



52I03SE2003 2.20907 NORWOOD LAKE

010

A Report on Airborne Geophysical Surveys
on the Nipigon Plate Property,
of
EAST WEST RESOURCE CORPORATION
Havoc Claim Group

Thunder Bay Mining Division, Ontario
Province of Ontario

2.20907

for
East West Resource Corporation
402 - 905 W Pender Street
Vancouver, British Columbia V6C 1L6

February 17th, 2001

Roger J Cavén, BAsC, P Eng, Consulting Geophysicist
RR# 5, 479 Ocean View Drive, Gibsons, British Columbia, CANADA V0N 1V5
Tel/Fax: (604) 886-0479, e-mail: roger_caven@telus.net (Sunshine Coast)

TABLE OF CONTENTS

Summary	Page 3
Introduction	4
Location and Access	5
Previous Work	5
Property – Description and Location	5
Geological Setting of Host Rocks and Ore	6
General Geology of the Lake Superior – Nipigon Area	6
Geology of the Claim Group	7
Airborne Magnetism (GSC – ODM Database)	7
Airborne EM – Magnetic Test Survey – MEGATEM®	7
Discussion of Results	8
Distribution of Work Performed	8
Conclusions and Recommendations	8
References	9

Certificate of Author

Excerpts from the "Logistics and Processing Report of the Airborne Magnetic and Geotem Electromagnetic Multicoil Survey near Lake Nipigon, Ontario for Canplats Resources Corp." by the Geoterrex – Dighem division of Fugro Airborne Surveys:

- I Introduction
 - II Survey Operations
 - III Quality Control and Compilation Procedures
 - IV Data Processing
 - V Final Products
- Appendix A Field Processing of the Data
Appendix B Geotem® Electromagnetic System

Index map of Canplats properties
Legend for Airborne Interpretation Map
Legend for Profiles
Havoc Airborne Interpretation Map Scale 1:50,000
Havoc Airborne EM – Magnetic Profiles Scale 1:50,000



52I03SE2003 2.20907 NORWOOD LAKE 010C

SUMMARY

East West Resource Corporation holds several groups of claims, including the 233 claim units within the Havoc Lake area within the Nipigon Plate near the west shore of Lake Nipigon, Ontario.

This report deals with the airborne geophysical test survey over the Havoc claims group.

The following information has been abstracted from the "Report on the Nipigon Plate Platinum Group Element – Nickel – Copper Properties, Thunder Bay Mining Division, Ontario, for Canplats Resources Corporation", October 16th, 2000, by R Cavén and K Cunnison ("Canplats Report"):

"The Nipigon Plate – Lake Superior area has been interpreted to be a favourable setting for Noril'sk type PGE bearing massive sulphide deposits. The tectonic setting and geological host rock types are identical to the Noril'sk region. The existence of major copper – nickel deposits in the region such as the Duluth Gabbro complex deposits, and the Great Lakes Nickel deposit within the Crystal Lake Gabbro, as well as the presence of PGE values in a previously unknown ultramafic body (Seagull Pluton) on the south side of Lake Nipigon, suggests that favourable mafic intrusive bodies occur in the Nipigon Plate.

Digital magnetic data coverage over the region has been made available only recently and it is therefore now possible to reprocess this data and filter it in order to recognize discrete mafic intrusive bodies beneath Proterozoic cover. This step was completed prior to acquisition of the claim groups to identify the best geological setting.

The electromagnetic conductors on the claims group are interpreted to reflect disseminated to massive sulphide bodies that are shallow dipping or flat lying at the base of the sills. The very existence of airborne electromagnetic conductors is extremely important since none of the areas have been previously explored and no sulphide bodies were previously known. The location of the conductors fits the model for a Noril'sk type setting.

INTRODUCTION

The Nipigon Plate is one of the largest areas of Proterozoic rocks in the world and it includes the second most extensive area mafic intrusions after the Bushveld Complex in South Africa. Between Thunder Bay in the south to Armstrong in the north, widespread diabase (dolerite) sills of olivine – tholeiite composition called the Logan Sills cover a 200 km by 250 km area (over 40,000 square kilometres). Adjacent to this area, beneath Lake Superior, the Keweenawan flood basalts occur with up to 30 km of thickness. These lavas and the diabase (dolerite) sills are similar in geological setting to the Noril'sk – Talnakh nickel – copper – platinum group metal producing region of north central Siberia.

Within Lake Superior, the Mid-continental Rift extends south-westward to Texas and is the tectonic setting for the flood basalts. A failed arm of the Mid-continental Rift extends northward through the Nipigon Plate and takes the form of the Black Sturgeon Fault. The importance of this fault has now been recognized and has been extended northward another 150 km, by re-interpretation of the aeromagnetic data. It is now apparent that this fault and a series of parallel faults are the main structures that are related to the mafic intrusives of the Logan Sill event, as well as older and younger intrusives. Evidence for the presence of an older rift system in the Lake Nipigon Area was discovered during the course of this investigation which suggests the presence of an early basin, graben, or trough which controlled the deposition of the Sibley sediments and is related to a series of alkali felsic intrusions. This setting should also be explored for Olympic Dam-type mineralization in addition to exploring for Noril'sk type mineralization in the younger mafic intrusions. The older rift system was likely reactivated during the formation of the Mid-Continental Rift.

It has been proposed for the last 10 years that there is a similarity between the Lake Nipigon – Lake Superior region and the Noril'sk area (Naldrett, A J, and Lightfoot, P C (1993), Duzhikov, O A, Distler, V V, Strunin, B M M, Krtychyan, A K, Sherman, M L, Sluzhenikin, S S, and Lurje, A M (1993), Society of Economic Geologists, Special Publication No 2, Giant Ore Deposits. Ed: Whiting, B H, Hodgson, C J, and Mason, R). Naldrett (1993) establishes this fact in a paper presented at Queens University as part of a symposium on Giant Ore Deposits and he concludes: "The Lake Superior area has the correct regional tectonic setting (triple junction and associated rifting), has a widespread development of basalt, and some of the basalts show evidence of chalcophile element depletion. What then is missing from the equation in the Lake Superior area that so far has precluded a "Giant", Noril'sk – type deposit being found there? One obvious point is the lack of recognition of major faults of trans-crustal magnitude, that have served as the locus for ore-bearing magma."

LOCATION AND ACCESS

The Nipigon Plate Havoc Lake property is road accessible via Hwy 527, which links Thunder Bay, Ontario, to Armstrong, Ontario. Locally this paved highway is known as the Spruce Falls road. Local and forestry roads branch off the highway.

PREVIOUS WORK

The only government geophysical surveys are the aeromagnetic surveys shown in the aeromagnetic maps listed in the references of this report, regional mapping by R Sage (1994) of the Ontario Geological Survey (map P963) and M E Coates (1972).

Earlier East West carried out ground geophysical work on the Havoc Lake claims, consisting of line cutting and induced polarization surveys.

PROPERTY – DESCRIPTION AND LOCATION

HAVOC

The Company has acquired a 233 claim unit group on the Havoc Lake claim map, at 49° 57' N latitude and 89° 05' W longitude, approximately 95 km NNE of the Lac des Iles mine, and ~35 km south of Armstrong, Thunder Bay Mining Division. The property is accessed from Hwy 527 by a forestry road and branch roads.

Claim	Units	Recording Date	
1216814	4	Sept 26, 1997	
1216825	4	Sept 26, 1997	
1216826	4	Sept 26, 1997	
1216828	4	Dec 07, 1998	
1216830	2	Sept 26, 1997	
1216831	4	Sept 26, 1997	
1229578	8	Feb 12, 1999	
1229579	16	Feb 12, 1999	
1229582	16	Feb 12, 1999	
1229590	16	Feb 12, 1999	
1229591	14	Feb 12, 1999	
1229592	16	Feb 12, 1999	
1241309	15	Apr 10, 2000	
1241310	14	Apr 10, 2000	
1241311	16	Apr 10, 2000	
1241312	16	Apr 10, 2000	
1241313	16	Apr 10, 2000	
1244283	16	May 12, 2000	
1244284	16	May 29, 2000	
1244285	16	May 29, 2000	Total 20 claims with 233 units, covering 3728 ha.

GEOLOGICAL SETTING OF HOST ROCKS AND ORE.

An extensive area of flood basalt covering and flanking widespread sediments containing sulphate evaporites and local coal measures (methane sources), which are in turn intruded by 30 – 350 m thick dolerite (diabase) sills, characterizes the geological setting of the Noril'sk camp. A major northeast trending fault known as the Noril'sk – Kharayelakh Fault is the main controlling feature that localized the mafic to ultramafic intrusions and dolerite sills. This fault is steeply dipping and is deep seated and may have tapped the mantle. The overall setting is a rift tectonic environment and is proximal to a triple junction of faults where two rift systems meet. All of the above characteristics are found in the Lake Superior – Nipigon area, including a major fault structure (the Black Sturgeon Fault) and a triple junction in Lake Superior associated with the Midcontinental Rift of North America.

GENERAL GEOLOGY OF THE LAKE SUPERIOR – NIPIGON AREA

Sibley Sediments

The Sibley Group of sediments occur on the north shore of Lake Superior and extend north-ward as far as Armstrong, Ontario, and form the base for the Nipigon Plate. This would be roughly a 200 km by 150 km area that has subsequently been intruded and capped by the Logan diabase sills. Age dating by Rb/Sr methods have suggested an age of 1339 +/- 33 Ma, Franklin (1970), however, mapping by Sutcliffe (1987) suggests that an older date is possible for the base of the Sibley. In the vicinity of English Bay on Lake Nipigon fragments of Sibley have been observed by Sutcliffe to be mixed with felsic volcanic fragments that are related to a high level alkali intrusion that yields an age of 1537 Ma. Fragments of a quartzite and grit – shale units were observed in the alkaline porphyry intrusive by Cunnison (Canplats Report), suggesting the Sibley or lower sections existed when the alkali body was intruded. Therefore this suggests that an older rift system existed, as old as 1537 Ma. Tanton (1931), Franklin (1970, 1980, 1982), Cheadle (1986), McIlwaine and Wallace (1976), Wallace (1981), and Sutcliffe (1991) have described the stratigraphy and geological setting of the Sibley in detail.

The importance of the Sibley to the search for PGE – nickel deposits in the Nipigon Plate area is that a source of sulphur is desirable for the generation of sulphide deposits within the mafic – ultramafic bodies. Franklin (1970, 1982) notes that barite occurs in the lower and middle formations (Pass Lake and RosSPORT) and that gypsum and anhydrite occur in the middle and upper formations (RosSPORT and Kama Hill). In addition methane gas and hydrogen sulphide occur, particularly in association with stromatolite horizons in the RosSPORT and Kama Hill formations. It is therefore concluded that abundant sources of sulphur were available to later mafic – ultramafic intrusions to generate sulphide bodies. This same geological setting occurs at the Noril'sk and Talnakh PGE – Ni – Cu mining camps in northern Siberia, C I S (formerly USSR), where sulphate-bearing sediments and coal measures are in contact with mafic intrusions.

Mid Proterozoic Mafic Intrusions

The mid Proterozoic mafic intrusions in the vicinity of the Nipigon Plate consist of two known suites of rocks, an early stage ultramafic – picrite event, the full extent of which is unknown, and the diabase – dolerite Logan Sills which are very extensive, 200 km x 120 to 250 X 200 km. These two events are followed by other mafic intrusives southwest of Thunder Bay, namely the Pigeon River dykes which cut the Logan Sills and the Crystal Lake gabbro – Mollie dyke which cut the Pigeon River dykes. Further away to the east of the Nipigon Plate a series of carbonatite syenite complexes occur such as the Coldwell complex which contain phases of gabbro – norite hosting large low grade copper – PGE values. These intrusions are also related to a failed arm structure that trends northeast from the Midcontinental Rift beneath Lake Superior and are dated at 1.05 billion years, Good P J, and Crockett J H (1994).

The geology of the picrites and Logan sills in the Thunder Bay region has been described by Pye (1953), Blackadar (1954), Geul (1970, 1973).

GEOLOGY OF THE CLAIM GROUP

The property covers a large magnetic anomaly situated at the junction of two major fault structures, the Black Sturgeon Fault and the Paint Lake Fault. A highly altered granitic body, dated at 1537 ma is found on the east side of the property. This type and age of granite is associated with a large copper – uranium – gold deposit in Australia called the Olympic Dam. Future exploration of the property needs to consider this type of setting. The property was originally acquired to cover a mafic dike shaped body and an intrusive that was interpreted from the magnetics to be a possible magmatic sulphide target, which could contain nickel, copper, and platinum group elements.

AIRBORNE MAGNETICS (GSC – ODM DATABASE)

Analysis of the Aeromagnetic Anomalies

The target areas covered by the Company's properties have been selected from aeromagnetic data generated in the 1960's by joint surveys carried out by the Geological Survey of Canada and the Ontario Department of Mines. The original data was recorded in analogue format and the total field readings were published as contoured maps at a scale of 1"=1 mile. More recently this data has been released in digital form. Recognition of major structures on the aeromagnetic maps was done by obtaining the data in the digital form, provided by the Ontario Geological Survey. By creating colour plots and classifying various levels of total field values and generating shadow plots, the positive magnetic anomalies that occur among the widespread negatively polarized diabase sills can be recognized.

AIRBORNE EM – MAGNETIC TEST SURVEY – MEGATEM SYSTEM®

"On February 21st, 2000 a test survey was flown over selected targets in the Nipigon Plate area, Thunder Bay Mining Division, by Fugro NV, Geotrex – Dighem Division, using the high-powered Megatem® System. Megatem® is the latest fixed-wing airborne electromagnetic system to be introduced in the past 15 years. The time-domain EM system was designed to operate at high altitudes as well as to provide exceptional depth penetration and precise target definition, which are achieved through a large and powerful transmitting loop and multiple frequencies and receiver coils. The transmitter loop has an area of 400 square metres with four turns (effective loop area of 1600 square metres) and a dipole moment of over one million ampère-metres squared capable at operating at waveform (pulse) frequencies from 12.5 Hz to 90Hz. The receiver is an improved version of the Geotem® system with receiving coils in three orthogonal directions (two horizontal axes and one vertical axis) and able to acquire both dB/dt (decay of secondary field measured between pulses) and B-field (secondary field measured during pulse on-time) data. The receiver coils with horizontal axes (in direction of flight and across flight direction, respectively) respond to vertical or steeply dipping conductors, whereas the receiver coil with vertical axis responds primarily to horizontal conductors.

The aircraft is a de Havilland Dash 7 (DHC-7) with short takeoff and landing capability suitable for small airports. It has two towed birds, one for the electromagnetic receiver coils, and the other for the magnetometer. The magnetometer is a Scintrex Caesium vapour optically pumped split beam instrument with a 10 Hz sampling rate and 0.01 nT sensitivity and low noise envelope (<0.25 nT). High sensitivity and low noise is also aided by placing the magnetometer in a towed bird rather than in a stinger on the aircraft itself.

The flight lines were set to cover each of the properties with two or more lines. The filled circles represent the highest conductivities."

The Megatem® system is described in detail in the appended material.

