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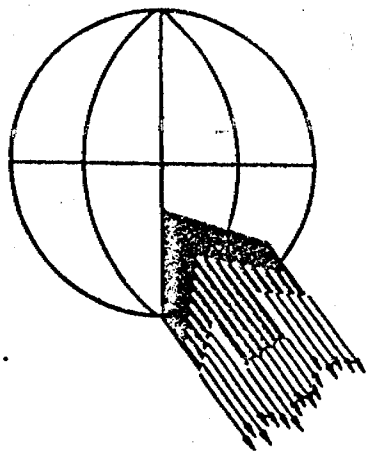
010

AIRBORNE ELECTROMAGNETIC SURVEY

ROBISON MINES LTD,

JAMIESON TWP. AREA, ONTARIO

FILE NO: 17018



QuestorSurveysLimited,20CansoRd.,Rexdale,Ontario,Canada.

INTRODUCTION

This report contains our interpretation of the results of an airborne electromagnetic survey flown in the Jamieson Township Area, Ontario, on April 29 and May 2, 1975. A brief description of the survey procedure together with recommendations for ground follow-up is included.

The survey totalled 265 line miles and was performed by Questor Surveys Limited. The survey aircraft was a Sky-van C-FQSL and the operating base was Timmins, Ontario.

The area outline is shown on a 1:250,000 map at the end of this report. This is part of the National Topographic Series sheet number 42A.

MAP COMPILATION

The base map is an uncontrolled mosaic constructed from Ontario Department of Lands & Forests 1" = ¼ mile photographs. The mosaic was reproduced at a scale of 1" equals 1320 feet on stable transparent film from which white prints can be made.

Flight path recovery was accomplished by comparison of the prints of the 35mm film with the mosaic in order to locate the fiducial points. These points are approximately 4000 feet apart.

SURVEY PROCEDURE

Terrain clearance was maintained as close to 400 feet as possible, with the E.M. Bird at approximately 150 feet above the ground. A normal S-pattern flight path using approximately one mile turns was used. The equipment operator logged the flight details and monitored the instruments.

A line spacing of 660 feet was used.

INTERPRETATION AND RECOMMENDATIONS

A number of anomalous areas were located as a result of the INPUT survey. However, most of them can be attributed to the presence of conductive overburden. These areas display broad, fast decaying E.M. responses.

The following geological and aeromagnetic maps were available to the author to assist in a geological-geophysical interpretation.

P. 633 Kamiskotia - Whitesides Area

P. 677 Jamieson Township

P. 695 Jamieson Township

P. 696 Loveland Township

P. 697 MacDiarmid Township

Aeromagnetic Map 2300 G

AREAS 1 to 3 are all very weak and probably are due to conductive overburden. No further work is warranted.

A grid was set up covering AREA 4 by Mespi Mines Limited. Three drill holes, indicated on Preliminary Geological Map No. P. 677, were put down in a south-westerly direction. The weak anomalies appear to be correlating with a peridotite plug. The mineralization, if any, is not known to the author.

AREA 5 correlates with an area that was worked on by Chance Mining and Exploration Co. They did not intercept these two anomalies on the ground. The rocktypes appear to be mafic and ultramafic intrusive rocks (P. 695). The anomalies are quite weak but they do have direct magnetic correlation, the latter, of course, being due to the ultramafic rocks. Disseminated sulphides could be the cause of the E. M. responses. The zone should be treated as a low priority target.

The anomalies in AREAS 6, 7 and 8 are very poor, displaying fast decay rates. They appear to be overburden responses and, as such, no further work is suggested.

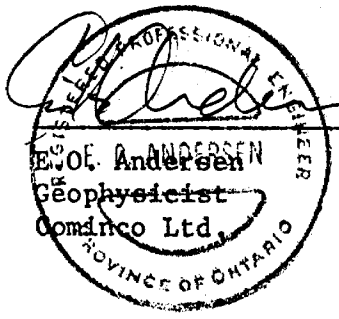
The only anomaly that looks like a bedrock conductor is intercept 66A. Unfortunately, it appears that this anomaly has been drilled. Referring to Map P. 677, Terra Nova Explorations set up a grid over this ground and put the drill hole down on the zone. The mineralization intercepted is not known to the author. A little further to the west, Mespi Mines Limited put down a drill hole and intercepted pyrite and pyrrhotite. The geology in the vicinity of intercept 66A has been described as being tuff and agglomerate.

Report by: _____

R.J. de Carle
Geophysicist
Questor Surveys Ltd.

Endorsed by: _____

E.O. Andersen
Geophysicist
Cominco Ltd.



APPENDIX

EQUIPMENT

The aircraft are equipped with Mark VI INPUT (R) airborne E.M. systems and Barringer AM-104 or AM-101A proton precession magnetometers. Radar altimeters are used for vertical control. The outputs of these instruments together with fiducial timing marks are recorded by means of galvanometer type recorders using light sensitive paper. Thirty-five millimeter continuous strip cameras are used to record the actual flight path.

(I) BARRINGER/QUESTOR MARK VI INPUT (R) SYSTEM

The Induced Pulse Transient (INPUT) system is particularly well suited to the problems of overburden penetration. Currents are induced into the ground by means of a pulsed primary electromagnetic field which is generated in a transmitting loop around the aircraft. By using half sine wave current pulses and a loop of large turns-area, the high output power needed for deep penetration is achieved.

The induced current in a conductor produces a secondary electromagnetic field which is detected and measured after the termination of each primary pulse. Detection is accomplished by means of a receiving coil towed behind the aircraft on four hundred feet of cable,

and the received signal is processed and recorded by equipment in the aircraft. Since the measurements are in the time domain rather than the frequency domain common to continuous wave systems, interference effects of the primary transmitted field are eliminated. The secondary field is in the form of a decaying voltage transient originating in time at the termination of the transmitted pulse. The amplitude of the transient is, of course, proportional to the amount of current induced into the conductor and, in turn, this current is proportional to the dimensions, the conductivity and the depth beneath the aircraft.

The rate of decay of the transient is inversely proportional to conductivity. By sampling the decay curve at six different time intervals, and recording the amplitude of each sample, an estimate of the relative conductivity can be obtained. By this means, it is possible to discriminate between the effects due to conductive near-surface materials such as swamps and lake bottom silts, and those due to genuine bedrock sources. The transients due to strong conductors such as sulphides exhibit long decay curves and are therefore commonly recorded on all six channels. Sheet-like surface materials, on the other hand, have short decay curves and will normally only show a response in the first two or three channels.

