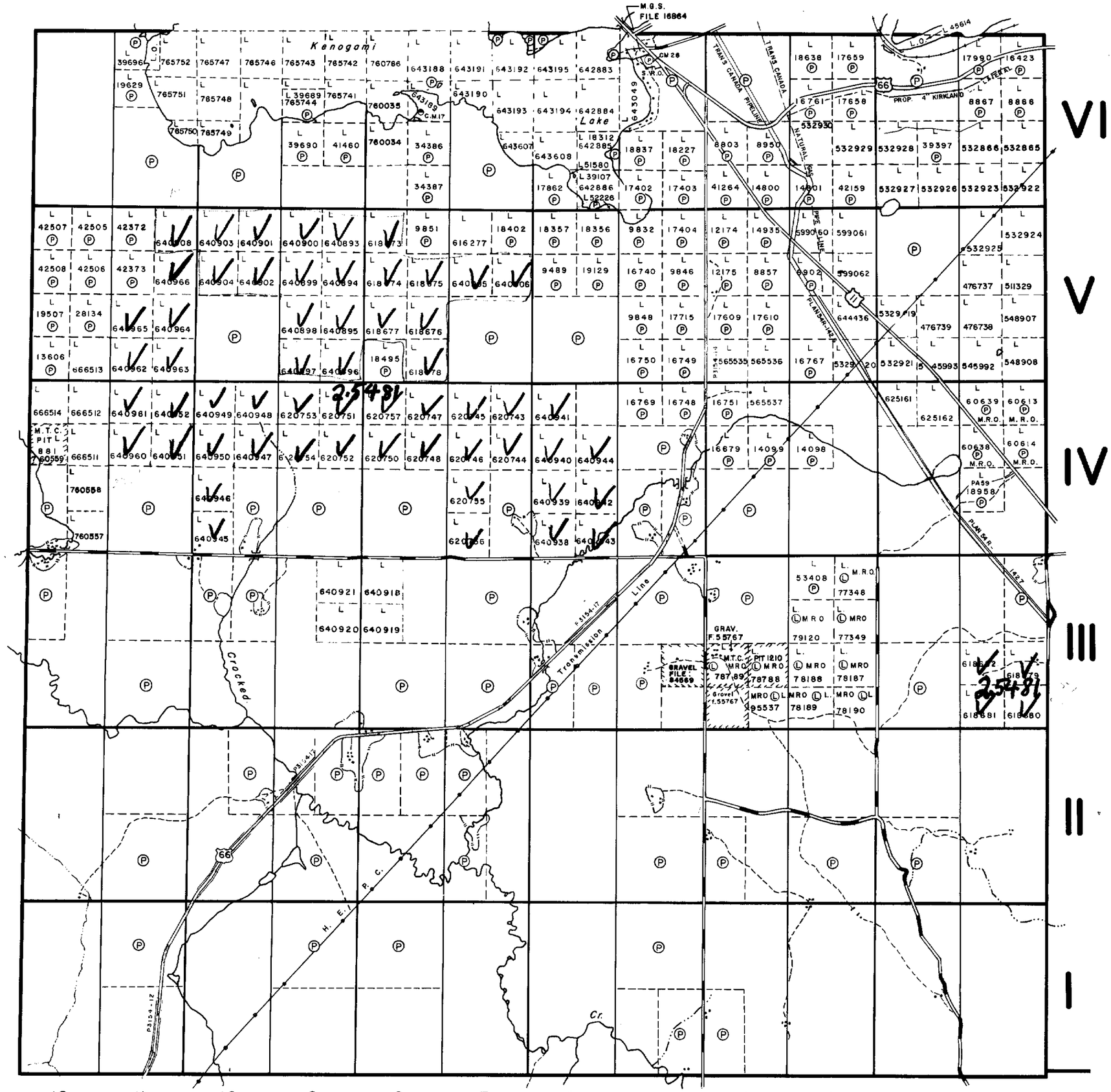
cc: Mining Recorder
Kirkland Lake, Ontario

Grenfell Twp. M.351

Burt Twp. M.334

Otto Twp. M.379

Blain Twp. M.418



THE TOWNSHIP OF EBY

DISTRICT OF TIMISKAMING

LARDER LAKE MINING DIVISION

SCALE: 1-INCH=40 CHAINS

LEGEND

PATENTED LAND	P
CROWN LAND SALE	C.S.
LEASES	L
LOCATED LAND	Loc.
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	C.