Discussion of Results

The airborne survey produced a number of excellent responses on the property. Preliminary interpretation indicates that many conductors may be flat-lying and depths varying from less than 200 metres to more than 300 metres. To the knowledge of the writer there is no conductive sediment, such as graphitic shale, present in the sequence and therefore the conductors are most likely reflecting the existence of sulphides.

The airborne EM results are presented as profiles over the claims, and also as interpreted anomalies on a claim map, both at a scale of 1:50,000, the scale at which the data was delivered by Fugro NV. Some of the flight lines traversed over ground not covered by claims, and the profiles have therefore been presented as sections over the claims only.

DISTRIBUTION OF WORK PERFORMED

The following work has been determined for each claim:

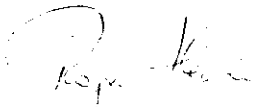
Claim	Units	Recording date	Coverage (km)
1216830	2	Sept 26, 1997	0.7
1229578	8	Feb 12, 1999	3.2
1229579	16	Feb 12, 1999	5.8
1229582	16	Feb 12, 1999	4.4
1229590	16	Feb 12, 1999	5.4
1229591	14	Feb 12, 1999	4.7
1229592	16	Feb 12, 1999	4.7
1241309	15	Apr 10, 2000	3.6 + 4.0 km outside
1241310	14	Apr 10, 2000	2.7 + 2.5 km outside
1241311	16	Apr 10, 2000	6.5
1241313	16	Apr 10, 2000	2.0
1244283	16	May 12, 2000	3.6

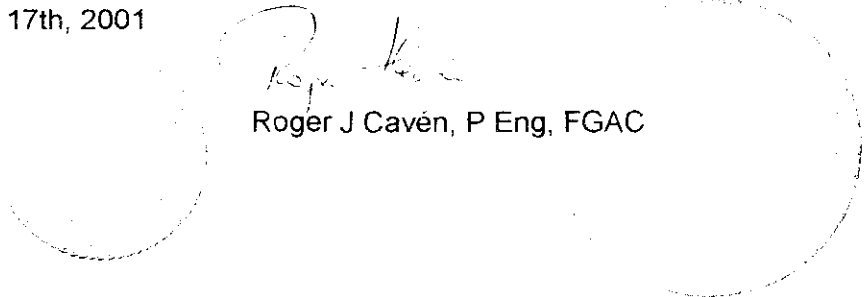
CONCLUSIONS AND RECOMMENDATIONS

The existence of strong airborne EM conductors in the absence of known graphitic occurrences points to the possible presence of massive sulphide deposits on the property. The preliminary interpretation presented immediately after the survey also indicates that the anomalies would be at depths of somewhat less than 200 metres, i.e. 100 – 150 metres, to more than 300 metres, with some appearing to be at a depth of 400 – 500 metres. In order to locate such conductors on the ground would require an EM system capable of penetration to the depths indicated. The shallower conductors may be located with a MaxMin instrument, but the deeper anomalies would best be located or mapped with a time-domain EM system (pulse EM). Ground magnetic surveys would complement the EM surveys to establish the relationships between host rocks and minerals. Fugro NV geophysicists maintain that the Megatem EM does not respond to magnetite, thus leaving the main magnetic anomalies reflecting the host rocks, which would be in the form of mafic intrusives.

Further ground magnetic and induced polarization surveys are recommended for this claim group.

Respectfully submitted February 17th, 2001


Roger J Cavén, P Eng, FGAC



REFERENCES

- Blackadar, R G (1954). Differentiation and assimilation in the Logan Sills. Ph D thesis, University of Toronto.
- Canplats Report: "Report on the Nipigon Plate Platinum Group Element – Nickel – Copper Properties, Thunder Bay Mining Division, Ontario", for Canplats Resources Corporation, formerly International Colby Resources Corporation, by R Cavén and K Cunnison, October 16th, 2000.
- Cavén, Roger J, February 6, 2001. A Report on Geophysical Surveys on the Nipigon Plate Property of Canplats Resources Corporation, Johnspine – Voltaire Claim Group. Submitted for Assessment Work Credits.
- Cheadle, Burns A (1986). Alluvial – playa sedimentation in the lower Keweenawan Sibley Group, Thunder Bay District, Ontario. *Canadian Journal of Earth Sciences*, Vol 23, No 4, p 527 – 542.
- Coates, M E (1972). Geology of the Black Sturgeon River Area, District of Thunder Bay; Ontario Department of Mines and Northern Affairs, Report 98, 41 p, incl maps 2233, 2234, 2235, and 2236, scale 1"= ½ mile.
- Duzhikov, O A, Distler, V V, Strunin, B M M, Krtychyan, A K, Sherman, M L, Sluzhenikin, S S, and Lurje, A M (1993), *Society of Economic Geologists, Special Publication No 2, Giant Ore Deposits*. Ed: Whiting, B H, Hodgson, C J, and Mason, R
- Franklin, J M (1970). Metallogeny of the Proterozoic rocks of the Thunder Bay district, unpublished Ph D thesis, University of Western Ontario, London, 317 p.
- Franklin, J M, McIlwaine, W H, Poulsen, K H, and Wanless, R K (1980). Stratigraphy and depositional setting of the Sibley Group, Thunder Bay district, Ontario, Canada, *Canadian Journal of Earth Sciences*, Vol 17, No 5, p 633 – 651.
- Franklin, J M (ed. 1982). Proterozoic geology of the northern Lake Superior area, *Geol Assoc of Canada Field Trip Guide Book 4*, 71 pages.
- Geul, J J C (1970). Geology of Devon and Pardee Townships and the Stuart Location. Ont Dept of Mines Geology Report 87, accompanying map 2207, re:Great Lakes Nickel Deposit.
- Geul, J J C (1973). Geology of Crooks Township, Jarvis and Prince locations and offshore islands, District of Thunder Bay, Ontario Division of Mines, Geological Report 102, 46 p.
- Good, D J, and Crockett, J H (1994). Genesis of the Marathon Cu – platinum group element deposit, Port Coldwell alkalic complex, Ontario: A mid-continent rift related magmatic sulphide deposit. *Economic Geology*, Vol 89, p 131 – 149.
- McIlwaine, W H, Wallace, H (1976). Geology of the Black Bay Peninsula Area, District of Thunder Bay, Ontario. Ontario Division of Mines, GR 133 incl map 2304, scale 1"=1 mile.
- Naldrett, A J (1993). Ni – Cu – PGE Ores of the Noril'sk Region, Siberia: A Model for Giant Magmatic Sulphide Deposits Associated with Flood Basalts, *in Society of Economic Geologists, Special Publication No 2, Giant Ore Deposits*. Ed: Whiting, B H, Hodgson, C J, and Mason, R.

- Naldrett, A J, and Lightfoot, P C (1993), Society of Economic Geologists, Special Publication No 2, Giant Ore Deposits. Ed: Whiting, B H, Hodgson, C J, and Mason, R
- Pye, E G (1953). A petrographic study of the textures of basic and ultrabasic igneous rocks; unpublished PhD thesis, University of Toronto, Toronto, Ontario, 93p.
- Sage (1998). Operation Ignace- Armstrong, Obonga Lake – Lac des Iles Area, Geology of Area II: Part 1 – Super crustal rocks, Part 2 – Granites, Granite–Super crustal Relationships, OGS Open File Report 5978, 443 p, maps P. 962, and P. 963.
- Sutcliffe, R H (1987). PhD Thesis, University of Western Ontario, London, Ontario.
- Sutcliffe, R H (1991). Proterozoic Geology of the Lake Superior Area *in* Geology of Ontario, OGS Special Volume 4 pt 1, p 627 – 660.
- Tanton, T L (1931). Fort William, Port Arthur, and Thunder Cape map areas, Thunder Bay District, Geological Survey of Canada, Memoir 167, 222 p.
- Wallace, H (1981). "Keweenawan geology of the Lake Superior Basin", in Proterozoic Basins of Canada, Ed: F H Campbell, GSC Paper 81-10, pp 399 – 418.
- Gupta, V K (1991) Shaded image of total magnetic field of Ontario, east-central sheet, Ontario Geological Survey, Map 2586, scale 1:1,000,000

CERTIFICATE OF QUALIFICATIONS

I, *Roger J Caven*, of 479 Ocean View Drive, Gibsons, British Columbia, hereby certify that:

1. I am a graduate of the University of Toronto, Faculty of Applied Science and Engineering, Engineering Science Course, Geophysics Option (1967).
2. I am a registered Professional Engineer in the Provinces of British Columbia and Ontario.
3. I am a Fellow of the Geological Association of Canada, and an Active Member of the Society of Exploration Geophysicists, the Australian Society of Exploration Geophysicists, and the European Association of Geoscientists and Engineers.
4. I am presently employed as an independent Consulting Geophysicist, with address in Gibsons, British Columbia.
5. I have been employed in my profession since graduation, by Barringer Research Inc as a Senior Geophysicist, and with UMAX Inc as Chief Geophysicist in charge of exploration, and as a Consulting Geophysicist since 1983.
6. The information contained in this report was obtained through a study of information listed in the references, airborne and ground surveys over the property, as well as having worked extensively in the Canadian Shield, particularly in northwestern Ontario on the Thierry Ni-Cu-PGE deposit near Pickle Lake, on exploration for nickel sulphides and other mineralization in that region.

Dated at Gibsons, British Columbia, this 17th day of February, 2001.


Roger J Caven, P Eng, FGAC
Consulting Geophysicist



LOGISTICS and PROCESSING REPORT

of the
**AIRBORNE MAGNETIC AND GEOTEM ELECTROMAGNETIC
MULTICOIL SURVEY**

near
LAKE NIPIGON, ONTARIO

for
EAST WEST RESOURCE CORP.

*Job N° 603
March 31, 2000
Ottawa, Ontario*

TABLE OF CONTENTS

INTRODUCTION	1
SURVEY OPERATIONS	2
Location of the Survey Area	2
Aircraft and Geophysical On-Board Equipment	2
Base Station Equipment	4
Field Office Equipment	4
Survey Specifications	4
Field Operations.....	5
QUALITY CONTROL AND COMPILATION PROCEDURES	6
In the Field	6
DATA PROCESSING	7
Flight Path Recovery	7
Altitude Data (Radar and GPS)	7
Magnetics.....	8
Electromagnetics	9
- Regular dB/dt coil data	9
- B-Field data	10
FINAL PRODUCTS	11
Digital Archives	11
Profile Data	11
Maps	12
Report	12

APPENDICES

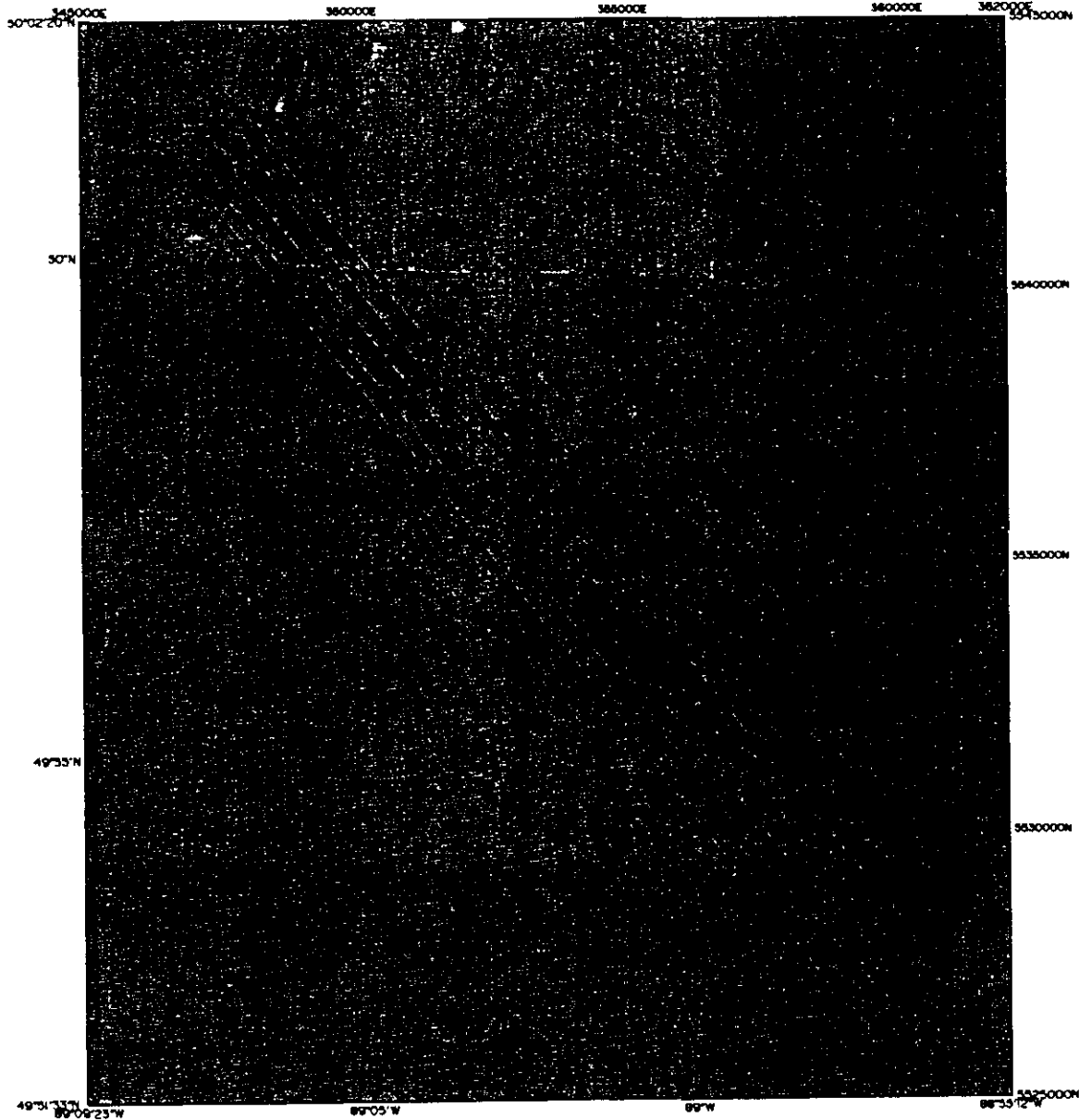
- A Field Processing of the Data
- B GEOTEM® Electromagnetic System
- C GEOTEM® Interpretation Notes
- D The Utility of Multicomponent Time-Domain
Electromagnetic Measurements
- E Multicomponent GEOTEM® Modeling
- F Archive Format Description
- G Anomaly Listing
- H Grid Listing

INTRODUCTION

On February 21, 2000, an electromagnetic and magnetic survey was flown over the Havoc Lake test block and on the Nipigon Plate approximately 170 kilometers north of Thunder Bay, Ontario by Fugro Airborne Surveys on behalf of East West Resource Corp. A total of 82 line kilometers of data were collected.

The survey data was compiled in the Geotrex-Dighem Ottawa office and is presented as maps of total field magnetics, X-Coil Channel 10, X-Coil Channel 16 and Geotem anomalies with flight path. There were also multiparameter profiles presented with resistivity pseudo sections and digital archives of line and grid data.