The samples, or gates, are positioned at 260, 480, 755, 1100, 1575 and 2100 micro-seconds after the cessation of the pulse. The widths of the gates are 225, 225, 320, 410, 500 and 540 micro-seconds respectively.

For homogeneous conditions, the transient decay will be exponential and the time constant of decay is equal to the time difference at two successive sampling points divided by the log ratio of the amplitudes at these points.

(II) BARRINGER AM-104 OR AM-101A PROTON PRECESSION MAGNETOMETER

The magnetometers which measure the total magnetic field have a sensitivity of 5 gammas and a range from 20,000 gammas to 100,000 gammas.

Because of the high intensity field produced by the INPUT transmitter, the magnetometer results are recorded on a time-sharing basis. The magnetometer head is energized while the transmitter is on, but the read-out is obtained during a short period when the transmitter is off. Using this technique, the head is energized for 1.15 seconds and then the transmitter is switched off for 0.15 seconds while the precession frequency is being recorded and converted to gammas. Thus a magnetic reading is taken every 1.3 seconds.

DATA PRESENTATION

The symbols used to designate the anomalies are shown in the legend on each map sheet, and the anomalies on each line are lettered in alphabetical order in the direction of flight. Their locations are plotted with reference to the fiducial numbers on the analog record.

A sample record is included to indicate the method used for correcting the position of the E.M. Bird and to identify the parameters that are recorded.

All the anomaly locations, magnetic correlations, conductivity-thickness values and the amplitudes of channel number 2 are listed on the data sheets accompanying the final maps.

GENERAL INTERPRETATION

The INPUT system will respond to conductive overburden and near-surface horizontal conducting layers in addition to bedrock conductors. Differentiation is based on the rate of transient decay, magnetic correlation and the anomaly shape together with the conductor pattern and topography.

Power lines sometimes produce spurious anomalies but these can be identified by reference to the monitor channel.

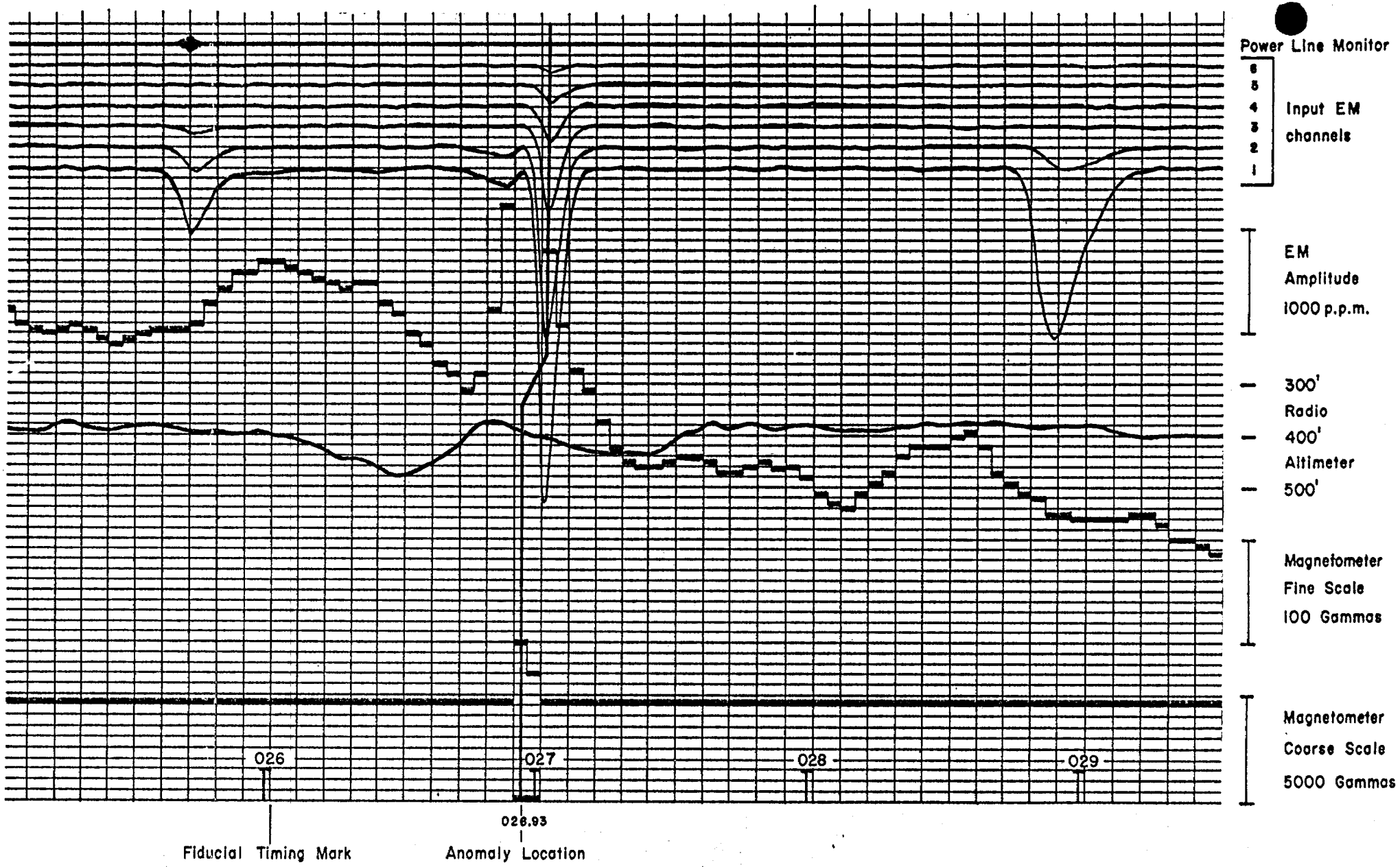
Railroad and pipeline responses are recognized by studying the film strips.

Graphite or carbonaceous material exhibits a wide range of conductivity. When long conductors without magnetic correlation are located on or parallel to known faults or photographic linears, graphite is most likely the cause.