NOTES

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

AREAS WITHDRAWN FROM STAKING
under Sec. 43 of The Mining Act (R.S.O. 1970).

Order No.	File	Date	Disposition

DATE OF ISSUE
JUL 21 1983
Ministry of Natural Resources
TORONTO

PLAN NO.- M-345

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

42A01SE8908 2.5481 EBY

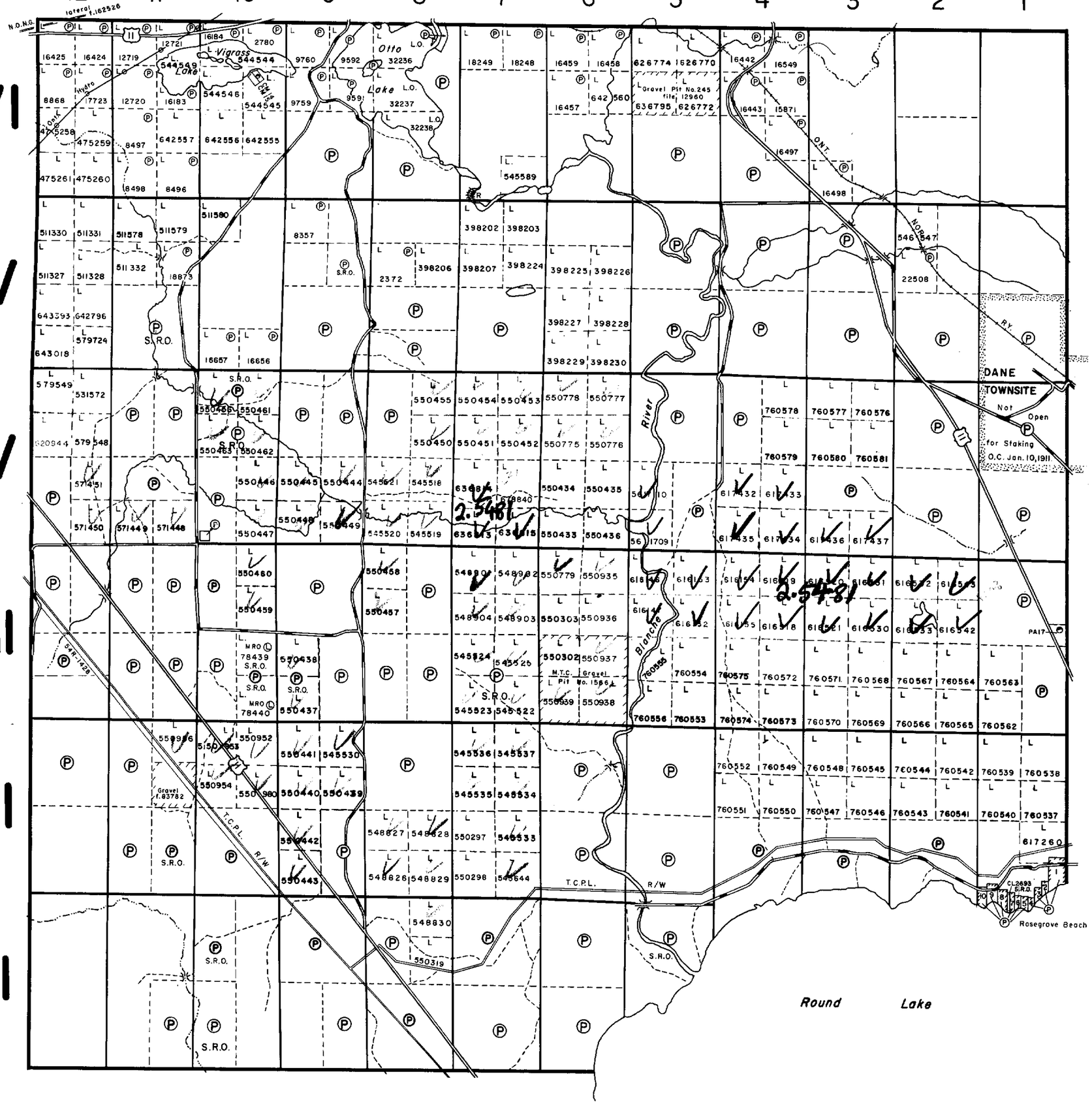
200

TECK TP. - M.392

EBY TP. - M.345

BOSTON TP. - M.332

ARQUIS TP. - M.362



THE TOWNSHIP OF OTTO

DISTRICT OF TIMISKAMING

LARDER LAKE MINING DIVISION

SCALE: 1-INCH=40 CHAINS

LEGEND

PATENTED LAND	● or (P)
CROWN LAND SALE	C.S.
LEASES	(L)
LOCATED LAND	Loc.
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	C.
PATENTED S.R.O.	