EAST WEST RESOURCE CORPORATION



HAVOC LAKE

A3 Lines
Total lines: 5 Total dist. 81.4473
Total Ties: 0 Total dist. .0000
=====

81.4473

Figure 1



SURVEY OPERATIONS

Location of the Survey Area

The survey area was located on the Nipigon Plate 170 kilometers north of Thunder Bay, Ontario. On the west side of Lake Nipigon.

See Figure 1.

North Bay was used as the base of operations to fly the survey.

Aircraft and Geophysical On-Board Equipment

Aircraft	deHavilland DHC-7EM (Dash 7) turbo-prop.
Operator	Geoterrex-Dighem.
Registration	C-GJPI.
Survey Speed	125 knots/145 mph/65m/sec.
Magnetometer	Scintrex Cs-2 single cell cesium vapour, towed-bird installation, sensitivity = 0.01 nT ¹ , sampling rate = 0.1 sec., ambient range 20,000 to 100,000 nT. The general noise envelope was kept below 0.5 nT. Nominal sensor height of 73 metres above ground.
Electromagnetic system	GEOTEM multicoil system

System parameters

Transmitter. vertical axis loop of 400 m²,
number of turns : 4
nominal height above ground of 120 metres.

¹ One gamma is equivalent to the S.I. unit nanotesla (nT).

Receiver: multicoil system (x, y and z) with a final recording rate of 4 samples/second, for the recording of 20 channels of x, y and z-coil data. Nominal height above ground of 70 metres, placed 125 m behind the centre of the transmitter loop.

Base frequency: 90 Hz

Pulse width: 2 ms

Pulse delay: 130.2 μ s

Off-time: 3385 μ s

Point value: 43.4 μ s

Transmitter: Current of 400 amperes
dipole moment of $0.90 \times 10^8 \text{Am}^2$

Receiver: Window mean delay times in milliseconds from the end of the pulse for 90 Hz:

channel 1: -1.931	channel 11: 0.825
channel 2: -1.497	channel 12: 0.998
channel 3: -0.933	channel 13: 1.194
channel 4: -0.368	channel 14: 1.410
channel 5: 0	channel 15: 1.628
channel 6: 0.131	channel 16: 1.867
channel 7: 0.239	channel 17: 2.127
channel 8: 0.369	channel 18: 2.409
channel 9: 0.500	channel 19: 2.734
channel 10: 0.652	channel 20: 3.125

Digital Acquisition	Geoterrex-Dighem GEODAS.
Analog Recorder	RMS GR-33, showing the total magnetic field at 2 vertical scales, the radar and barometric altimeters, the time-constant filtered traces of the x-coil channels 9 to 20 and the on-time channel 1, the raw traces of the x and z-coil channel 9 and 20, the EM primary field, the power line monitor, the 4 th difference of the magnetics, the x-coil earth's field monitor and the fiducials.
Barometric Altimeter	Rosemount 1241M, sensitivity 1 foot, .5 sec. recording interval.
Radar Altimeter	King, accuracy 2%, sensitivity 1 foot, range 0 to 2,500 feet, .5 sec. recording interval.
Camera	Panasonic colour video, super VHS, model WV-CL302.
Electronic Navigation	Sercel GPS receiver NR103, 1.66 sec. recording interval, with a resolution of 0.00001 degree and an accuracy of ± 10 m. Real time differential correction was provided by Omnistar.

Base Station Equipment

Magnetometer:	None.
GPS Receiver:	SERCEL NR103 V2.3, measuring all GPS channels, for up to 10 satellites.
Computer:	Toshiba laptop, model T4600, 33 MHz, 486.
Converter:	Picodas, model MEP710 3/10901 GTS 780008.

Field Office Equipment

Computers:	Dell Inspiron 3200 Pentium II laptop with 4 GB hard drive and an external 8 GB Hard drive.
Plotter:	Tech Jet designer 720c Calcomp.
Printer:	Hewlett Packard Deskjet 660C.
DAT Tape Drive:	DDS-90 4 mm.
Hard Drive:	Jazz drive, 2 gigabyte

Survey Specifications

Altitude:	The survey was flown at a mean terrain clearance of 120 metres.
------------------	---

The altitude tolerance was not to exceed 140 m over distances greater than 3 Km, unless greater clearance was required for safety or air regulations.

Traverse Lines: Spacing of 400m, direction Az 320°.

The separation between flight lines was not to exceed 50% of the specified spacing over a distance greater than 3000 m.

Diurnal Variation: No diurnal data was recorded.

Noise Levels: The noise envelope on the magnetic data was not to exceed ± 0.25 nT.

The noise envelope on the raw EM channel 20 was not to exceed ± 2500 pV/m² on the X-coil and ± 50000 pV/m² on the Z-coil over a distance greater than 3000 m, as displayed on the raw analogue traces. Atmospheric noise bursts must never become frequent enough to interfere with data processing or interpretation.

FIELD OPERATIONS

The base of field operations was North Bay, Ontario.

Field Crew:

Pilots:	R. Korswagen, B. Waines
Electronics Operators:	A. Proulx
Engineer:	E. Slaney
Geophysicist:	A. Marshall

Production:

The flying was done on February 21, 2000.



QUALITY CONTROL AND COMPILATION PROCEDURES

In the Field

After each flight, all analog records were examined as a preliminary assessment of the noise level of the recorded data. Altimeter deviations from the prescribed flying altitudes were also closely examined.

All digital data were verified for validity and continuity. The data from the aircraft and position data from the base station was transferred to the PC's hard disk. Basic statistics were generated for each parameter recorded; these included the minimum, maximum and mean values, the standard deviation and any null values located. Editing of all recorded parameters for spikes or datum shifts was done, followed by final data verification via an interactive graphics screen with on-screen editing and interpolation routines. Any of the recorded parameters could be plotted back at a suitable scale on the field pen plotter.

The quality of the GPS navigation was controlled on a daily basis by recovering the flight path of the aircraft. The Trajecto correction procedure employs the raw ranges from the base station to create improved models of clock error, atmospheric error, satellite orbit, and selective availability. These models are used to improve the conversion of aircraft raw ranges to aircraft position. The Trajecto-corrected GPS was plotted back daily in the field on the pen plotter and checked for speed busts.

Checking all data for adherence to specifications was carried out in the field by the Geoterrex-Dighem field geophysicist.

More details on the individual processing steps applied to each parameter are given in Appendix A of this report.

IV

DATA PROCESSING

Flight Path Recovery

Data used: GPS positions recalculated from the recorded raw range data and differentially corrected.

Final positions:

Projection: Universal Transverse Mercator

Central meridian: 87° West

False Easting: 500,000 metres

False Northing: 0 metres

Scale factor: 0.99960

Spheroid: NAD27

Altitude Data (Radar and GPS)

Noise editing: Alfatrims median filter used to eliminate the two highest and two lowest values from the statistical distribution of a 9 point sample window.

Noise filtering: Triangular filters set to remove radar and GPS wavelengths less than 4 seconds.

Magnetics

Lag correction: 3.3 seconds

Noise editing: 4th difference editing routine set to remove spikes greater than 0.5 nT, followed by an alfatrim median filter eliminating the high and the low value from its calculation over a 5 point window.

Noise filtering: Triangular filter set to remove noise events having a wavelength less than 2 seconds and an amplitude less than 0.5 nT.

Gridding: The data was gridded with a 100 m grid cell size, using an minimum curvature routine.

Electromagnetics

Regular dB/dt coil data

Lag correction: 3.75 seconds

Data correction: The x, y and z-coil data were processed from the 20 raw channels recorded at 4 samples per second.

The following processing steps were applied to the dB/dt data from all coil sets:

- a) the data from channels 1 to 5 (on-time) and 6 to 20 (off-time) were corrected for drift in flight form (prior to cutting the recorded data back to the correct line limits) by passing a low order polynomial function through the baseline minima along each channel, via a graphic screen display;
- b) the data were edited for residual sferic spikes by examining the decay pattern of each individual EM transient. Bad decays (i.e. not fitting a normal exponential function) were deleted and replaced by interpolation;
- c) for the x and z-coils only, the data were initially corrected for incoherent, non-decaying low frequency noise events by analyzing the decay information through decay constant calculations, in order to separate the true signal from the low-frequency noise.

An adaptive filter was then applied to the data. This filter responds to local changes in the gradient in order to select and apply an appropriate time domain

convolution ranging from very narrow to wide, depending on the local character of the anomaly. The suite of filters selected were aimed at noise frequencies ranging from 2 Hz to 0.18 Hz;

- d) for the y-coil data, spikes were removed using an alftrim median filter to isolate extreme high and low values. This was followed by the application of a small running average filter.
- e) The filtered data from the x, y and z-coils were then re-sampled to a sample rate of 5 samples/sec and combined into a common file for archiving.

Anomaly Selection: Anomalies were selected by fitting the data from the standard (dB/dt) x-coil channels 9 to 20 to the vertical plate model, in order to extract conductance and depth information. Comparison of the response from the x and z-coil data were made during the anomaly review to help with the final selection of the anomalies.

Conductivity-Depth-Transform

All 20 channels of the X and Z coil were fitted to a layered earth model to derive conductivity variations as a function of depth. This information is presented as colour resistivity pseudo-sections along the multi-channel profiles. Note that the process of converting the channel data to conductivity as a function of depth generally results in a section with depth variations being smoother than reality.

B-Field data

The B-Field component from the x, y and z-coils was measured but was not required as a deliverable, so it is not part of the present dataset. This component of the data however can be made available at a later date if required.

V

FINAL PRODUCTS

Digital Archives

Data from the 5 test lines are archived in line format. The files are in standard ASCII format. The file contains a line identifier, fiducial, eastings and northings, altimeter data, magnetic data and other auxiliary data as well as the processed x, y and z-coil data. It is described in Appendix F (Archive Format Description).

The gridded data is archived in GEOSOFT binary format, and are described in Appendix H. A copy of the line and grid archives was produced on CD-ROM.

Profile Data

1 set of multiparameter profiles displaying the following information at a horizontal scale of 1:50,000, on paper.

- Radar altimeter
- GPS Elevation
- Primary Field
- Total Field magnetics
- 12 off-time x-coil channels (9-20)
- 12 off-time z-coil channels (9-20)
- Hz monitor
- Terrain
- CDT Section

Maps

EM Anomaly map

Presentation = with flight path
Scale = 1:50,000
Base = Clear UTM
Media/Copies = 1 mylar, 2 b&w paper copies
Comments = Anomalies selected from x-coil with z-coil used as a reference

Total Magnetic Field

Presentation = no flight path
Scale = 1:50,000
Base = Clear UTM
Media/Copies = 2 colour paper copies

X-Coil Channel 10

Presentation = no flight path
Scale = 1:50,000
Base = Clear UTM
Media/Copies = 2 colour paper copies

X-Coil Channel 16

Presentation = no flight path
Scale = 1:50,000
Base = Clear UTM
Media/Copies = 2 colour paper copies

Topographical Base Map

Presentation = no flight path
Scale = 1:50,000
Base = Clear UTM
Media/Copies = 1 mylar copy

Report

2 copies of the Logistics and Processing Report.

Appendix A
Field Processing of the Data

Flight Path Recovery

1. Recover GPS data from base station.
2. Recover GPS data from aircraft file.
3. Combine base station and aircraft GPS data to a common file.
4. Apply differential corrections and compute Lat/Long fixes from the raw range data (TRAJECTOGRAPHY); GPS lag of -.17 sec. used.
5. Convert the WGS84 Lat/Long fixes to NAD27 ellipsoid using the following delta X, Y & Z coefficients:
delta X= 8 delta Y= -163 delta Z= -180
6. Convert Lat/Long fixes to UTM metres, using the following:
Central meridian: 87°
False Easting: 500,000
False Northing: 0 m
Scale factor: 0.99960 m
Ellipsoid: NAD27
7. Compute speed from resulting positions to check for irregularities, time gaps, etc.

Correction of Altimeter Data

1. Recover altimeter data from aircraft file.
2. Remove spikes from the radar and GPS data using an alftrim median filter to isolate the extreme values (two highest or two lowest) of a statistical distribution based on a window of 9 points.
3. Apply triangular convolutions to the altimeter and GPS data; aimed at wavelengths of 4 seconds or less.

Processing of Magnetic Data from the Aircraft

1. Recover data at full 10 samples/sec.
2. Adjust readings for a system lag of 3.3 seconds (33 samples).
3. Edit data for spikes using a fourth difference routine, set for spikes of greater than 0.5 nT.
4. Apply triangular smoothing convolution, aimed at removing wavelength of less than 2 seconds with amplitudes less than 0.5 nT.
5. Remove the long wavelength component of the diurnal data (greater than 120 seconds).
6. Add back the mean value of the diurnal field.
7. Grid the resulting magnetic values, image and check for irregularities.

Processing of GEOTEM Multicoil Data

1. Recover data in full flight format; x, y and z-coil channels at 4 samples/second.
2. Adjust readings for a system lag of 3.75 seconds (15 samples).
3. Review baseline positions for every channel of x and z-coil data via a graphic screen display and remove any visible drift component when required by graphically reconstructing and subtracting a low order polynomial. This procedure is only followed in resistive terrain when background "no response" sections along lines can be observed.
4. Convert regular x and z-coil data to ppm, leaving y-coil data in pv/m^2
5. Isolate and remove, by interpolation, spheric events which are located in the data by analyzing the decay pattern at each sample point. All bad samples identified are labeled in the flag field. A decay threshold of 300 - 600 ppm were used, with the correction of no more than 2 consecutive samples allowed. The spheric editing was run twice for each flight due to higher spheric levels, the threshold used depended on the percent spherics remaining after the initial iteration.
6. Remove any remaining small spikes in the data (x and z-coil channels) by using an alftrim median filter to isolate the extreme values (two highest or lowest) of a statistical distribution based on a window of 9 sample points.
7. Correct the x and z-coil data for low frequency, incoherent noise elements (that do not correlate from channel to channel) in the data, by analyzing the decay patterns of channels 13 to 20 (OGEO process). A decay threshold of 150 ppm was used.
8. Noise filtering done using an adaptive filter technique based on time domain triangular

operators. Using a 2nd difference value to identify changes in gradient along each channel, minimal filtering (5 point convolution) is applied over the peaks of the anomalies, ranging in set increments up to a maximum amount of filtering in the resistive background areas (27 points for both the x-coil and the z-coil data).

Creation of Final Files

1. Processed positioning, altimeter, magnetic and GEOTEM (raw and processed) x, y and z-coil data is cut-back from flight form to survey line limits, re-sampled and combined into a common file at 5 samples/sec.

Field Products

1. Total Field Magnetics at 1:50,000.
2. Flight Path at 1:50,000.
3. Selected X-coil EM channel map at 1 : 50,000.

Appendix B
GEOTEM[®] EM System

GEOTEM® ELECTROMAGNETIC SYSTEM

General

The operation of a towed-bird time-domain electromagnetic system (EM) involves the measurement of decaying secondary electromagnetic fields induced in the ground by a series of short current pulses generated from an aircraft-mounted transmitter. Variations in the decay characteristics of the secondary field (sampled and displayed as windows) are analyzed and interpreted to provide information about the subsurface geology. The response of such a system utilizing a vertical-axis transmitter dipole and a multicomponent receiver coil has been documented by various authors including Smith and Keating (1991, *Geophysics* v.61, p. 74-81).