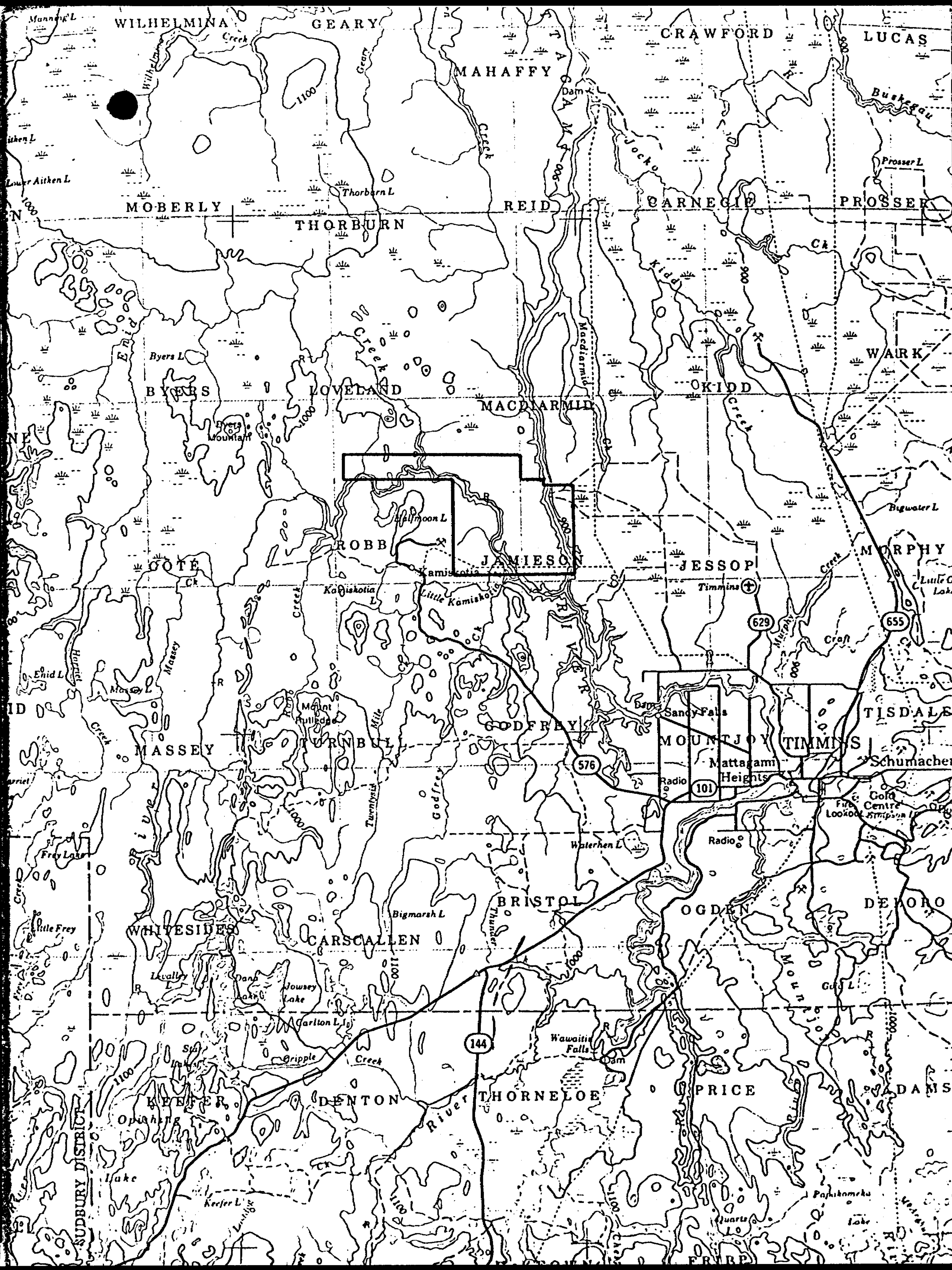
Contact zones can often be predicted when anomaly trends coincide with the lines of maximum gradient along a flanking magnetic anomaly. It is unfortunate that graphite can also occur as relatively short conductors and produce attractive looking anomalies. With no other information than the airborne results, these must be examined on the ground.

Serpentinized peridotites often produce anomalies with a character that is fairly easy to recognize. The conductivity which is probably caused in part by magnetite, is fairly low so that the anomalies often have a fairly large response on channel #1; they decay rapidly, and they have strong magnetic correlation. INPUT E. M. anomalies over massive magnetites show a relationship to the total Fe content. Below 25 - 30%, very little or no response at all is obtained, but as the percentage increases the anomalies become quite strong with a characteristic rate of decay which is usually greater than that produced by massive sulphides.

Commercial sulphide ore bodies are rare, and those that respond to airborne survey methods usually have medium to high conductivity. Limited lateral dimensions are to be expected and many have magnetic correlation caused by magnetite or pyrrhotite. Provided that the ore bodies do not occur within formational conductive zones as mentioned above, the anomalies caused by them will usually be recognized on an E.M. map as priority targets.



Representative INPUT, Magnetometer and Altimeter Recording


WILHELMINA
GEARY
CRAWFORD
LUCAS
MAHAFFY
MOBERLY
THORBURN
REID
CARNEGIE
PROSSER
WARK
BYERS
LOVELAND
MACDIARMID
KIDD
ROBB
JAMIESON
JESSOP
MORPHY
COTE
Timmins
Kamiskotia
Sandy Falls
MASSEY
TURNBULL
GODFREY
MOUNTJOY
TIMMINS
TISDALE
Schumacher
Mattagami Heights
Gold Centre
WHITESIDES
CARSCALLEN
BRISTOL
OGDEN
DELORO
KEEFER
DENTON
THORNELOE
PRICE
ADAMS
SUDBURY DISTRICT
Halfmoon L
Thorburn L
Byers L
Byers Mountain
Enid L
Massey L
Frey Lake
Little Frey
Mount Rutledge
Bigmarsh L
Waterhen L
Jowsey Lake
Carlton L
Wawaitin Falls
Keefer L
Prosser L
Bigwater L
576
101
144
629
655