NOTES

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

DATE OF ISSUE
JUL 21 1983
Ministry of Natural Resources
TORONTO

PLAN NO.- M-379

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

42A01SE8908 2.5481 EBY

LOCATION MAP

AIRBORNE MAG., V.L.F., E.M. SURVE

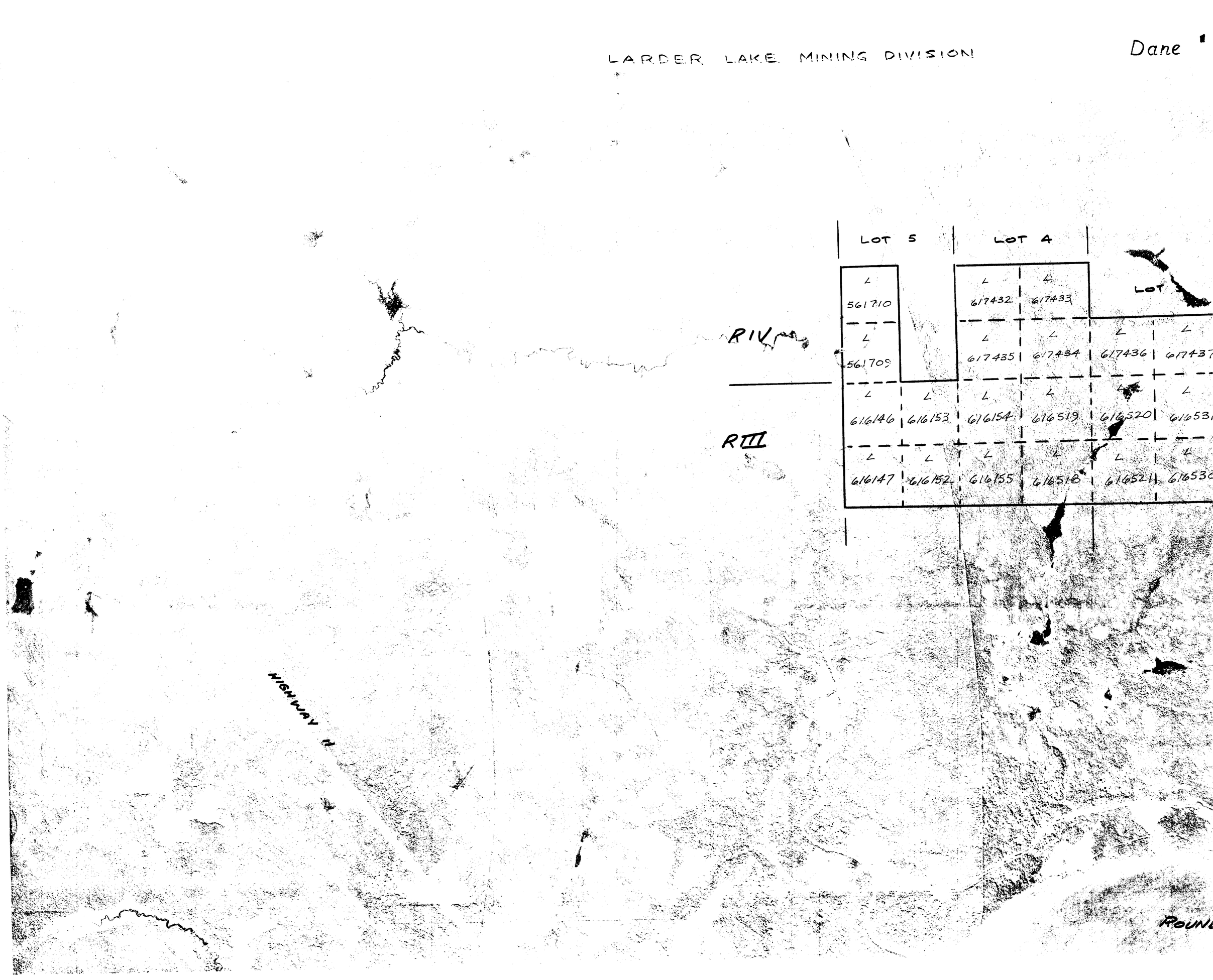
FOR

LENORA EXPLORATION LTD.