The principle of sampling the induced secondary field in the absence of the primary field (during the "off-time") gives rise to an excellent signal-to-noise ratio and an increased depth of penetration compared to conventional continuous wave (frequency domain) electromagnetic systems. Such a system is also relatively free of noise due to air turbulence. However, also sampling in the "on-time" (Annan et al., 1991, *Geophysics* v.61, p. 93-99) can result in excellent sensitivity for mapping very resistive features and very conductive features, and thus mapping geology.

Through free-air model studies using the University of Toronto's Plate and Layered Earth programs it may be shown that the "depth of investigation" depends upon the geometry of the target. Typical depth limits would be 400 m below surface for a homogeneous half-space, 550 m for a flat-lying inductively thin sheet or 350 m for a large vertical plate conductor. These depth estimates are based on the assumptions that the overlying or surrounding material is resistive.

The method also offers very good discrimination of conductor geometry. This ability to distinguish between flat-lying and vertical conductors combined with excellent depth penetration results in good differentiation of bedrock conductors from surficial conductors.

Methodology

GEOTEM® (GEOterrex Transient ElectroMagnetic system) is a time-domain towed-bird electromagnetic system incorporating a high-speed digital EM receiver. The primary electromagnetic pulses are created by a series of discontinuous sinusoidal current pulses fed into a three- or six-turn transmitting loop surrounding the aircraft and fixed to the nose, tail and wing tips. The base frequency rate is selectable: 25, 30, 75, 90, 125, 150, 225 and 270 Hz. The length of the pulse can be tailored to suit the targets. Standard pulse widths available are 0.6, 1.0, 2.0 and 4.0 ms. The available off-time can be selected to be as great as 16 ms. The

current depends on the pulse width but the dipole moment can be as great as $6.7 \times 10^5 \text{ Am}^2$.

The receiver is a three-axis (x,y,z) induction coil which is towed by the aircraft on a 135-metre or 125-metre cable. The tow cable is non-magnetic, to reduce noise levels. The usual mean terrain clearance for the aircraft is 120 m with the EM bird being situated nominally 50 m below and 125 m behind the aircraft.

For each primary pulse a secondary magnetic field is produced by decaying eddy currents in the ground. These in turn induce a voltage in the receiver coils, which is the electromagnetic response.

The measured signals pass through anti-aliasing filters and are then digitized with an A/D converter at sampling rates of up to 80 kHz. The digital data flows from the A/D converter into an industrial-grade computer where the data are processed to reduce the noise.

Operations, which are carried out in the receiver, are:

1. *Compensation:* During flight, the transmitter creates eddy currents within the structure of the aircraft that have a measurable effect at the bird. Compensation for this signal is effected numerically within the receiver by a statistical analysis of the signal detected at the bird in absence of ground response. This is achieved by flying at an altitude such that no ground response is measurable. The observed signal is used to define a compensation signal, which is subtracted from the observed to effectively buck out any response due to the aircraft.
2. *Transient Analysis:* Transient analysis permits the separation of specific types of noise from the signal in real time.
3. *Digital Stacking:* Stacking is carried out to reduce the effect of broadband noise on the data.
4. *Windowing of data:* The GEOTEM[®] digital receiver samples the secondary and primary electromagnetic field at 64, 128 or 384 points per EM pulse and windows the signal in up to 20 time gates whose centres and widths are software selectable and which may be placed anywhere within or outside the transmitter pulse. This flexibility offers the advantage of arranging the gates to suit the goals of a particular survey, ensuring that the signal is appropriately sampled through its entire dynamic range.
5. *Power Line Filtering:* Digital comb filters are applied to the data during real-time processing to remove power line interference while leaving the EM signal undisturbed. The RMS power line voltage (at all harmonics in the receiver passband) are computed, displayed and recorded for each data stack.
6. *Primary Field:* The primary field at the towed sensor is measured for each stack and recorded as a separate data channel to assess the variation in coupling between the aircraft and the towed sensor induced by changes in system geometry.

7. *Earth Field Monitor:* A monitor of sensor coil motion noise induced by coil motion in the Earth's magnetic field is also extracted in the course of the real-time digital processing. This information is also displayed on the real-time chart as well as being recorded for post-survey diagnostic processes.
8. *Noise/Performance:* A monitor computes the RMS signal level on an early off-time channel over a running 10-second window. This monitor provides a measure of noise levels in areas of low ground response. This information is printed at regular intervals on the side of the flight record and is recorded for every data stack.

One of the major roles of the GEOTEM® digital receiver is to provide diagnostic information on system functions and to allow for identification of noise events, such as spherics, which may be selectively removed from the EM signal.

GEOTEM®'s high digital sampling rate yields maximum resolution of the secondary field. The absence of an analog system time-constant filter results in minimal signal distortion and, therefore, superior representation of the anomaly amplitudes and shapes.

System Hardware

The GEOTEM® system is an integrated whole, consisting of the CASA 212 aircraft, the on-board hardware, and the software packages controlling the hardware.

The software packages in the GEODAS data acquisition system and in the GEOTEM® receiver were developed in-house. Likewise, certain elements of the hardware (GEOTEM® transmitter, system timing clock, towed-bird receiver system) were developed in-house.

Transmitter System

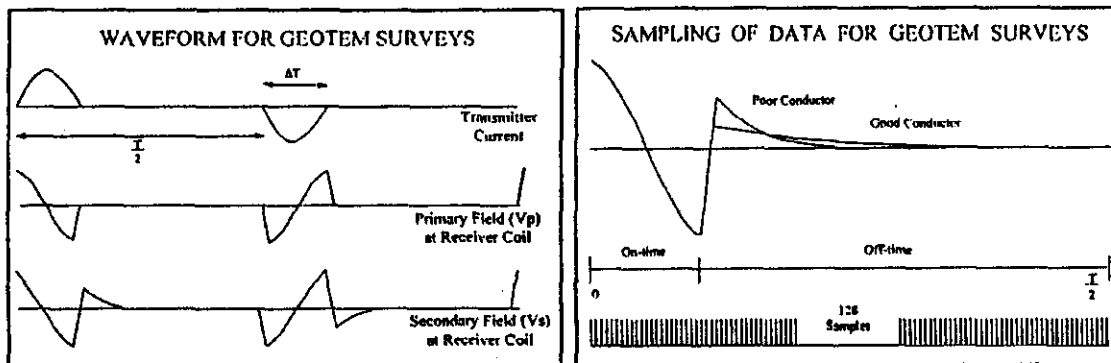
The transmitter system drives high-current pulses of an appropriate shape and duration through the coils mounted on the CASA aircraft.

System Timing Clock

This subsystem provides appropriate timing signals to the transmitter, and also to the analog-to-digital converter, in order to produce output pulses and capture the ground response.

Towed-Bird Receiver System

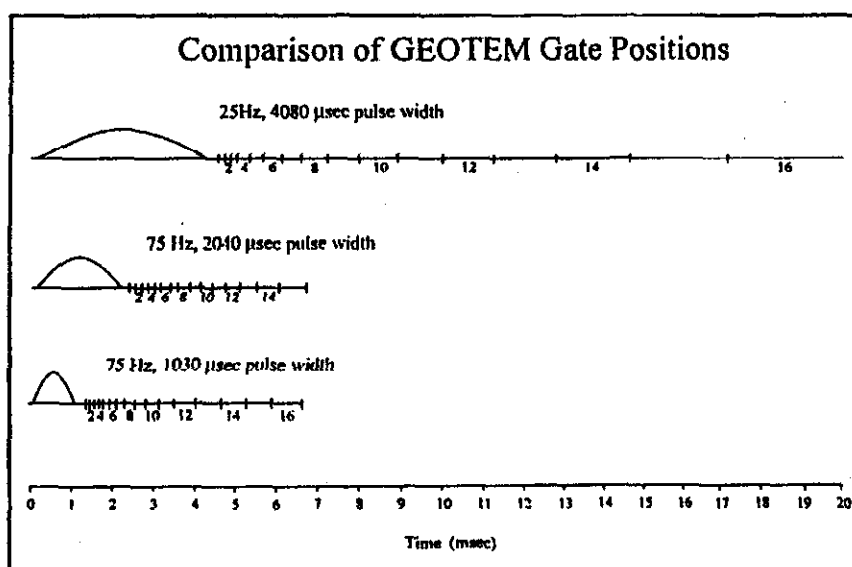
A three-axis induction coil is mounted inside a towed bird, which is typically 50 metres below and 125 metres behind the aircraft. (A second bird, housing the magnetometer sensor, is typically 45 metres below and 80 metres behind the aircraft.)



The GEOTEM system waveform (left frame) and sampling (right frame)

Timing of GEOTEM™ data acquisition for typical configurations

Base Frequency [Hz]	150	90	30	125	75	25
Pulse Width [ms]	1.02	2.04	4.14	1.02	2.04	4.14
Total Halfcycle [ms]	3.33	5.56	16.67	4.00	6.67	20.00
Off-Time [ms]	2.31	3.52	12.53	2.98	4.63	15.86
TX pulses / second	240	144	48	200	120	40
Eff. Digitising Rate [samples/sec]	38,400	23,040	7,680	32,000	19,200	6,400
Pulses per Reading	60	36	12	50	30	10
Stored readings / second	4	4	4	4	4	4
Samples per transient	128	128	128	128	128	128
Number of Channels	20	20	20	20	20	20
- off-time	16	15	15	16	15	16
- in-pulse	4	5	5	4	5	4



Standard GEOTEM gate positions

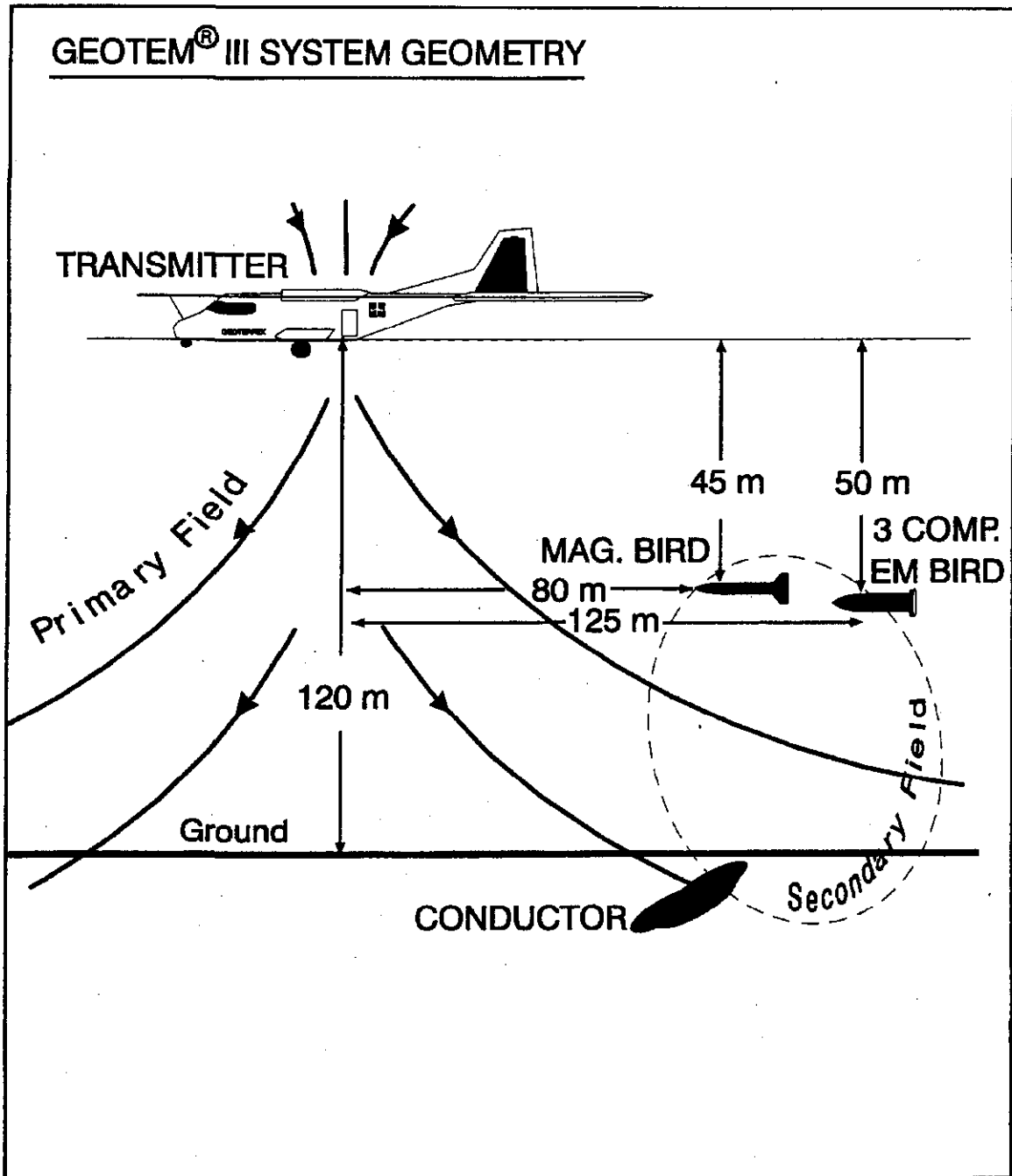
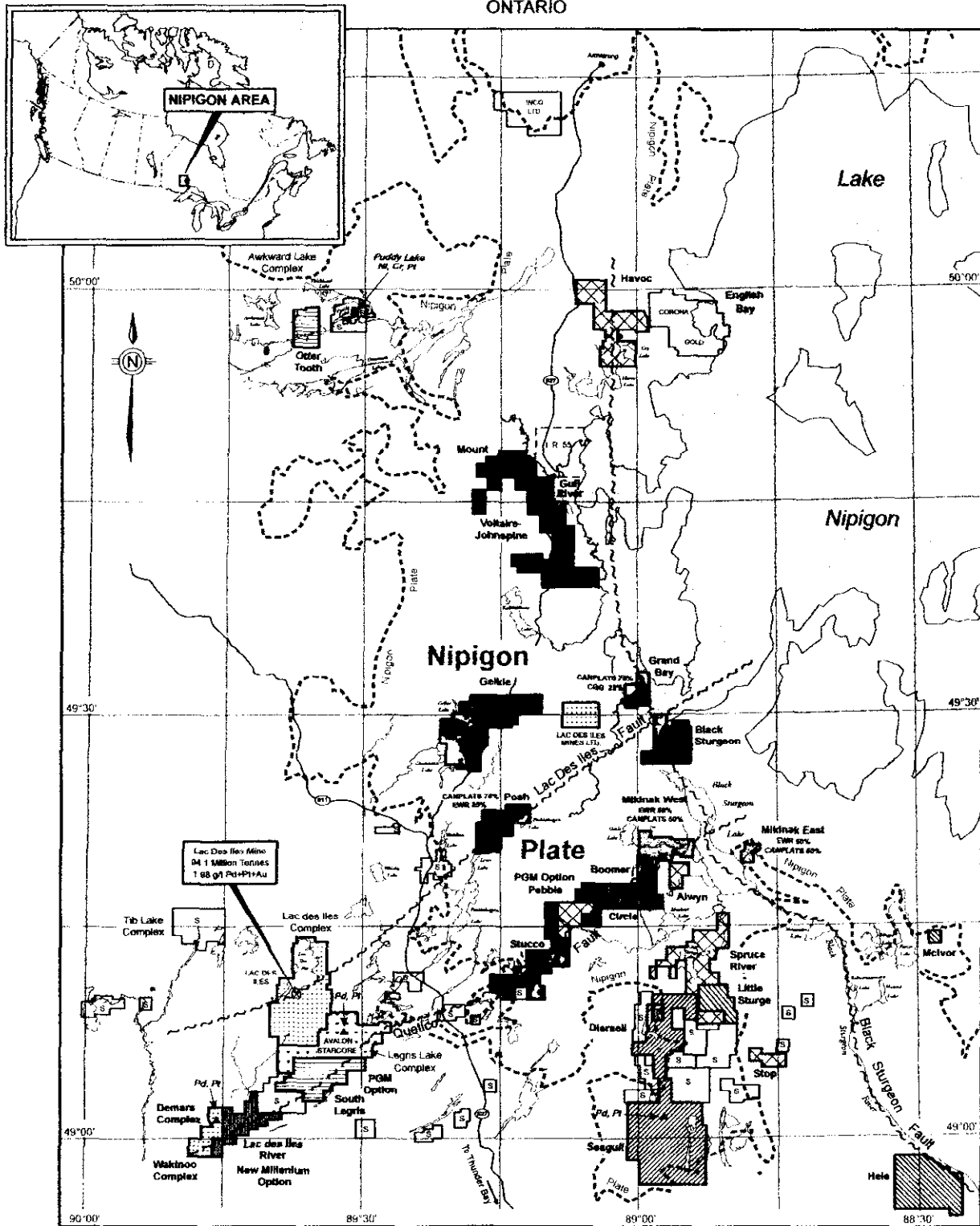