ANOM*	FID	CHS	CH2.AMP PPM	MHOS	MAG	VALUE
1A	57.70	4	1700	1	57.60	800
2A	819.42	4	1525	1	819.45	620
2B	824.24	3	175	1	824.35	75
3A	69.15	3	150	1	68.95	100
4A	82.10	2	150	NC	81.90	110
4B	86.90	4	2000	1	86.70	40
5A	75.60	4	1325	1	75.75	25
5B	76.10	4	2550	1	76.30	35
5C	80.75	3	200	1	80.90	95
6A	107.57	4	2050	1	107.40	100
6B	107.68	4	1600	1	0.00	0
7A	117.12	2	100	NC	117.20	70
7B	121.70	4	1550	1	121.50	120
8A	99.24	4	750	1	99.35	110
8B	99.40	3	800	1	0.00	0
9A	524.42	5	550	6	524.40	20
10A	538.40	4	500	3	538.50	20
12A	556.15	3	275	1	556.15	55
13A	523.63	4	300	4	523.45	20
14A	568.73	2	100	NC	568.70	90
14B	569.10	3	275	1	569.15	35
14C	573.00	4	525	1	572.95	250
15A	533.10	4	1000	1	533.05	230
15B	537.90	3	300	1	537.80	30
16A	583.00	3	200	3	583.00	90
16B	583.27	3	200	1	583.25	20
16C	588.42	4	1700	1	588.50	185
17A	551.42	3	125	1	551.55	90
18A	602.40	5	1900	1	602.45	200
20A	616.04	4	1575	1	616.10	200
22A	624.60	4	800	1	0.00	0
22B	625.10	4	1150	1	624.95	350
22C	627.22	4	1300	1	627.30	190
23A	589.64	4	1100	1	589.85	170
24A	661.03	3	925	1	661.05	100
31A	643.97	3	450	1	644.10	40
33A	712.05	3	225	1	711.95	40
35A	836.70	3	325	2	836.55	35
36A	828.47	3	300	2	828.25	20
36B	830.29	3	325	2	0.00	0
37A	848.01	3	175	1	848.10	70
38A	861.41	3	200	3	861.60	25
40A	872.49	3	650	1	872.60	50
41A	885.42	3	600	1	0.00	0
41B	885.70	3	575	1	0.00	0
41C	886.10	3	475	1	0.00	0
42A	857.79	3	700	1	857.65	130
45A	921.80	3	825	1	0.00	0
46A	883.43	4	950	1	883.70	45
47A	936.85	2	100	NC	936.95	110
48A	895.03	2	100	NC	894.95	45
50A	913.34	4	800	1	913.55	155
51A	963.76	3	775	1	963.90	170
52A	929.90	3	1000	1	0.00	0
52B	930.12	4	725	3	930.15	320
52C	930.45	4	1225	1	0.00	0
53A	974.10	4	700	1	0.00	0
54A	938.64	3	300	1	938.75	140

ANOM	FID	CHS	CH2.AMP PPM	MHOS	MAG	VALUE
54B	[illegible].48	3	925	1	0.00	0
56A	[illegible].66	3	750	1	0.00	0
56B	961.50	3	650	1	0.00	0
57A	8.40	4	700	1	8.50	80
57B	8.74	3	600	1	0.00	0
57C	9.00	3	550	1	0.00	0
58A	969.40	3	1000	1	0.00	0
58B	969.90	3	450	1	969.90	60
58C	972.30	3	500	1	972.50	30
59A	15.71	3	400	1	15.85	50
60A	987.17	4	900	1	987.20	260
61A	997.70	4	900	1	997.75	370
62A	31.52	3	600	1	31.65	550
63A	10.20	4	950	2	10.20	600
63B	13.01	3	300	1	0.00	0
64A	20.80	3	600	1	0.00	0
64B	22.50	4	750	1	0.00	0
66A	42.70	6	900	8	42.80	180
66B	43.60	4	2100	1	0.00	0
66C	43.77	4	1900	1	0.00	0
67A	32.26	4	700	1	0.00	0
67B	33.02	4	1250	1	33.00	440
67C	33.33	4	750	1	0.00	0
68A	47.80	4	1000	1	0.00	0
68B	48.14	4	850	1	48.20	170
68C	50.82	3	475	1	0.00	0
71A	870.46	3	750	1	0.00	0

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900

File 2.1887

RECEIVED by hand
AUG 13 1975
PROJECTS UNIT

TO BE ATTACHED AS AN APPENDIX TO TECHNICAL REPORT
FACTS SHOWN HERE NEED NOT BE REPEATED IN REPORT
TECHNICAL REPORT MUST CONTAIN INTERPRETATION, CONCLUSIONS ETC.

Type of Survey Airborne EM & Mag. - combined

Township or Area Robb, Jamieson, Loveland, MacDiarmid

Claim holder(s) Robison Mines Ltd.

Author of Report R.J. de Carle

Address Questor Surveys Ltd., 20 Canso Rd., Rexdale, Ont.

Covering Dates of Survey April 29, 1975 to June 1975
(linecutting to office)

Total Miles of Line cut

SPECIAL PROVISIONS CREDITS REQUESTED

ENTER 40 days (includes line cutting) for first survey.

ENTER 20 days for each additional survey using same grid.

	DAYS per claim
Geophysical	
-Electromagnetic	
-Magnetometer	
-Radiometric	
-Other	
Geological	
Geochemical	

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

X Magnetometer See attached schedules, Electromagnetic Radiometric
(enter days per claim)

DATE: 13 Aug 75 SIGNATURE: Author of Report or Agent

PROJECTS SECTION

Res. Geol. Qualifications L.I.D. 2.259

Previous Surveys

Checked by date

GEOLOGICAL BRANCH

Approved by date

GEOLOGICAL BRANCH

Approved by date

OFFICE USE ONLY

MINING CLAIMS TRAVERSED
List numerically

(prefix) (number)

See attached schedules

LOVELAND Twp

13.5 x 40 = 540 ÷ 28

27 days each mag + em

JAMIESON and MACDIARMID

116.5 x 40 = 4660 ÷ 118

38 days each mag

43 x 40 = 1720 ÷ 113

30 days each mag

116 claims with 80 days

27 claims with 40 days.