OTTO TWP.

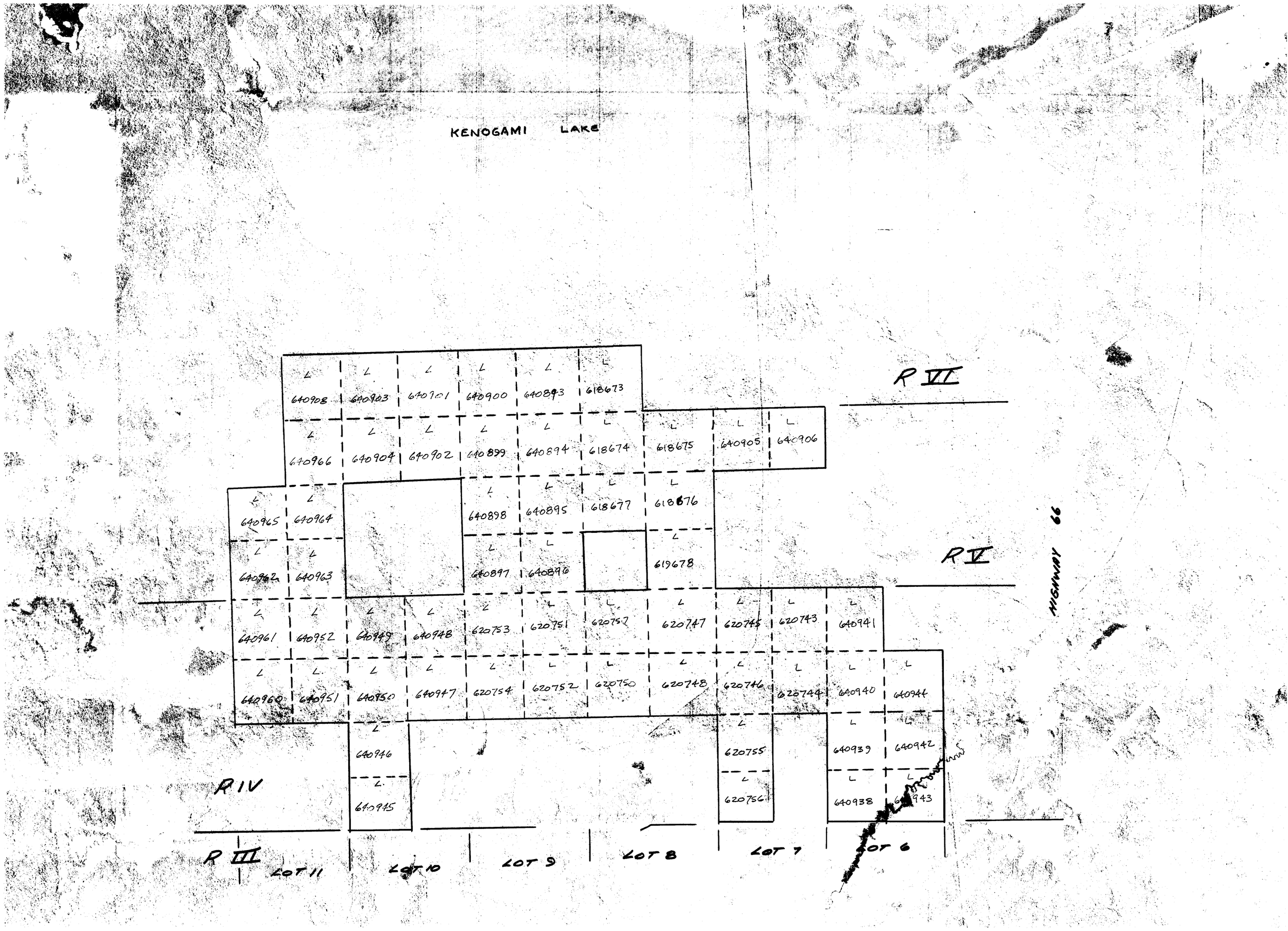
LARDER LAKE MINING DIVISION

Dane



SCALE 1" :

42A01SE0006 2.5481 EBY



LOCATION MAP

AIRBORNE MAG., V.L.F., E.M. SURVEYS

FOR

LENORA EXPLORATION LTD.