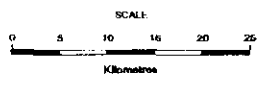
Figure 1

PGE PROPERTIES NIPIGON PLATE AND QUETICO BELT

ONTARIO



- | | | | |
|--|---|--|---|
| | CANPLATS RESOURCES CORPORATION - 100% | | LAC DES ILES MINES LTD |
| | EAST WEST RESOURCE CORPORATION - 100% | | AVALON VENTURES LTD, STARCORE RESOURCES LTD |
| | CANADIAN GOLDEN DRAGON RESOURCES LTD. - 100% | | STAKED |
| | EAST WEST RESOURCE CORPORATION - 30%
CANADIAN GOLDEN DRAGON RESOURCES LTD. - 30%
AVALON VENTURES LTD. - 40% | | Pd, Pt, Au (PGE) |
| | EAST WEST RESOURCE CORPORATION - 50%
CANADIAN GOLDEN DRAGON RESOURCES LTD. - 50% | | |
| | EAST WEST RESOURCE CORPORATION - 50%
MAPLE MINERALS LTD. - 50% | | |
| | EAST WEST RESOURCE CORPORATION - 50%
CANPLATS RESOURCES CORPORATION - 50% | | |

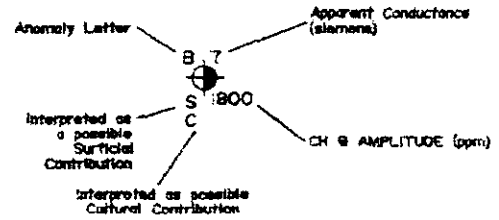


NOTE: This compilation according to industry standards and believed to be accurate. Geoscience Services Ltd. does not accept responsibility for any errors or omissions.

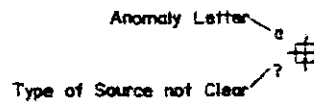
This map is copyright by Robert S. Milliken and no portion may be reproduced in any form without the consent of Robert S. Milliken.

GEOTEM® Peak Response Symbols

ANOMALY	CLASSIFICATION
✳	1-2 Channels and/or Surficial
⊕	3-4 Channels
⊗	5-6 Channels
⊙	7-8 Channels
●	9-10 Channels
●	11-12 Channels



Culture Response



SURVEY PARAMETERS

Flying Elevation.....120 m Mean Terrain Clearance
 Average Aircraft Speed.....70 m/s
 Navigation.....Differential GPS
 GPS Receiver.....Sercel NR 103, 10 Channels
 Video Camera.....Hitachi VK-C370

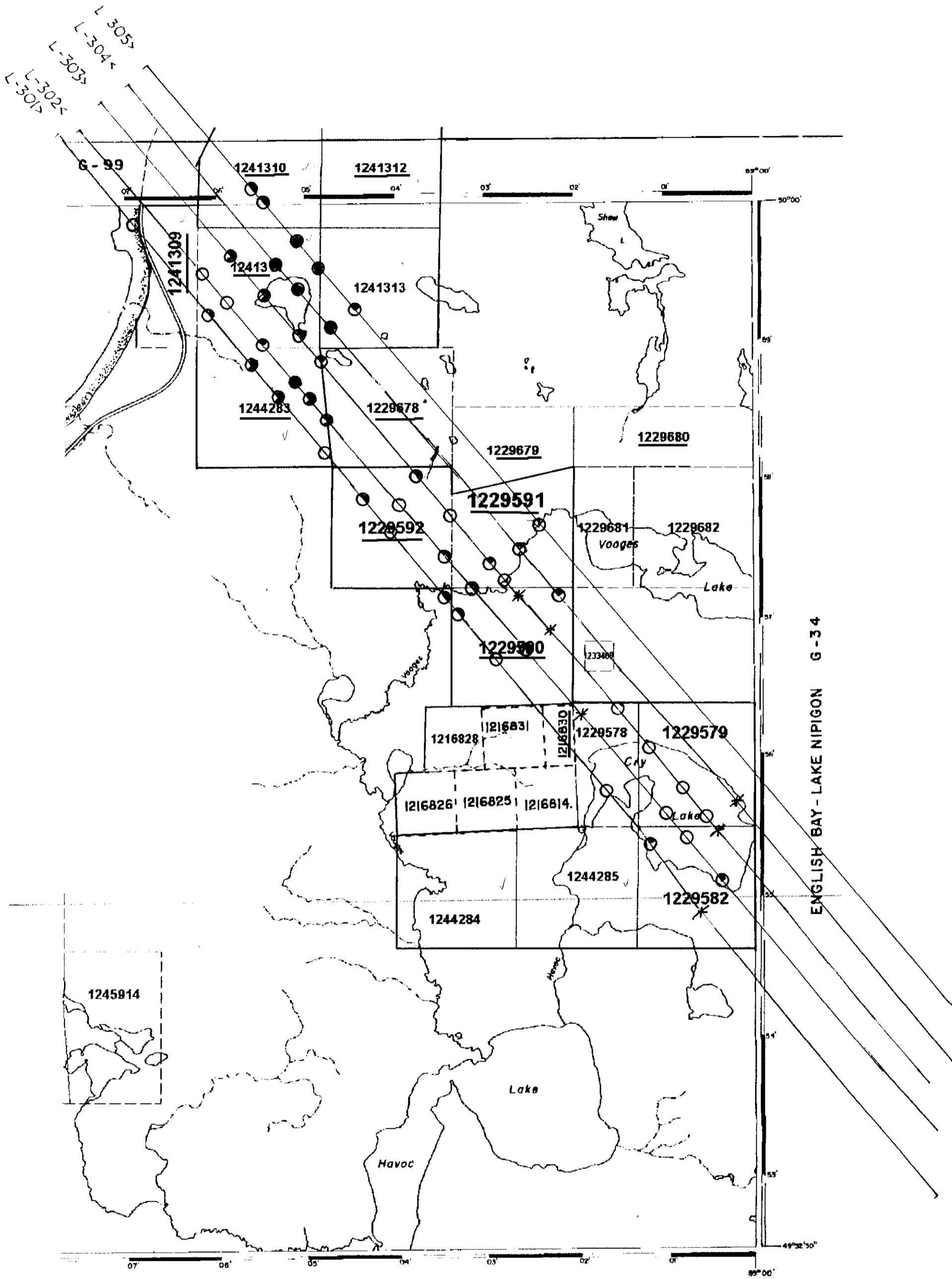
EQUIPMENT SPECIFICATIONS

Magnetics
 Type.....Scintrex CS-2 Cesium Vapour
 Installation.....Towed bird
 Sensitivity.....0.01 nT
 Sampling.....0.1 s

Electromagnetics
 Type.....GEOTEM III, Multicoll, 20 Channels
 Installation.....Transmitter loop mounted on the aircraft,
 Receiver coils in a towed bird.
 Coil Orientation.....X, Y and Z
 Frequency.....90 Hz
 Pulse Width.....2 ms
 Geometry.....Tx-Rx horizontal separation of 125 m
 Tx-Rx vertical separation of 50 m
 Sampling.....0.25 s

GEOETIC INFORMATION

Map Projection.....UTM
 Spheroid.....Clarke 1866
 Central Meridian.....87 degrees West
 False Easting.....500000 m
 False Northing.....0 m
 Scale Factor.....0.9996



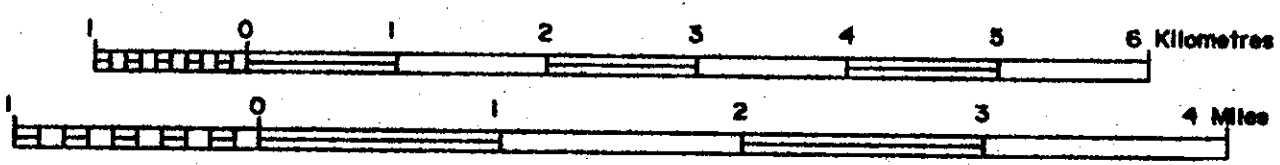
ENGLISH BAY - LAKE NIPIGON G-34

G-95

Havoc

AEM Interpretation

SCALE 1:50000

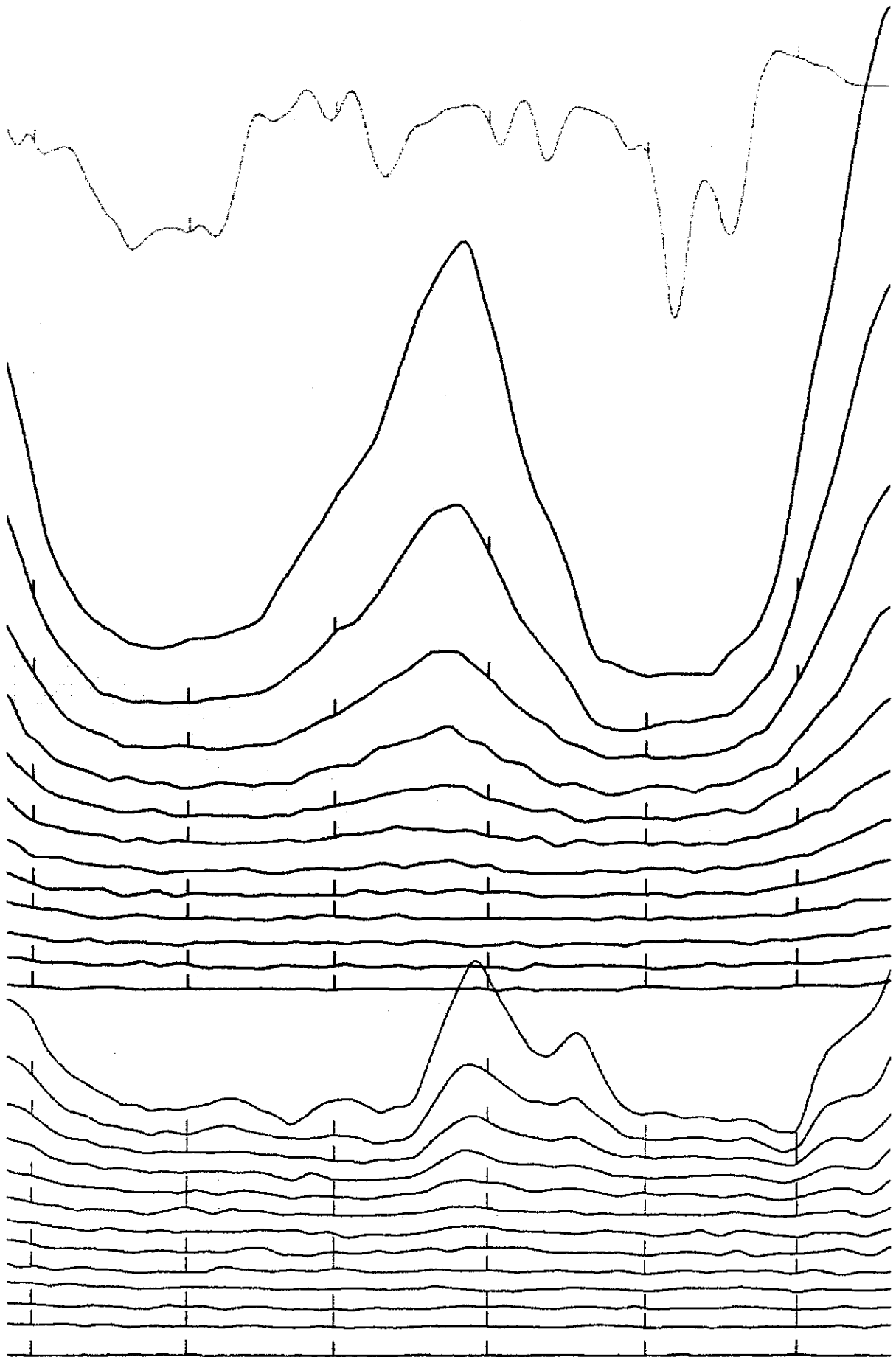


GEOTEM 90 hz / 2 ms

HORIZONTAL SCALE 1:50000

Alt	Radar Altimeter	100	m/cm
Gps	GPS Elevation	100	m/cm
EmPf	Em Primary Field	25	%/cm
Mag	Magnetics	250	nT/cm
Z09	Z-coil Channel 9	15000	pT/s/cm
	Z-coil Channel 10	15000	pT/s/cm
	Z-coil Channel 11	15000	pT/s/cm
Z12	Z-coil Channel 12	15000	pT/s/cm
	Z-coil Channel 13	15000	pT/s/cm
	Z-coil Channel 14	15000	pT/s/cm
Z15	Z-coil Channel 15	15000	pT/s/cm
	Z-coil Channel 16	15000	pT/s/cm
	Z-coil Channel 17	15000	pT/s/cm
Z18	Z-coil Channel 18	15000	pT/s/cm
	Z-coil Channel 19	15000	pT/s/cm
	Z-coil Channel 20	15000	pT/s/cm
X09	X-coil Channel 9	15000	pT/s/cm
	X-coil Channel 10	15000	pT/s/cm
	X-coil Channel 11	15000	pT/s/cm
X12	X-coil Channel 12	15000	pT/s/cm
	X-coil Channel 13	15000	pT/s/cm
	X-coil Channel 14	15000	pT/s/cm
X15	X-coil Channel 15	15000	pT/s/cm
	X-coil Channel 16	15000	pT/s/cm
	X-coil Channel 17	15000	pT/s/cm
X18	X-coil Channel 18	15000	pT/s/cm
	X-coil Channel 19	15000	pT/s/cm
	X-coil Channel 20	15000	pT/s/cm
Hz	Powerline monitor	100	mv/cm
	Terrain	225	m/cm
	CDT Section, sea level datum		ohm-m