TOTAL CLAIMS 143

If space insufficient, attach list

Show instrument technical data in each space for type of survey submitted or indicate "not applicable"

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS

Number of Stations _____ Number of Readings _____

Station interval _____

Line spacing _____

Profile scale or Contour intervals _____

(specify for each type of survey)

MAGNETIC

Instrument _____

Accuracy - Scale constant _____

Diurnal correction method _____

Base station location _____

_____

ELECTROMAGNETIC

Instrument _____

Coil configuration _____

Coil separation _____

Accuracy _____

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

Frequency _____

(specify V.L.F. station)

Parameters measured _____

GRAVITY

Instrument _____

Scale constant _____

Corrections made _____

_____

Base station value and location _____

_____

Elevation accuracy _____

INDUCED POLARIZATION – RESISTIVITY

Instrument _____

Time domain _____ Frequency domain _____

Frequency _____ Range _____

Power _____

Electrode array _____

Electrode spacing _____

Type of electrode _____

SELF POTENTIAL

Instrument _____ Range _____

Survey Method _____

_____

Corrections made _____

_____

RADIOMETRIC

Instrument _____

Values measured _____

Energy windows (levels) _____

Height of instrument _____ Background Count _____

Size of detector _____

Overburden _____

(type, depth – include outcrop map)

OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

Type of survey _____

Instrument _____

Accuracy _____

Parameters measured _____

_____

Additional information (for understanding results) _____

_____

_____

AIRBORNE SURVEYS

Type of survey(s) Airborne EM and magnetics - combined

Instrument(s) Barringer/Questor Mark VI, Input System & Barringer AM-104 Proton Precession Magnetometer.

(specify for each type of survey)

Accuracy Magnetometer: ±5 gammas; EM system: [redacted], ± one part per 10,000

(specify for each type of survey)

Aircraft used Skyvan C-FQSL

Sensor altitude 150 feet

Navigation and flight path recovery method Visual Navigation from Photomosaic

Recovery by comparison of prints of 35 mm film with mosaic to locate fiducial points.

Aircraft altitude 400 feet Line Spacing 660 feet

Miles flown over total area 265 Over claims only 130 (13.5 - 116.5)

GEOCHEMICAL SURVEY – PROCEDURE RECORD

Numbers of claims from which samples taken _____

_____

_____

Total Number of Samples _____

Type of Sample _____
(Nature of Material)

Average Sample Weight _____

Method of Collection _____

_____

Soil Horizon Sampled _____

Horizon Development _____

Sample Depth _____

Terrain _____

_____

Drainage Development _____

Estimated Range of Overburden Thickness _____

_____

_____

SAMPLE PREPARATION
(Includes drying, screening, crushing, ashing)

Mesh size of fraction used for analysis _____

_____

_____

_____

General _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

ANALYTICAL METHODS

Values expressed in: per cent ☐
p. p. m. ☐
p. p. b. ☐

Cu, Pb, Zn, Ni, Co, Ag, Mo, As, (circle)

Others _____

Field Analysis (_____ tests)

Extraction Method _____

Analytical Method _____

Reagents Used _____

Field Laboratory Analysis

No. (_____ tests)

Extraction Method _____

Analytical Method _____

Reagents Used _____

Commercial Laboratory (_____ tests)

Name of Laboratory _____

Extraction Method _____

Analytical Method _____

Reagents Used _____

General _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

CLAIM NUMBER	DAYS CREDIT FOR AEM	DAYS CREDIT FOR AMAG	TOTAL CREDIT CLAIMED
P 372386	40	40	80
P 372387	40	40	80
P 372388	40	40	80
P 372389	40	40	80
P 372390	40	40	80
P 372391	40	40	80
P 372392	40	40	80
P 372393	40	40	80
P 372394	40	40	80
P 372395	40	40	80
P 372396	40	40	80
P 372397	40	40	80
P 372398	40	40	80
P 372399	40	40	80
P 372400	40	40	80
P 372401	40	40	80
P 372402	40	40	80
P 372403	40	40	80
P 372417	20	20	40
P 372418	20	20	40
P 372419	20	20	40
P 372420	20	20	40
P 372421	20	20	40
P 372422	20	20	40
P 372423	20	20	40
P 372424	20	20	40
P 372425	20	20	40
P 372426	20	20	40
P 372427	20	20	40
P 372428	20	20	40
P 413099	40	40	80
P 413100	40	40	80
P 413101	40	40	80

CLAIM NUMBER	DAYS CREDIT FOR AEM	DAYS CREDIT FOR AMAG	TOTAL CREDIT CLAIMED
P 372339	40	40	80
P 372340	40	40	80
P 372341	40	40	80
P 372342	40	40	80
P 372343	40	40	80
P 372344	40	40	80
P 372345	40	40	80
P 372346	40	40	80
P 372347	40	40	80
P 372348	40	40	80
P 372349	40	40	80
P 372350	40	40	80
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P 372361	40	40	80
P 372362	40	40	80
P 372363	40	40	80
P 372364	40	40	80
P 372365	40	40	80
P 372376	20	20	40
P 372377	20	20	40
P 372378	20	20	40
P 372379	20	20	40
P 372380	40	40	80
P 372381	40	40	80
P 372382	40	40	80
P 372383	40	40	80
P 372384	40	40	80
P 372385	40	40	80

CLAIM NUMBER	DAYS CREDIT FOR AEM	DAYS CREDIT FOR AMAG	TOTAL CREDIT CLAIMED
P 372207	20	20	40
P 372208	20	20	40
P 372209	20	20	40
P 372210	20	20	40
P 372211	20	20	40
P 372212	20	20	40
P 372213	20	20	40
P 372214	20	20	40
P 372215	20	20	40
P 372216	20	20	40
P 372217	20	20	40
P 372256	40	40	80
P 372262	40	40	80
P 372272	40	40	80
P 372273	40	40	80
P 372274	40	40	80
P 372275	40	40	80
P 372279	40	40	80
P 372280	40	40	80
P 372281	40	40	80
P 372282	40	40	80
P 372283	40	40	80
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P 372289	40	40	80
P 372290	40	40	80
P 372291	40	40	80
P 372292	40	40	80
P 372296	40	40	80
P 372297	40	40	80
P 372298	40	40	80
P 372299	40	40	80
P 372300	40	40	80
P 372301	40	40	80

(1)