EBY TWP.

LARDER LAKE MINING DIVISION

1" =

42A13E9908 2.5481 EBY

230

N

EM RESPONSE

Conductivity thickness in mhos

⑧	> 500
⑧	250 – 500
⑦	125 – 250
⑥	60 – 125
⑤	30 – 60
④	15 – 30
③	8 – 15
②	4 – 8
①	2 – 4
○	< 2
25	Inphase response

Horizontal control ..... MRS III
Average bird height ..... 30 m
Line spacing ..... 200 m

INTERPRETED CONDUCTOR AXIS

GENERAL ASSOCIATION WITH MAGNETIC TREND

SUSPECTED CULTURAL CONDUCTOR

INTERPRETED VLF – EM CONDUCTOR

LENORA EXPLORATION

AIRBORNE ELECTROMAGNETIC SURVEY INTERPRETATION MAP

KIRKLAND LAKE AREA

ONTARIO

SCALE 1/10,000

0 330 660 1320 1/2 mile

0 100 200 500 1 Kilometre

DATE: February, 1983

N.T.S. No: 42 A

MAP No: 1

AERODAT LIMITED

1010 1020 1030 1040 1050 1060 1070 1080 1090 1100 1110 1120 1130 1140 1150 1160 1170 1180 1190 1200 1210 1220 1230 1240 1250 1260 1270 1280 1290 1300 1310 1320 1330 1340 1350 1360 1370 1380 1390 1400 1410 1420 1430 1440 1450 1460 1470 1480

C1

1050

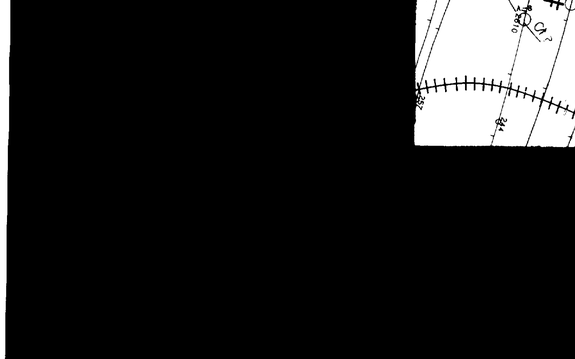
240

INTERPRETED CONDUCTOR AXIS

GENERAL ASSOCIATION WITH MAGNETIC TREND

Ct SUSPECTED CULTURAL CONDUCTOR

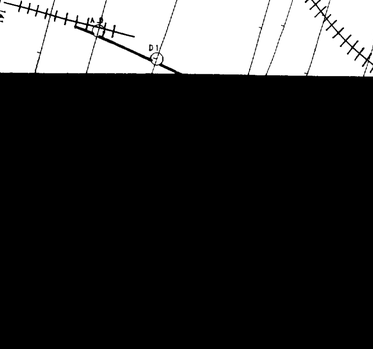
INTERPRETED VLF – EM CONDUCTOR



EM RESPONSE

Conductivity thickness in mhos

⑨ > 500
⑧ 250 – 500
⑦ 125 – 250
⑥ 60 – 125
⑤ 30 – 60
④ 15 – 30
③ 8 – 15
② 4 – 8
① 2 – 4
○ < 2
25 Inphase response



Horizontal control ..... MRS III

Average bird height ..... 30 m

Line spacing ..... 150, 200 m

LENORA EXPLORATION

AIRBORNE ELECTROMAGNETIC SURVEY

INTERPRETATION MAP

EBY TWP.