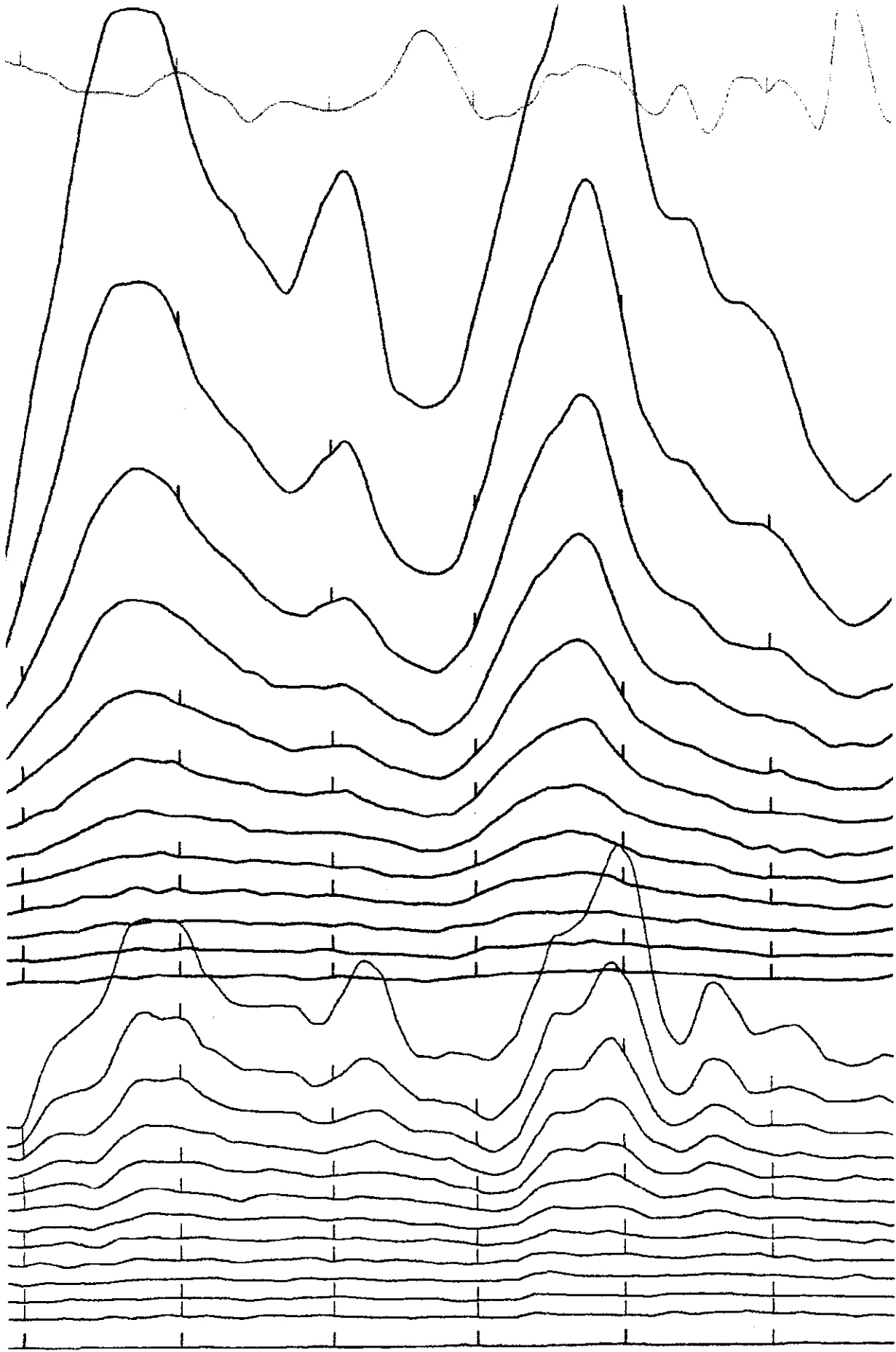
GeoTem Profile Legend



Havoc, L-301 S part, Flt Dir S, Scale 1:50,000

0000

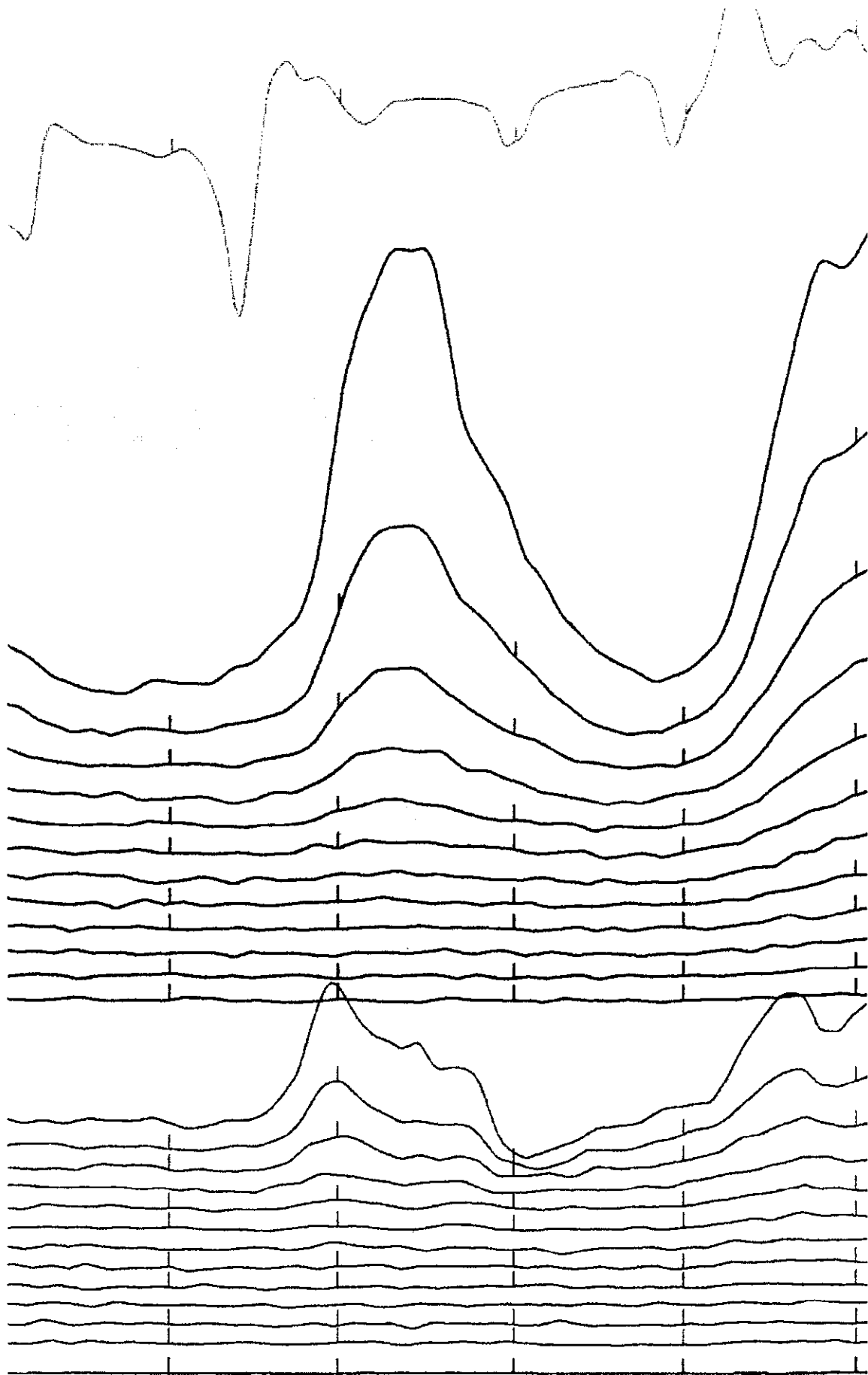
0000



Havoc, L-301 N part, Flt Dir S, Scale 1:50,000

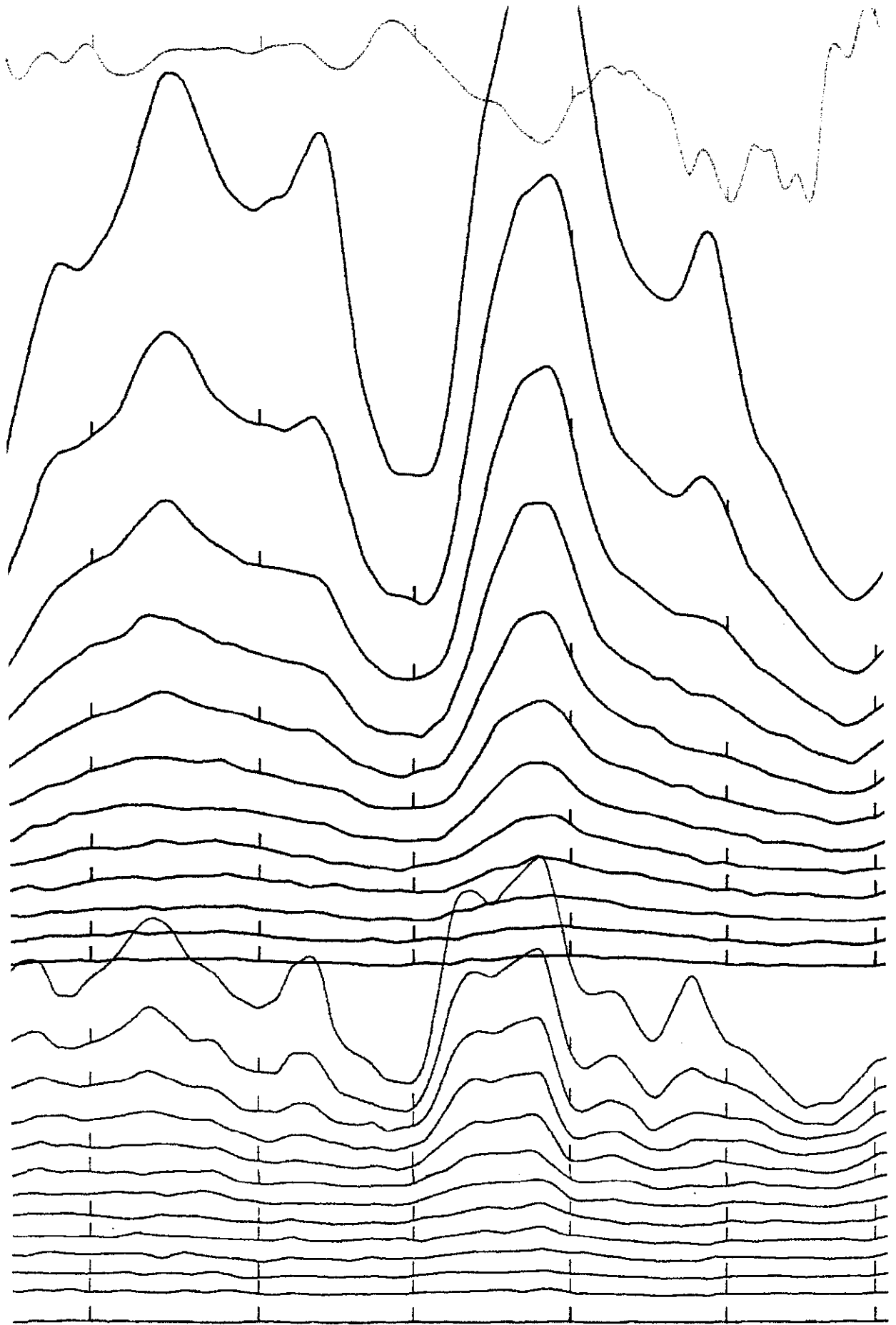
00180

00180



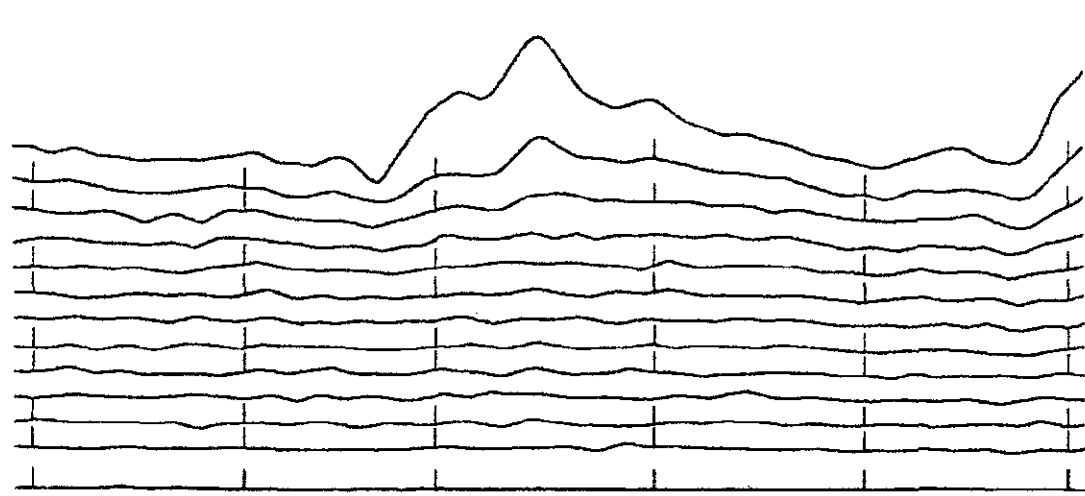
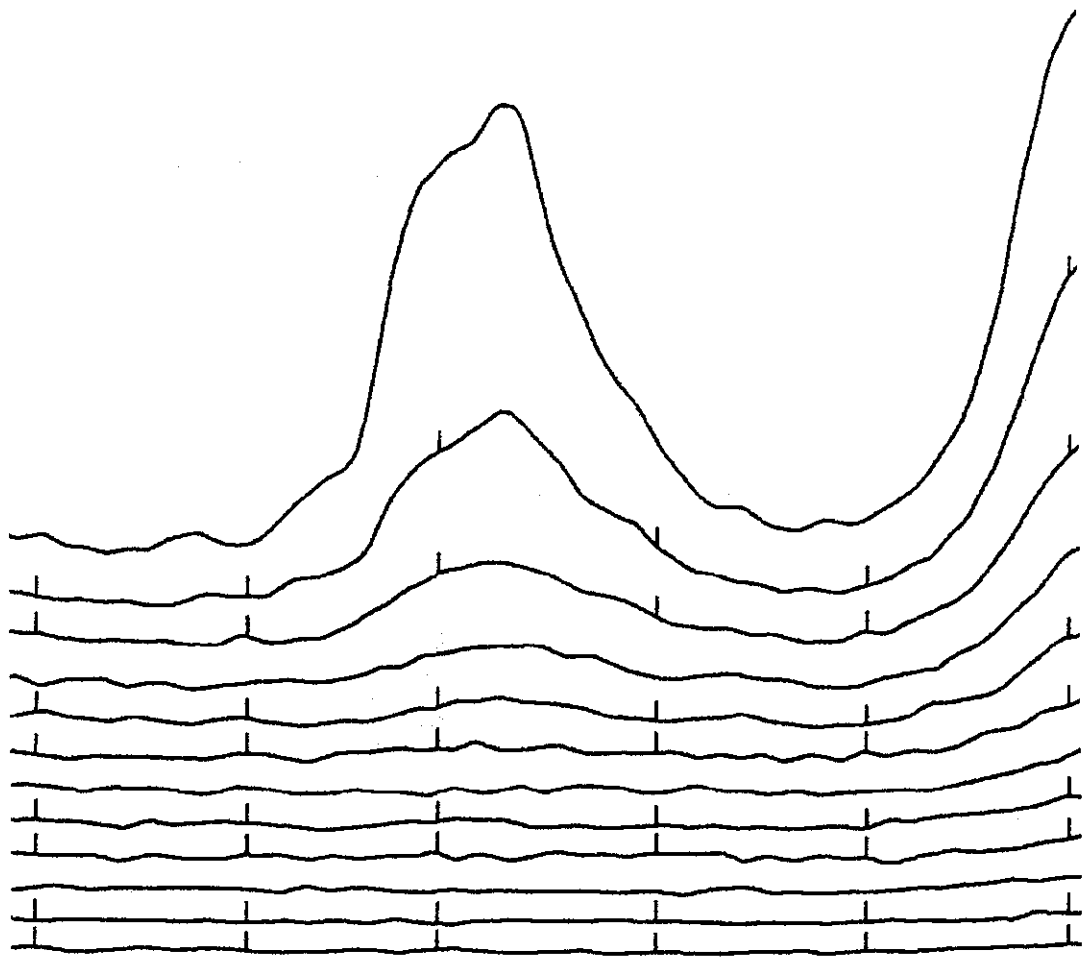
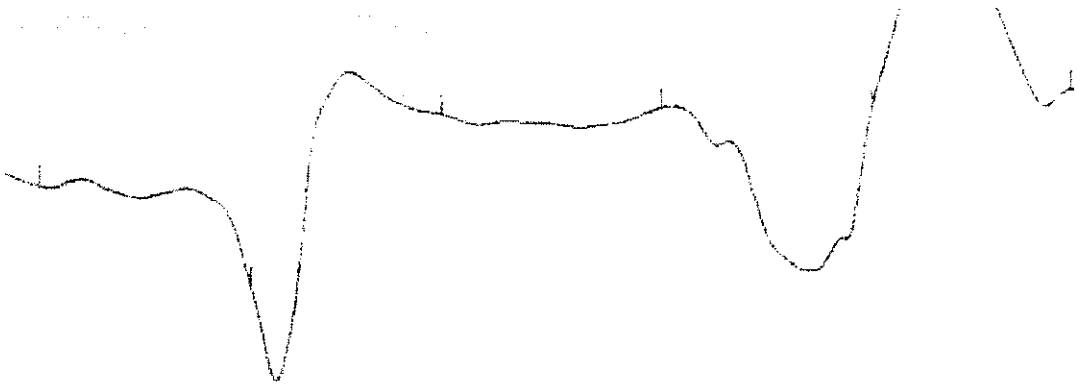
Havoc, L-302 S part, Flt Dir N, Scale 1:50,000