CLAIM NUMBER	DAYS CREDIT FOR AEM	DAYS CREDIT FOR AMAG	TOTAL CREDIT CLAIMED
P 372302	40	40	80
P 372303	40	40	80
P 372305	40	40	80
P 372306	40	40	80
P 372307	40	40	80
P 372308	40	40	80
P 372309	40	40	80
P 372310	40	40	80
P 372311	40	40	80
P 372312	40	40	80
P 372313	40	40	80
P 372314	40	40	80
P 372315	40	40	80
P 372316	40	40	80
P 372317	40	40	80
P 372318	40	40	80
P 372319	40	40	80
P 372320	40	40	80
P 372321	40	40	80
P 372322	40	40	80
P 372323	40	40	80
P 372324	40	40	80
P 372325	40	40	80
P 372326	40	40	80
P 372327	40	40	80
P 372328	40	40	80
P 372329	40	40	80
P 372330	40	40	80
P 372331	40	40	80
P 372332	40	40	80
P 372333	40	40	80
P 372334	40	40	80
P 372335	40	40	80
P 372336	40	40	80
P 372337	40	40	80
P 372338	40	40	80

Macdiarmid Twp.- M. 294

Robb Twp.- M.309

Jessop Twp. - M.289

Godfrey Twp.- M. 284

THE TOWNSHIP OF 2.1887

JAMIESON

DISTRICT OF COCHRANE

PORCUPINE 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.

Flooding rights to areas along Mattagami River to HEPC - L O 7085

This township lies within the Municipality of City of Timmins

· MINING LANDS ·
DATE OF ISSUE
AUG 15 1975
MINISTRY OF NATURAL RESOURCES

PLAN NO.- M.288

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

42A12NE0547 2.1887 LOVELAND

200

Thorburn Twp. (M.601)

Byers Twp. (M.265)

Macdiarmid Twp. (M.294)

Robb Twp. (M.309)

THE TOWNSHIP OF 2.1887

LOVELAND

DISTRICT OF COCHRANE

PORCUPINE 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

This township lies within the Municipality of CITY of TIMMINS.

- MINING LANDS -
DATE OF ISSUE
AUG 15 1975
MINISTRY OF NATURAL RESOURCES

PLAN NO. M-293

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

42A12NE0647 2 1887 LOVELAND

210

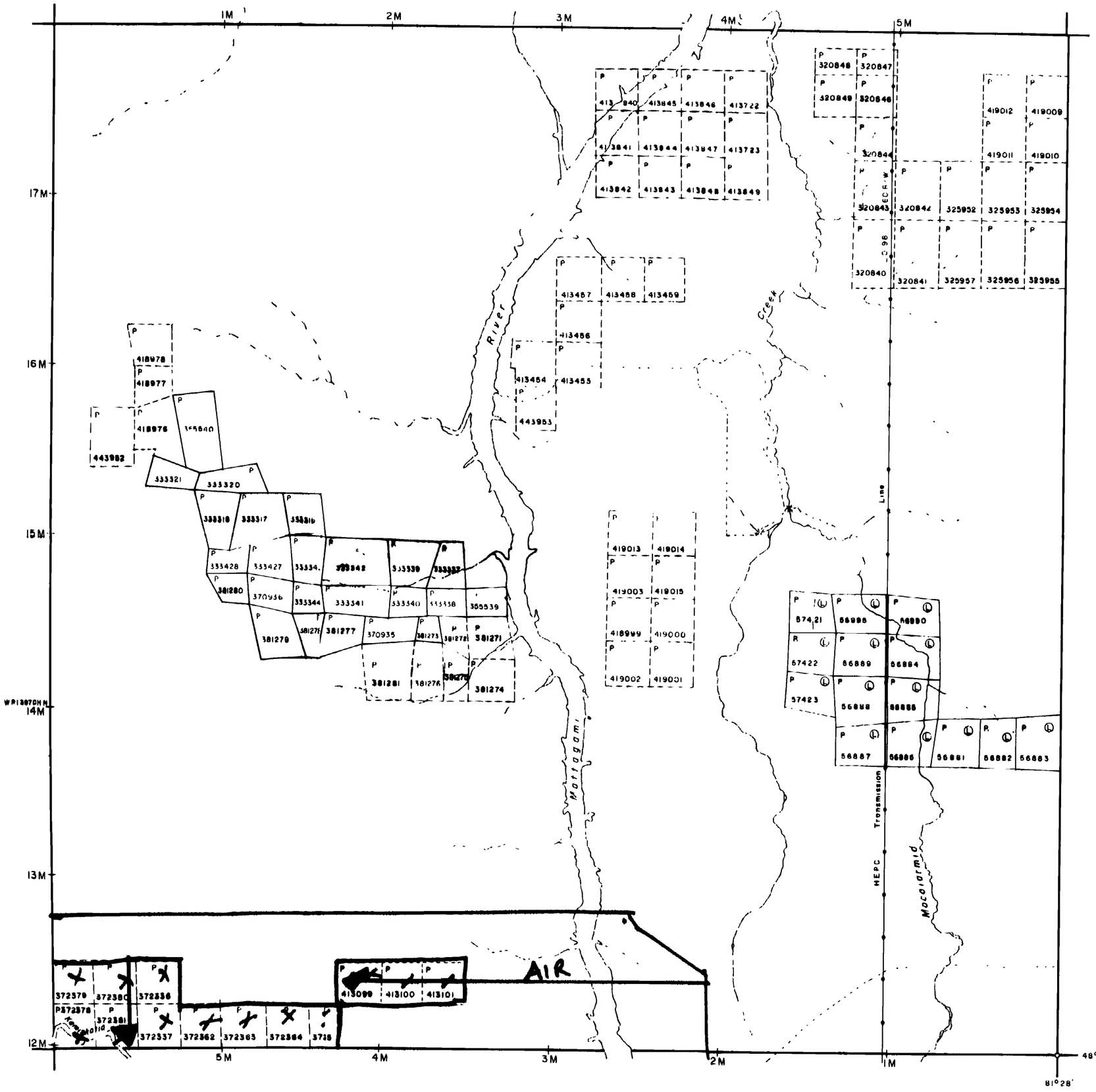
Karl K

REID TWP. - M.575

LOVELAND TWP. - M.293

KIDD TWP. - M.291

JAMIESON TWP. - M.288



THE TOWNSHIP
OF
2.1887

MACDIARMID

DISTRICT OF
COCHRANE

PORCUPINE
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.