KIRKLAND LAKE AREA

ONTARIO

REGISTERED PROFESSIONAL ENGINEER
N. W. BAKER
PROVINCE OF ONTARIO
April 11/83

SCALE 1/10,000

0 330 660 1320 1/2 mile

0 100 200 500 1 Kilometre

AERODAT LIMITED

DATE: February, 1983

N.T.S. No: 42 A

MAP No: 1

2.5481

42A01SE8908 2.5481 EBY

LENORA EXPLORATION

AIRBORNE ELECTROMAGNETIC SURVEY

PROFILES - 955 Hz (coaxial)

KIRKLAND LAKE AREA

ONTARIO

SCALE 1/10,000

1/2 mile

Kilometre

0 330 660 1320

0 100 200 500

DATE: February, 1983

N.T.S. No: 42 A

MAP No: 2

AERODAT LIMITED

KIRKLAND LAKE

48°00'

80°00'

In-phase

Quadrature

p.p.m.

30 20 10 0

N

Dame St.

BOSTON

NORTHLAND

Golf Course

Radio Towers

Gravel Pit

Gas

Rostgmore Beach

ROUND

1010 1020 1030 1040 1050 1060 1070 1080 1090 1100 1110 1120 1130 1140 1150 1160 1170 1180 1190 1200 1210 1220 1230 1240 1250 1260 1270 1280 1290 1300 1310 1320 1330 1340 1350 1360 1370 1380 1390 1400 1410 1420 1430 1440 1450 1460 1470 1480

1050 1100 1000 1050 1113

260

80°00'

LENORA EXPLORATION

AIRBORNE ELECTROMAGNETIC SURVEY

PROFILES - 955 Hz (coaxial)

EBY TWP.

KIRKLAND LAKE AREA

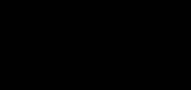
ONTARIO

WEST SHEET

SCALE 1/10,000

0 330 660 1320 1/2 mile

0 100 200 500 1 Kilometre



AERODAT LIMITED

DATE:	February, 1983
N.T.S. No:	42 A
MAP No:	2

42A01SE0006 2.5481 EBY

270

181

NORTHLAND

Golf Course

BM 1030

Gravel Pit

Radio Towers 293

Auto Wrecker

Gravel Pit

Dane Sta

BOSTON CR

Dane

Gas

Rosegrove Beach

Gravel Pit

Gate

Control Valve

Underground

Hershman

Canada

R O U N D

1100

1050

1000

950

1100

1000

1050

1100

1100

1050

1000

1100

I

II

III

IV

V

VI

LEGEND

500 gammas

100 gammas

50 gammas

10 gammas

KIRKLAND LAKE

Virginia

Round

48°00'

80°00'

LENORA EXPLORATION

TOTAL FIELD MAGNETIC MAP

KIRKLAND LAKE AREA

ONTARIO

SCALE 1/10,000

0 330 660 1320 1/2 mile

0 100 200 500 Kilometre

AERODAT LIMITED

DATE: February, 1983

N.T.S. No: 42 A

MAP No: 3

280

80°00'

LENORA EXPLORATION

TOTAL FIELD MAGNETIC MAP

REGISTERED PROFESSIONAL ENGINEER
W. W. BAKER
PROVINCE OF ONTARIO

EBY TWP.

KIRKLAND LAKE AREA

ONTARIO

SCALE 1/10,000

0 330 660 1320 1/2 mile

0 100 200 500 Kilometre

AERODAT LIMITED

DATE:	February, 1983
N.T.S. No:	42 A
MAP No:	3

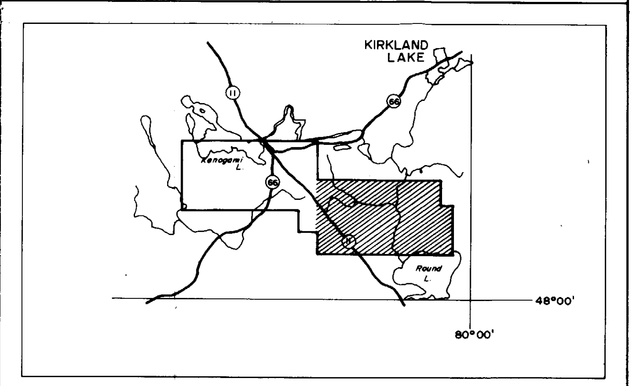
42A01SE0988 2.5481 EBY

LEGEND

50 %

10 %

2 %



LENORA EXPLORATION

VLF-EM TOTAL FIELD CONTOUR MAP
NAA (MAINE) 17.8 KHz.