7600

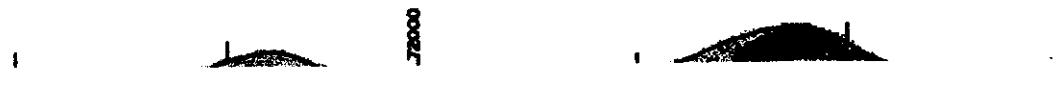


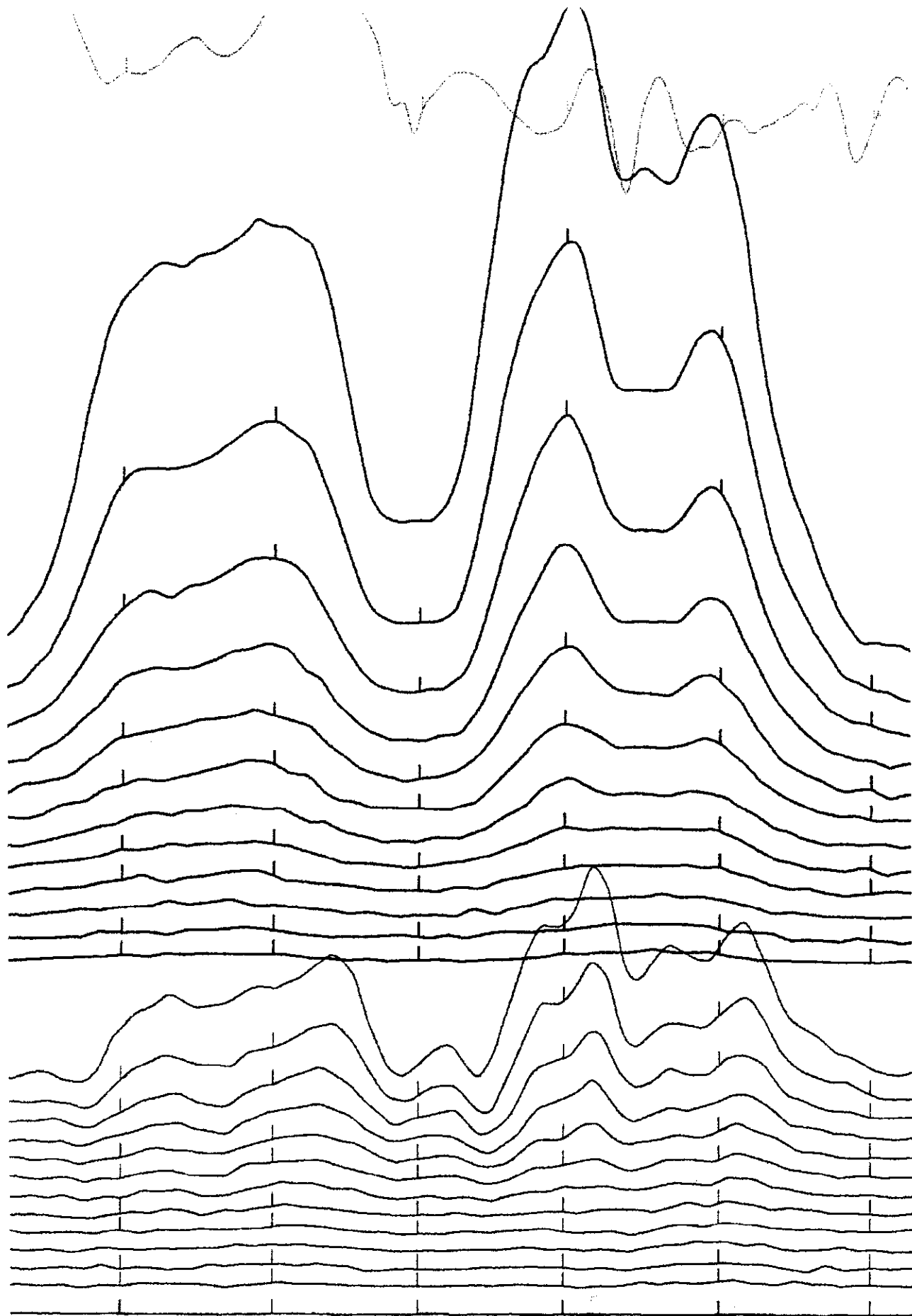
Havoc, L-302 N part, Flt Dir N, Scale 1:50,000

7000



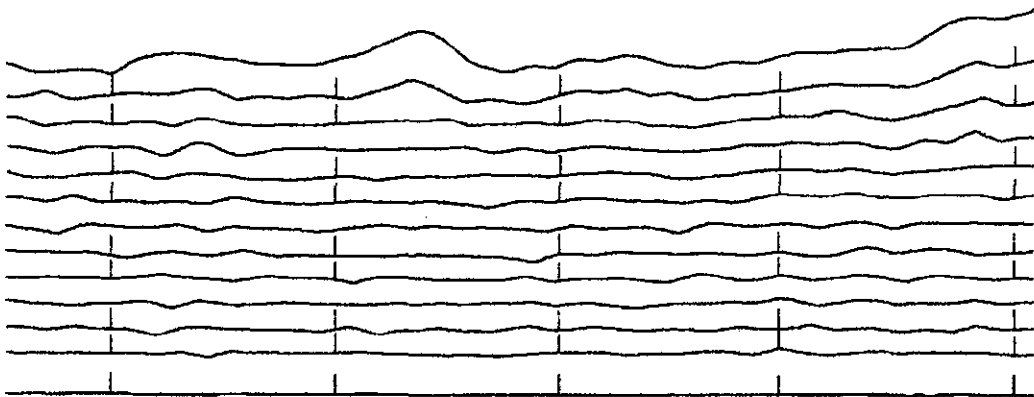
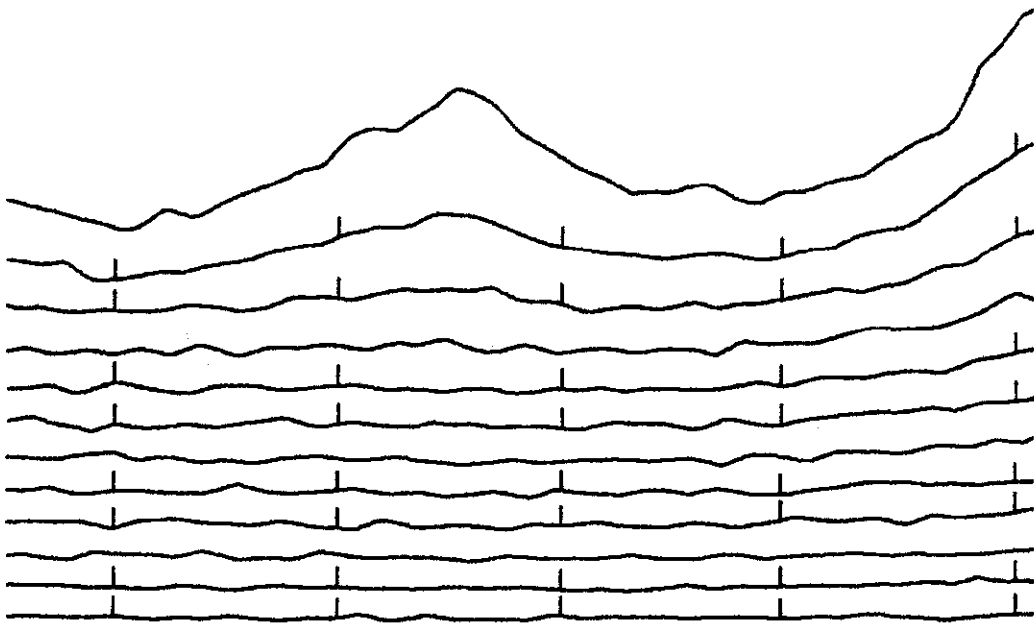
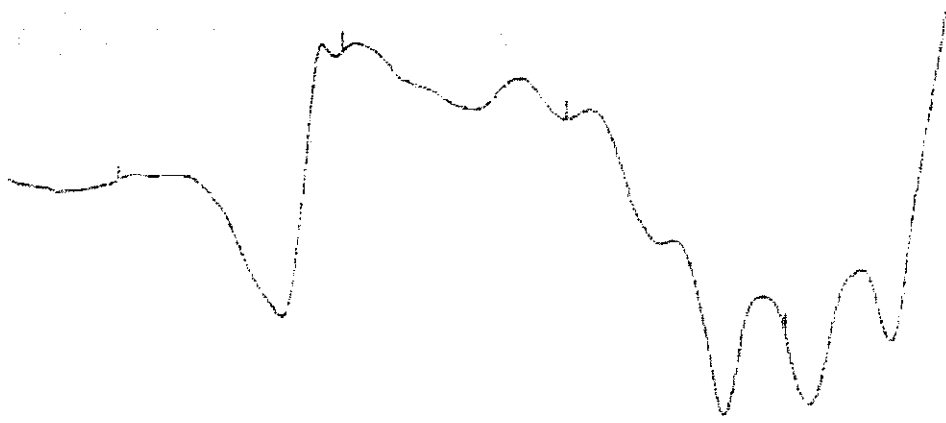
Havoc, L-303 S part, Flt Dir S, Scale 1:50,000





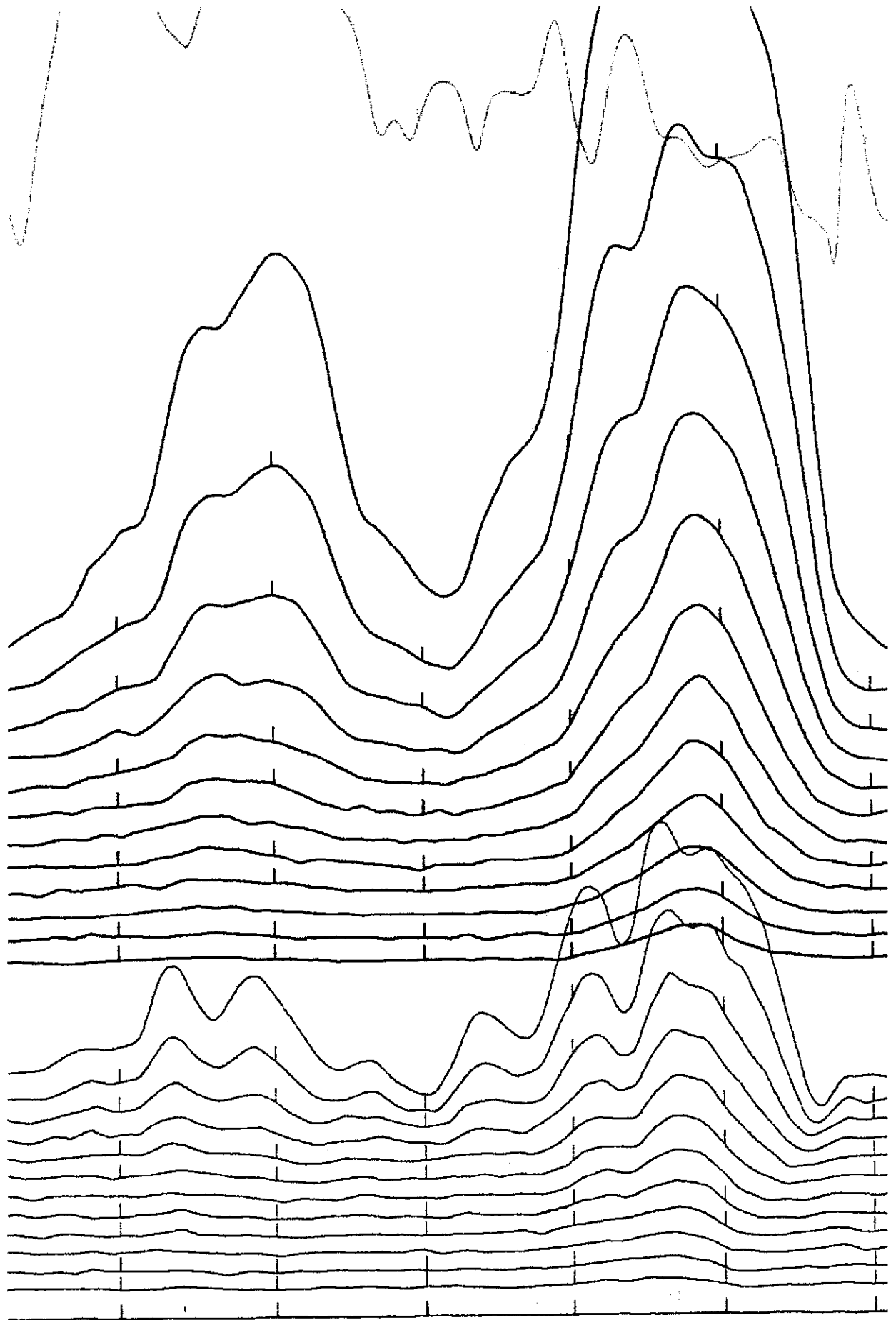
Havoc, L-303 N part, Flt Dir S, Scale 1:50,000