Flooding rights to areas along Mattagami River reserved to H E P C - L O 7085

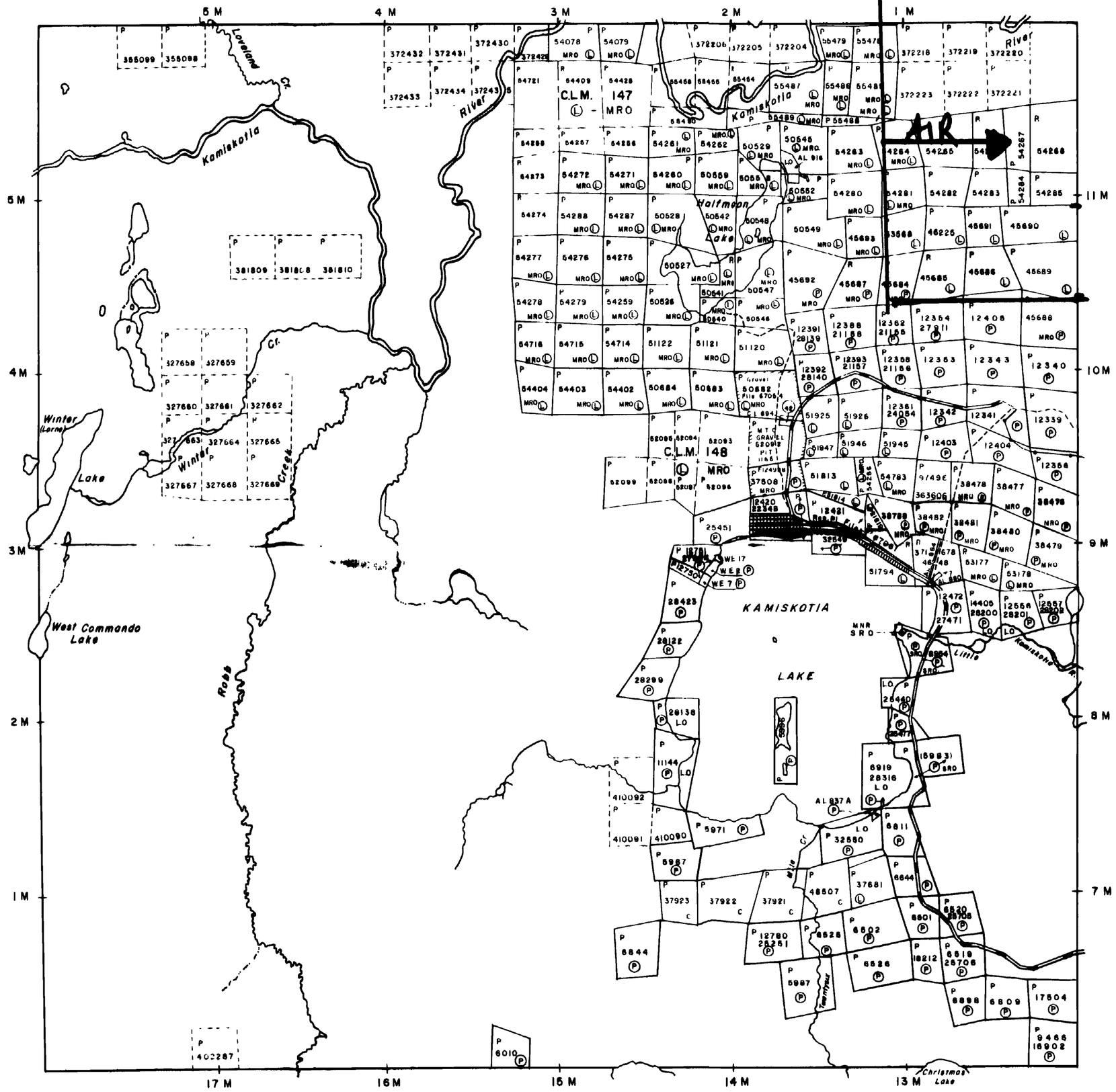
This township lies within the Municipality of CITY of TIMMINS.

PLAN NO M.294

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

220

LOVELAND TP. M.293



THE TOWNSHIP OF 2.1887

ROBB

DISTRICT OF COCHRANE

PORCUPINE 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 Section 42 of the Mining Act (R.S.O. 1960), Sec. 43 (R.S.O. '70)

Order No.	File	Date	Disposition
(42)	67054	16/3/66	S.R.O.

This township lies within the Municipality of CITY of TIMMINS.

- MINING LANDS -
DATE OF ISSUE
AUG 15 1975
MINISTRY OF NATURAL RESOURCES

PLAN NO.- M.309

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

42A12NE0547 2.1887 LOVELAND

230

JPyK

LOVELAND TWP.
MACDIARMID TWP.
ROBB TWP.
JAMIESON TWP.
LOVELAND TWP.
ROBB TWP.
MACDIARMID TWP.
JAMIESON TWP.

LOVELAND TWP
ROBB TWP
MACDIARMID TWP
JAMIESON TWP
KAMISKOTIA LAKE
LITTLE KAMISKOTIA RIVER
KAMISKOTIA RIVER
HWY 576

LOCATION MAP Scale: 1 inch = 100 miles

LEGEND

L Leased ground
P Patent ground

CLAIMS COVERED BY FLIGHT LINES IN TWO DIRECTIONS - 40 DAYS CLAIMED

CLAIMS COVERED BY FLIGHT LINES IN ONE DIRECTION - 20 DAYS CLAIMED

0 1/2 1 1 1/2 miles

42A12NE0047 2.1887 LOVELAND

240

ISOMAGNETIC INTERVAL

(TOTAL FIELD)

25 GAMMA CONTOUR LINE
50 GAMMA CONTOUR LINE
100 GAMMA CONTOUR LINE
500 GAMMA CONTOUR LINE

MAGNETIC DEPRESSION

FLIGHT ALTITUDE 400' ABOVE TERRAIN

Legend

- 6 Channel Anomaly
- 5 Channel Anomaly
- 4 Channel Anomaly
- 3 Channel Anomaly
- 2 Channel Anomaly

Anomaly Letter — B.S. 1800 — Apparent Conductivity - Width (Half Amplitude, p.p.m.)