KIRKLAND LAKE AREA
ONTARIO

SCALE 1/10,000

0 330 660 1320 1/2 mile

0 100 200 500 Kilometre

AERODAT LIMITED

DATE: February, 1983

N.T.S. No: 42 A

MAP No: 4

LOCATION MAP

AIRBORNE MAG., V.L.F., E.M. SURVEYS

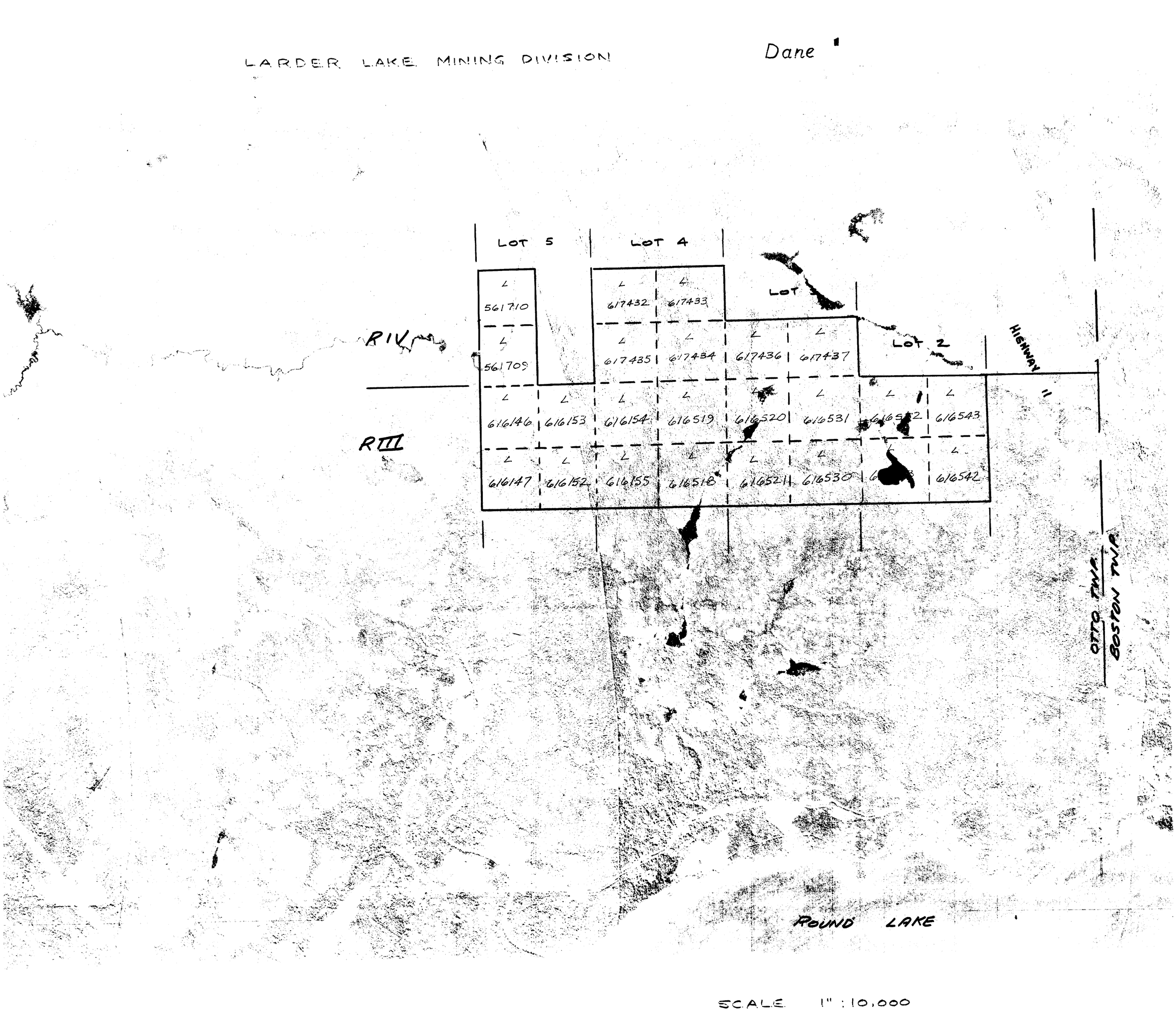
FOR

LENORA EXPLORATION LTD.