7000



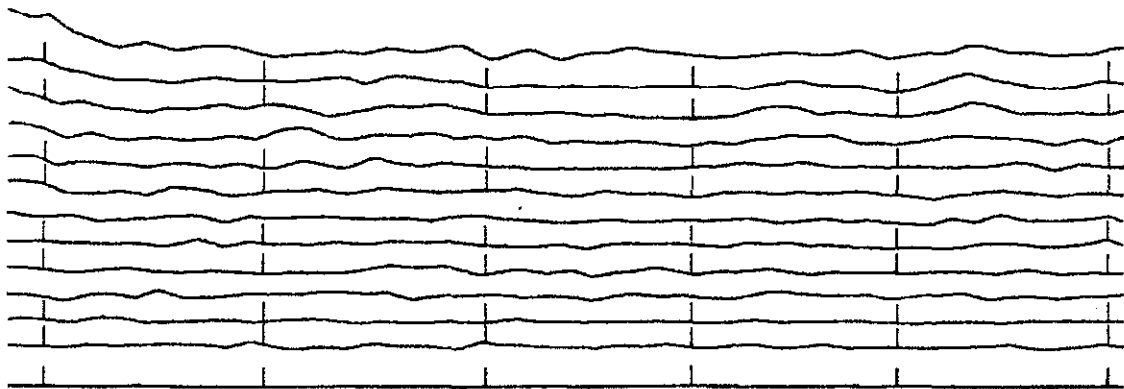
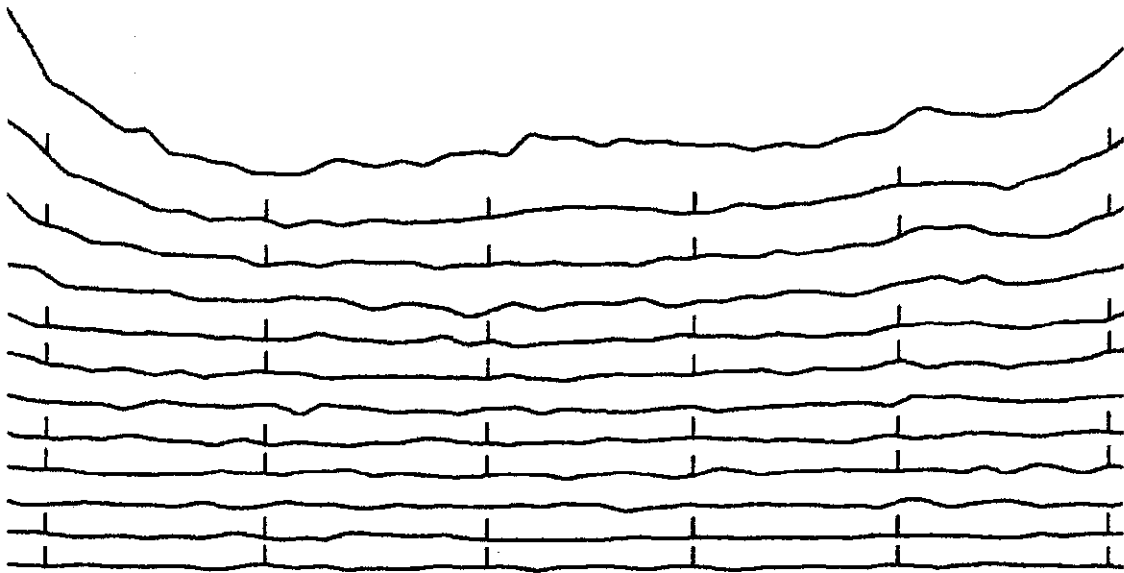
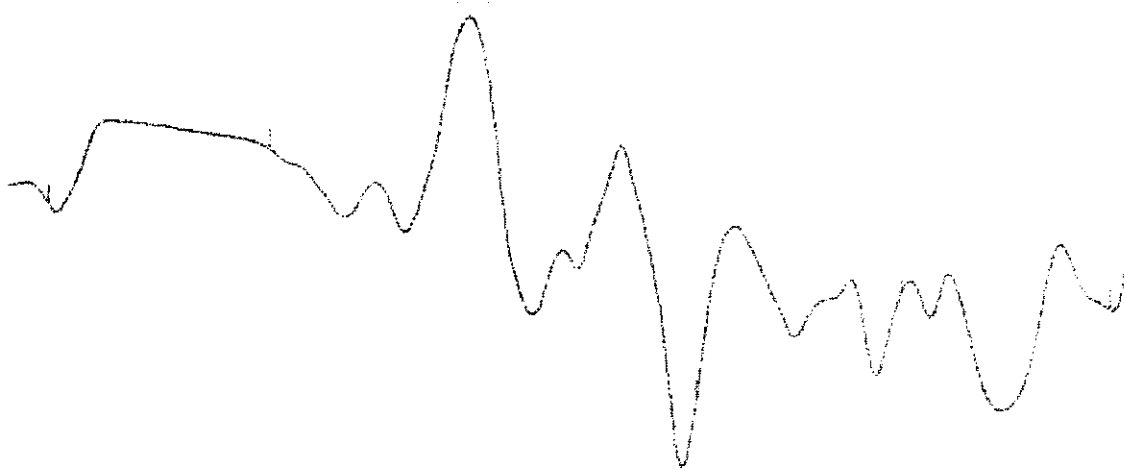
Havoc, L-304 S part, Flt Dir N, Scale 1:50,000





Havoc, L-304 N part, Flt Dir N, Scale 1:50,000

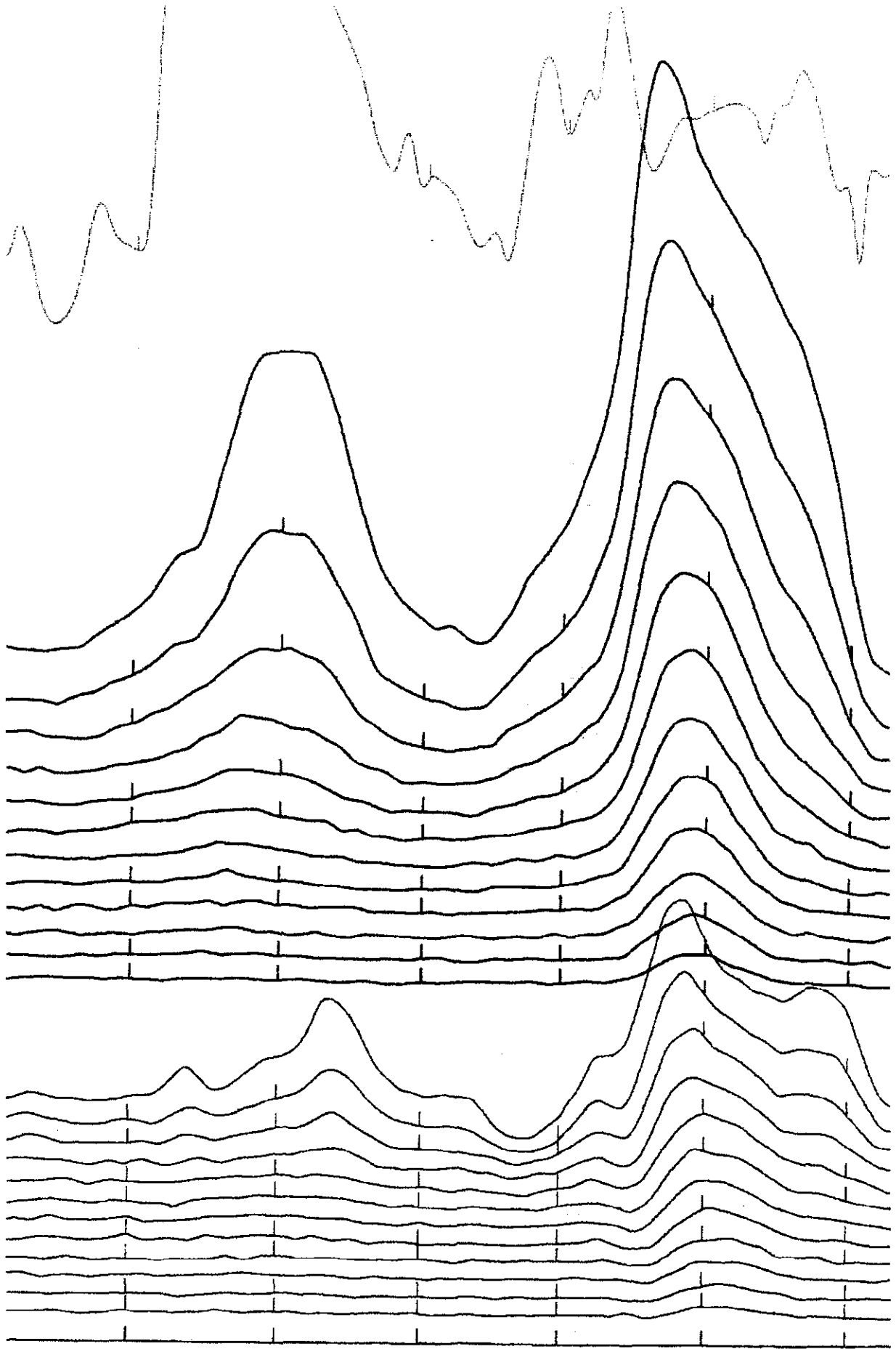
72400



Havoc, L-305 S part, Flt Dir S, Scale 1:50,000

78000

78700



Havoc, L-305 N part, Flt Dir S, Scale 1:50,000

047700

047800

Date: 2001-MAY-22

GEOSCIENCE ASSESSMENT OFFICE
933 RAMSEY LAKE ROAD, 6th FLOOR
SUDBURY, ONTARIO
P3E 6B5

EAST WEST RESOURCE CORPORATION
905 WEST PENDER
APT 402
VANCOUVER, BRITISH COLUMBIA
V6C 1L6 CANADA

Tel: (888) 415-9845
Fax: (877) 670-1555

Submission Number: 2.20907
Transaction Number(s): W0140.00045
W0140.00046

Dear Sir or Madam

Subject: Approval of Assessment Work

We have approved your Assessment Work Submission with the above noted Transaction Number(s). The attached Work Report Summary indicates the results of the approval.

At the discretion of the Ministry, the assessment work performed on the mining lands noted in this work report may be subject to inspection and/or investigation at any time.

If you have any question regarding this correspondence, please contact LUCILLE JEROME by email at lucille.jerome@ndm.gov.on.ca or by phone at (705) 670-5858.

Yours Sincerely,



Ron Gashinski
Supervisor, Geoscience Assessment Office

Cc: Resident Geologist

Roger John Caven
(Agent)

East West Resource Corporation
(Claim Holder)

East West Resource Corporation
(Assessment Office)

Assessment File Library

East West Resource Corporation
(Claim Holder)

East West Resource Corporation
(Assessment Office)



52I03SE2003 2.20907 NORWOOD LAKE

900



Date / Time of Issue May 10 2001 11:03h Eastern
TOWNSHIP / AREA PLAN
NORWOOD LAKE AREA G-0099

ADMINISTRATIVE DISTRICTS / DIVISIONS
Mining Division Thunder Bay
Land Titles/Registry Division THUNDER BAY
Ministry of Natural Resources District THUNDER BAY

TOPOGRAPHIC

- Administrative Boundary
- Boundary
- Contour Line
- Proposed Line
- Iron Mine
- Oil Pipeline
- Contour
- Contour - Approx. Approximate
- Stream
- Water Feature
- Road
- Trail
- Natural Outcrop
- Hydroline
- Contour Interval
- Wooded Area
- Mineral - Unaltered Mineral from Crown

LAND TENURE

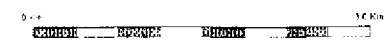
- Feehold Patent
 - Surface and Mining Rights
 - Surface Rights Only
 - Mining Rights Only
- Leasehold Patent
 - Surface and Mining Rights
 - Surface Rights Only
 - Mining Rights Only
- License of Occupancy
 - Surface Rights
 - Surface and Mining Rights
 - Surface Rights Only
 - Mining Rights Only
- Mineral Rights
 - Mineral Rights
 - Mineral Rights with Approval
- Mining Class
 - 323657

LAND TENURE WITHDRAWALS

- 1224 Active Withdrawal from Disposition
 - Mining Rights Withdrawal to PM
 - Surface and Mining Rights Withdrawal
 - Surface Rights Only Withdrawal
 - Mining Rights Only Withdrawal
 - Order of Crown Withdrawal Types
 - Surface and Mining Rights Withdrawal
 - Surface Rights Only Withdrawal
 - Mining Rights Only Withdrawal

IMPORTANT NOTICES

No



LAND TENURE WITHDRAWAL DESCRIPTIONS

Mineral	Type	Date	Description
067	Wm	Jan 1 2001	SL 123657 (2294001) MAY 7994-5
067	Wm	Jan 1 2001	MINING AND SURFACE RIGHTS WITHDRAWN FROM STAKING ORDER W/2584
067	Wm	Jan 1 2001	HWDRD D064640 (MULLEN) RESEARCH SAMPLE PLOTS
067	Wm	Jan 1 2001	MINING AND SURFACE RIGHTS WITHDRAWN FROM STAKING ORDER W/2584
067	Wm	Jan 1 2001	HWDRD D064640 (MULLEN) RESEARCH SAMPLE PLOTS
068	Wm	Jan 1 2001	MINING AND SURFACE RIGHTS WITHDRAWN FROM STAKING ORDER W/2584
068	Wm	Jan 1 2001	HWDRD D064640 (MULLEN) RESEARCH SAMPLE PLOTS
W/1 22341	Wm	May 17 1995	SEC. 25 W/1 22341 (001) MAY 1790-5 (001) MULLEN FROM W/1 22341 (001) MAY 1790-5 (001)

IMPORTANT NOTICES

Users should check special regulations, conditions, and other special conditions, including mining and mineral development activities.

2.20907
AMAG
AEM



521038E2003 2.20907 NORWOOD LAKE