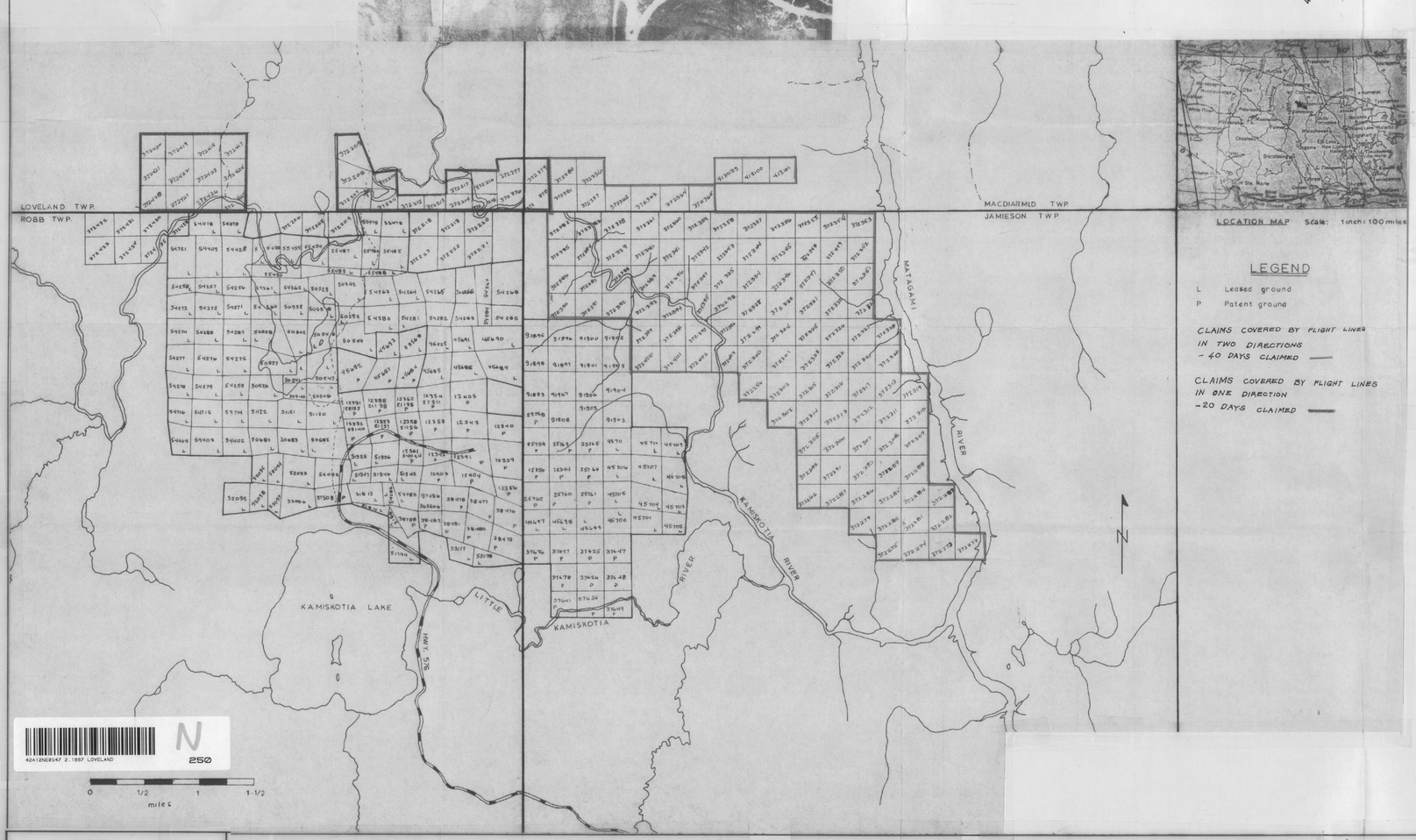
REGISTERED PROFESSIONAL ENGINEER E. G. ANDERSEN

QUESTOR SURVEYS LIMITED
Airborne Magnetometer Survey
FOR
RODISON MINES LTD

JAMIESON TWP AREA
MAGNETIC SURVEY
2.1887

Scale—1":1320 feet

Drawn By	Dataplotting
Dates Flown	April - May, 1975
Flight Path Recovery	R.K.
Data Reduction	Dataplotting
Completed	June, 1975
Contoured	Dataplotting
File No.	17018



LOCATION MAP Scale: 1 inch: 100 miles

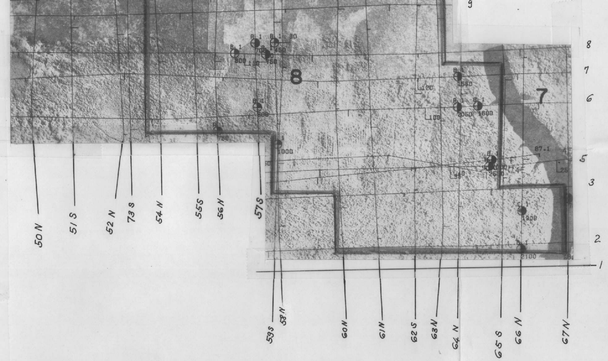
LEGEND

L Leased ground

P Patent ground

CLAIMS COVERED BY FLIGHT LINES IN TWO DIRECTIONS - 40 DAYS CLAIMED ——

CLAIMS COVERED BY FLIGHT LINES IN ONE DIRECTION - 20 DAYS CLAIMED ——



Legend

- 6 Channel Anomaly
- 5 Channel Anomaly
- 4 Channel Anomaly
- 3 Channel Anomaly
- 2 Channel Anomaly

Anomaly Letter — B-S 1800 — Apparent Conductivity - Width

Ch 2 Amplitude, p.p.m.

QUESTOR SURVEYS LIMITED

Airborne Magnetometer Survey

FOR

ROBISON MINES LTD

JAMIESON TWP AREA

AIRBORNE EM SURVEY

2.1887

Scale—1":1320 feet

Drawn By	Dataplotting
Dates Flown	April-May, 1975
Flight Path Recovery	R.K
Data Reduction	Dataplotting
Completed	June, 1975
Contoured	Dataplotting
File No.	17018


LOVELAND TWP.
MACDIARMID TWP.
LOVELAND TWP.
ROBB TWP.
MACDIARMID TWP.
JAMIESON TWP.
1
2
3
4
5
8
II
35S
36W
37S
38S
39W
40S
69S
42N
43S
44W
45S
46N
47S
48W
49S