OTTO TWP.

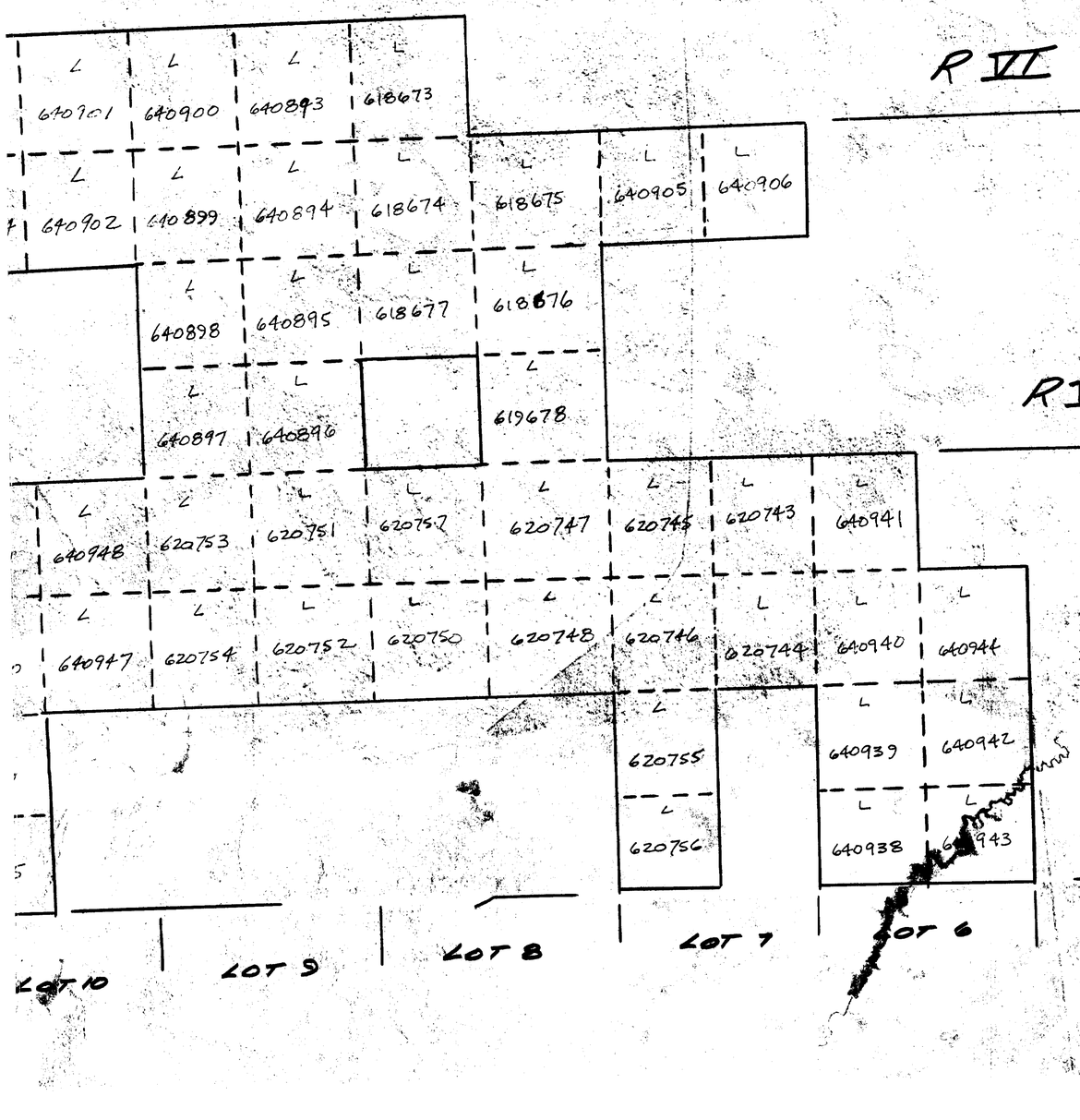
LARDER LAKE MINING DIVISION

Dane



SCALE 1" : 10,000

KENOGAMI LAKE



LOCATION MAP

AIRBORNE MAG., V.L.F., E.M. SURVEYS

FOR

LENORA EXPLORATION LTD.

EBY TWP.

LARDER LAKE MINING DIVISION

N

1" = 10,000

